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Sembrando Alianzas para Vender

PARAGUAY PRODUCTIVO

FINAL REPORT



September 2009 – September 2012

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LIST OF ABBREVIATIONS

ACDI/VOCA	Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance
ADM	Archer Daniels Midland Company
CODIPSA	Compañía de Desarrollo y de Industrialización de Productos Primarios S.A.
DEAg	Dirección de Extensión Agrícola (dependent on the Ministry of Agriculture and Livestock)
DAP	Desarrollo Agrícola del Paraguay S.A.
FECOPRO	Federación de Cooperativas de Producción
GAP	Good Agricultural Practices
GDA	Global Development Alliance
MAG	Ministry of Agriculture and Livestock
PPR	Proyecto Paraguay Rural
PyP	Paraguay Productivo
REDIEX	Investment and Export Promotion Program
SENAVE	Servicio Nacional de Calidad y Seguridad Vegetal
SMS	Short Message System
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Landlocked between powerful neighbors, the agrarian Paraguayan economy provides for unique opportunities for growth. Agriculture accounts for 26% of GDP and 35% of employment. The sector is buoyed by a steady increase in worldwide commodity prices since 2000, decreasing production in Argentina, and exploding demand from Brazil. Trade as a percentage of GDP is relatively high at 68%. Exports increased by 70% between 2000 and 2010, and agriculture accounts for 90% of exports. While reliance on the commodity sector has huge risks, Paraguay's GDP has grown steadily by an average of 5% and in 2010, grew by 15%, a remarkable feat considering the global economic downturn as well as severe drought followed by periodic flooding of Paraguay's agricultural regions.¹

To make the most of these global agricultural opportunities for the poorest of Paraguay's farmers, Paraguay Productivo (PyP), a project funded by the United States Agency for International Development (USAID), in cooperation with private sector partners, the government of Paraguay, and micro-finance institutions, carefully selected high-growth and high-potential value chains in which to stimulate increased participation of small-holder farmers. By linking small farmers to markets through alliances with buyers and investors, and providing them with access to finance and technical assistance, PyP successfully piloted and demonstrated a powerful model of change for rural economic development in Paraguay, building a successful platform for future investments by the private sector, public sector, and donors.

Paraguay's government has a long history of promoting agricultural extension in key products such as soy and beef. However, in order to provide targeted technical assistance in alternative crops, PyP relied heavily on leveraging United States Government (USG) funds with private sector partners to extend assistance to small rural farmers. At the start of the project, technical staff negotiated 20 detailed cost-sharing agreements with large Paraguayan companies in the form of Global Development Alliances (GDAs), a USAID-sanctioned accord that multiplies the effect of USG funds. The agreements included cost sharing the introduction of new technologies, such as traceability and SMS notifications, as well as person hours in the form of technical assistance. Over the course of the project, PyP hired over 30 technical professionals that worked closely with the more than 120 extension agents hired by the partner firms. The careful twinning of project and private sector funded professionals catalyzed close to US\$20 million in private sector funds devoted to technical extension, maintaining a 1:5 leveraging ratio. Considerable investment by partner firms represents a key to the long-term sustainability of the approach long after initial donor funding is successfully invested. Assistance to farmers also came in the form of providing detailed training to financial institution agents on how to provide services to smallholder farmers, and has resulted in over 10,000 financial services packages disbursed by 12 separate financial institutions.

Furthering the sustainability goal, the project also built capacity of local institutions to leverage policy change and catalyze increased investment into the agricultural sector. The project worked with various institutions including the Microfinance Network (Spanish: Red de Microfinanzas), Rural Paraguay (Spanish: Paraguay Rural), REDIEX, and the Ministry of Agriculture and Livestock (Spanish Acronym: MAG), among others. One of the key successes of this component is the development of a trilateral agreement between USAID, the Chilean development agency (Spanish acronym: AGCI) and MAG. The trilateral agreement's focus was to train public sector extension agents that provide targeted technical

¹ Source of data: World Bank

and financial assistance to agricultural producers. The results are an increase in effectiveness of public sector extension, increased participation by small producers in technical assistance and the integration of national food security policies into production assistance.

Over the three-year period of performance, the project designed and implemented successful interventions that galvanized significant, national impact in: increasing yields of staple crops, increasing organic production, improving food security, improving Good Agricultural Practices, improving the role of women in agricultural value chains, expanding market linkages, and improving access to finance. PyP crafted a series of alliances with the public and private sectors that have already demonstrated significant impact, and have the potential to continue to yield significant benefits for Paraguay's small farmers in the decades to come.

Paraguay Productivo provided technical assistance in distinct value chains and helped promote access to finance for smallholder farmers and cooperatives in rural Paraguay.



I THE PROGRAM'S APPROACH

I.1 INTRODUCING THE CONTEXT

Paraguay is a country rich in natural resources. The country's economy has grown significantly in the past 8 years as a result of an increase in agricultural exports. Total exports have increased from US\$ 1,306 to US\$ 5,517 million from 2003 to 2011. Agriculture generates most of these exports and employs more than a quarter of the economically active population. Almost 45 percent of Paraguay's 2.6 million people live in rural areas and continue to live in poverty. In a country of only 6.4 million people, high poverty rates create a barrier to balanced and sustainable growth.



Rural poverty is most common on small family farms. According to the latest agricultural census in 2008, 217,152 families live on their farms and cultivate 528,270 hectares of crops like cassava, sugar cane, sesame, cotton, beans, peanuts, yerba mate and others (see tables 1 and 2). These farms are no larger than 20 hectares, and average 5.57 hectares per farmer, and the total cultivated area has decreased considerably in the last two decades (see tables 1 and 2). Only 49 percent of the total land available to these small farmers has been cultivated, whereas the remaining area is used for mechanized agriculture. Family units in rural Paraguay could quickly increase production with better access to market.

TABLE 1 – Small Farm's (≤ 20 Ha) Area of Cultivation, 1991 / 2008

	≤ 10 HA	> 10 HA ≤ 20 HA	TOTAL / AVERAGES
NUMBER OF FARMERS / FAMILIES	165,071	52,081	217,152
TOTAL AREA WHERE SMALL FARMERS LIVE	594,256	614,556	1,208,811
AVERAGE AREA PER FARM IN HA	3.6	11.8	5.57
% USED FOR AGRICULTURE	53%	36%	49%
% OTHER USES	47%	54%	51%

Source: National Agriculture Census 2008

Between 1994 and 2011 small farmer exports of staple crops increased by only 67%, from \$171 million to \$286 million, despite a tenfold national increase, from \$299 to \$2,957 million, in sales and exports of large industrial crops, such as soy. Cotton has been the main cash crop for small farmers, as shown in table 2. However, its dramatic decline, from 414,691 to 66,256 hectares, has slowed the overall growth of the sector.

Small farmers are plagued with overused soil and low productivity, low market access, a lack of technical assistance to improve crop yields, and almost no access to microfinance. Hundreds of farmers are forced each year to sell off their parcels and migrate to cities where they are often confronted with food insecurity and the realities of urban poverty. USAID's Paraguay Productivo (PyP) project supported more than 16,000 farmers in developing high growth potential crops and transforming negative trends into positive impacts for small farmers in Paraguay.

TABLE 2 – Small Farm's (≤ 20 Ha) Area of Cultivation, 1991 / 2008

	AGRICULTURE CENSUS 1991	AGRICULTURE CENSUS 2008
CASSAVA	175,572	170,694
SUGAR CANE	55,879	81,830
SESAME	0	69,857
COTTON	414,691	66,256
BEANS	47,083	55,424
PEANUTS	30,850	24,113
YERBA MATE	26,515	18,305
ORANGES	10,188	7,457
BANANAS	9,030	7,434
SOUR ORANGES	10,354	6,938
PINEAPPLES	2,706	5,004
SWEET POTATO	10,524	4,973
CASTOR BEANS	11,339	4,828
TOBACCO	4,359	2,220
OTHERS	14,871	2,937
TOTAL	823,961	528,270

Source: Agriculture National Census 1994 and 2008

1.2 OBJECTIVES AND METHODOLOGY

PyP was an economic growth program implemented from 2009 to 2012 with the overall objective to quickly and cost-effectively produce more value-added agricultural products, create jobs, increase incomes, reduce poverty and promote trade by adopting a demand-driven assistance strategy. The program benefitted from CARANA Corporation's international experience in generating value for both small farmers and agribusinesses, and helping the PyP team identify opportunities. Based on the ambitious set of targets on sales, exports, jobs and microloans (see Table 3), the team selected eight crops – sesame, cassava, sugar cane², passion fruit, stevia, lemon grass, corn and dairy – to be supported through demand-driven assistance (see Table 4). PyP's ultimate goal was to reactivate family-run agriculture and connect small producers to market opportunities, and promote inclusive economic growth.

² A waiver was approved by USAID by July 2011

TABLE 3 – Paraguay Productivo’s Key Targets

LEVERAGE \$ 9.65 MILLION FROM PRIVATE SECTOR ALLIANCES
GENERATE \$ 57.00 MILLION OF SALES, INCLUDING DOMESTIC AND EXPORTS
ACHIEVE \$ 38.00 OF EXPORTS
CREATE 15,000 NEW JOBS
ASSIST 14,000 SMALL FARMERS
PROVIDE 6,500 SMALL FARMERS ACCESS TO MICROLOANS

PyP’s strategy was to develop effective alliances with the private sector based on USAID’s Global Development Alliance (GDA) model. The strategy is known as “Planting Alliances for Sales” (“Creando Alianzas para Vender”), and directed the team’s attention to strengthening the links between farmers, agro-processing firms, cooperatives and the financial industry. Within this framework, the program provided trainings, including technical and financial assistance, throughout the value chain (see Table 4).

TABLE 4 – Paraguay Productivo’s Training and Technical & Financial Assistance Program

LINKING SMALL PRODUCERS WITH FIRMS (‘PLANTING ALLIANCES FOR SALES’)
ESTABLISHING ACCESS TO MICROLOANS
PROMOTING GOOD AGRICULTURAL PRACTICES TO INCREASE YIELDS AND SUSTAIN THE ENVIRONMENT
INCORPORATING TRACEABILITY FOR CLOSING THE RELATIONS BETWEEN CONSUMERS, FIRMS AND SMALL FARMERS
IMPROVING THE GENDER EQUITY IN SMALL FARMERS AGRICULTURE



I.3 PLANTING ALLIANCES FOR SALES

During PyP's first year of implementation, the team approached many businesses, cooperatives, and financial services providers to carry out joint activities that would help increase their business and trade by developing alliances with small farmers. Alliances were co-designed, co-managed and co-funded which means risks, responsibilities and rewards were shared. The strategy combined PyP's technical expertise with private sector experience and its networks to maximize results.

Through these alliances, PyP's experts, along with the firms' managers and small producers themselves, analyzed market's needs and identified specific problems along the value chain, including cultivating, harvesting, collecting, processing, manufacturing, marketing, and access to financial services. Twenty businesses, cooperatives, and financial services providers worked with the program to develop crops and financial services for small farmers (see Table 5). The most visible result of these alliances is the private sector investment of over US\$ 27.7 million, leveraged by USAID/Paraguay's US\$ 5.9 million investment. For each dollar that USAID invested, PyP leveraged \$4.6 in private sector investment.



Fleming Duarte, Finance Component Manager for Paraguay Productivo, works closely with Cooperativa Manduvirá leaders, local financial institutions, small farmers, and large commercial interests to help leverage the construction of a new processing plant to increase incomes of organic sugar producers

This is a shared-value or value-chain approach. PyP's interventions were sometimes interpreted as the development of smooth productive chains, which seek to improve the quality of products from one stage to another in a value chain. In reality, PyP's shared-value methodology creates solutions to increasing the benefits of the people involved along the productive value chain with a thoughtful reassignment of work and effort. The Program's focus was on alliances between small farmers and agribusiness firms. The slogan 'Planting Alliances for Sales' helped transform Paraguay's traditional view that training, and technical and financial assistance to small farmers is only suited for promoting food security and local development.

TABLE 5 – Paraguay Productivo Alliances with Real Sector Firms and Financial Sector Firms

	ALLIANCES	KEY CROPS AND FINANCE PER ALLIANCE
1	ARASY ORGÁNICA	SESAME, MICROFINANCE
2	SHORISAWA COMPANY	SESAME, MICROFINANCE
3	COOPERATIVA COLONIAS UNIDAS	STEVIA
4	GRANULAR PARAGUAY	STEVIA
5	ADM	STEVIA, CORN, MICROFINANCE
6	COOPERATIVA CAPIBARY	PASSION FRUIT, MICROFINANCE
7	FRUTIKA	PASSION FRUIT, MICROFINANCE
8	KEMASEM	SESAME, MICROFINANCE
9	COOPERATIVA LA NORTEÑA	LEMON GRASS, SESAME, MICROFINANCE
10	BIOEXPORT	SESAME, MUNG BEANS, MICRO & VALUE CHAIN FINANCE
11	CODIPSA	CASSAVA, MICROFINANCE
12	COOPERATIVA MANDUVIRÁ	SUGAR CANE, SESAME, MICRO & VALUE CHAIN FINANCE
13	LA FORTUNA	DAIRY, MICROFINANCE
14	COOPERATIVA SANJUBA	SUGAR CANE, PASSION FRUIT, MICROFINANCE
15	FINANCIERA EL COMERCIO	MICROFINANCE
16	BANCO VISIÓN	MICROFINANCE
17	COOPEDUC	MICROFINANCE
18	BANCO FAMILIAR	MICROFINANCE, VALUE CHAIN FINANCE
19	BANCO REGIONAL	VALUE CHAIN FINANCE
20	CAH	MICROFINANCE, MOBILE BANKING

Source: Monitoring and Evaluation unit

The ‘Planting Alliances for Sales’ idea was intended to open the dialog not only with the small farmers and the firms, but also with the Government, international cooperation agencies in Paraguay, and professionals who normally would not be open to this approach. The concept was especially useful when communicating the project’s impacts in its final year. One of the lessons is that, although it focuses on business and investment, the ‘Planting Alliances for Sales’ strategy is indeed appropriate for promoting food security and local development.

One of the key differences is that the program sought to strengthen the cooperatives and farmers associations’ skills in trade and finance, and also increase women’s involvement. The farmer committees and associations were trained and assisted in organizing ‘Joint Trading Initiatives’ to appropriately use microloans. Instead of selling the crops individually, a group of farmers could get better conditions and prices organized as a pool of farmers to make offers to multiple buyers.

‘Joint Trading Initiatives’ boost farmer confidence, especially for the most vulnerable populations: women and youths. This is vital in increasing competitiveness and developing a business mindset to become more innovative. In some cases, like Cooperativa Manduvirá and Cooperativa La Norteña, the program strengthened farmers’ cooperatives considerably. They are now turning into export firms, dealing directly with foreign buyers and local banks. The program always saw opportunities for developing suppliers of raw material into major value chain players.

I.4 RURAL MICROFINANCE AND VALUE CHAIN FINANCE

Rural microfinance is not well developed in Paraguay compared to urban microfinance, which is remarkably strong³. The estimates are that only 17% to 20% of small farmers have access to financial services of any scale, including microfinance. The market has, however, developed a strong capacity to supply financial services to urban small and micro enterprises as reflected in the international recognition for its achievements in urban microfinance. The underdevelopment of the rural microfinance sector is now changing because many banks, financial institutions and cooperatives have discovered its business potential. PyP made considerable effort to introduce microfinance into the sesame, cassava starch, organic sugar, herbs, fruit, and dairy value chains (see Table 5).



USAID/Paraguay Mission Director and PyP COP attend the signing of the creation of the Red de Microfinanzas.

PyP's rationale was straightforward and simple. To get the required supply of raw material from agriculture, PyP's 14 partners had the following choices: set up production on their own land or get small farmers to increase their cultivated area. In order for anchor firms to increase production from small farmers they must: increase cultivated area, improve yields per hectare, and incorporate more labor into small farms, especially from women and youth. Regardless of the strategy chosen, microfinance is necessary for small farmers to increase production. PyP provided microfinance training to banks, cooperatives and financial institutions, most of them organized into the 'Red de Microfinanzas' (see Table 4).

Intervention methodology:

- The PyP team contacted financial institutions and presented areas where microloans are needed.
- The team connected these institutions with GDA anchor firms, facilitating agreements between them.
- The team organized meetings with small producers where microloan institutions offer their products.

PyP's six financial partners have invested \$ 10.2 million, which represents 37% of the total funds leveraged by the 20 partners (\$ 27.7 million). Financiera El Comercio invested \$8 million into rural microloans to the families affiliated to PyP (see Table 9). These investments in microloans were not only

³ According to Economist Intelligence Unit - BID/FOMIN/CAF, "Microscopio Global sobre el Entorno de Negocios para las Microfinanzas 2010" (October 2012), Paraguay's position in a ranking of 55 emerging countries in the world is at N° 12. See as well USAID Paraguay Productivo, "Microfinanzas Rurales" (September 2012).

crucial to achieve additional cultivation by small farmers, but also for PyP to get partner firms to increase sales, exports, and employment.

Microfinance was not the only form of support to access finance provided by PyP. In the case of Bioexport and Cooperativa Manduvirá, PyP also facilitated investments to increase processing capacity (see ‘value chain finance’ in Table 5). Bioexport benefited by Banco Regional’s DCA funds to finance the expansion of its sesame processing plant and has since expanded its production. The firm was a newcomer in the sesame sector and through PyP’s assistance has become one of the main players in the industry, well positioned to continue growing organic black sesame and make inroads in reducing extreme poverty in rural areas.

Cooperativa Manduvirá received specialized technical assistance to build a new organic sugar plant and develop a trust fund for financial resources. This was the first time a fund of this type has been developed in Paraguay. It was an innovative solution for complex fixed asset investment project like the sugar plant. PyP played a key role in working with the primary financial institution, Banco Familiar, to manage and be the trustee for the fund, and with the cooperative, Manduvirá, to provide the legal and financial documentation necessary to reassure the pool of local and international investors that have placed \$9 million into this trust (see Table 6). At the end of the project, the trust fund was providing its first disbursements to Manduvira. The InterAmerican Development Bank is leading the operation, which gives the Manduvirá project long-term sustainability.

TABLE 6 – Funds Provided to Cooperativa Manduvira’s for Investments into a new Sugar Plant

TRUST FUND MANAGED BY BANCO FAMILIAR	\$ 9,000,000
ORIGIN OF THE TRUST FUNDS:	
OIKOCREDIT (NETHERLANDS)	\$ 3,900,000
INTERAMERICAN DEVELOPMENT BANK	\$ 1,000,000
RESPONSIBILITY (SWITZERLAND)	\$ 2,600,000
BANCO CONTINENTAL (PARAGUAY)	\$ 500,000
CAJA MUTUAL DE COOPERATIVISTAS DEL PARAGUAY	\$ 1,000,000
INTERNATIONAL CONTRACTS OF BUYERS ORGANIC SUGAR	\$ 6,000,000
TOTAL INVESTMENTS IN THE NEW PLANT	\$ 15,000,000

Source: Monitoring and Evaluation unit

Before PyP’s intervention, Cooperativa Manduvirá’s 1,500 members were supplying raw sugar cane to a local organic sugar firm in the region of Arroyos y Esteros, but after receiving assistance from the project and other development agencies– notably the IDB – they started renting a sugar plant only 130 KM from their location. Thanks to the investment leveraged by PyP, they have started building their own plant. The plant is scheduled to be operational in 2013. Organized small farmers, if supported and empowered, can setup this type of complex international business in the same way large private firms do. The project played a key role in helping the cooperative expand its opportunities and work to free its members from the poverty trap.



Rose Rakas, USAID/Paraguay Mission Director at the the symbolic start, called “primera palada”, of Cooperativa Manduvira’s first organic sugar plant owned by small producers.

BUILDING THE PASSION FRUIT VALUE CHAIN

Pedro Cuevas and Julian Lezcano are among thousands of small farmers in eastern Paraguay struggling to compete with the increasingly mechanized large-scale farming of commodity crops. Cuevas farmed his own cotton, but also worked as a carpenter in neighboring Argentina for months at a time to support his family and their small shop. Lezcano planted soy on his 25-hectare farm, but eventually stiff competition forced him to sell 20 hectares to pay off loans. Their situations are hardly unique: migration and land sales are common in this part of the country. In 2010, both men had reached a breaking point—Lezcano hurt his back, incurring steep medical bills, and Cuevas was preparing to leave Paraguay for good with two of his four children. Luckily, before either man was forced into an untenable situation, they came across a new opportunity that could help them turn things around. Through PyP they learned about the potential of passion fruit. This high-value crop—with prices three to five times higher than average cotton prices—didn’t require much heavy labor, could be harvested for four months a year and already had a guaranteed buyer: Frutika, a nearby fruit juice-processing plant with local and export markets.

Passion fruit production requires an initial investment of about US\$1,000 per hectare for wires and poles to construct a frame to support the plants. PyP joined forces with financial institutions to overcome this entry barrier, introducing managers and loan officers to rural value-chain financing and microloans adapted to the passion fruit crop cycle. PyP worked with a local cooperative, Cooperativa Capiibary, to strengthen its credit department, hiring a financial specialist to streamline the cooperative’s internal processes. The project also trained managers and loan officers there and at another specialized microfinance institution, Financiera El Comercio, and forged an alliance between Frutika and the government-run Crédito Agrícola de Habilitación (CAH) to set aside US\$100,000 for 150 agricultural producers of all types. Last year, the three lenders approved loans to 72 passion fruit producers—two lenders gave loans specifically for passion fruit for the first time ever.

“We see the confidence of producers growing, since they are producing with a buyer already in mind and an idea of what the price will be like,” said Daniel Gaona, a loan officer for Financiera El Comercio. “The existence of a secure market reduces our risk, and allows us to approve a larger number of loans than what we would have approved previously.”

1.5 GOOD AGRICULTURAL PRACTICES AND TRACEABILITY

As outlined in Section 1.1, the cultivated area of small farmers in Paraguay has decreased during the last 17 years, and, as summarized in Figure 1, the productivity of small farming has also fallen in the last ten years. This is partly due to bad agricultural practices, especially regarding soil impoverishment, resulting from continuous cultivation of the same crop on the same plot, without crop rotation and soil fertility recovering techniques.

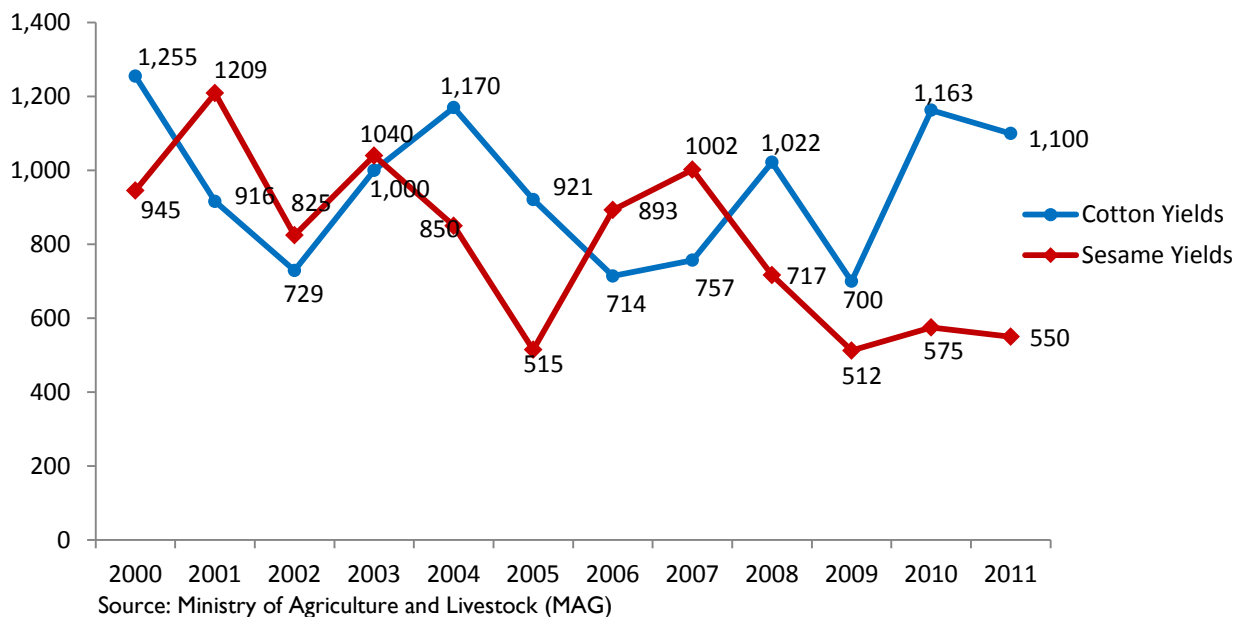


Farmers label their sesame at the farm after putting in place good agricultural practices to meet market demand.

Good Agricultural Practices (GAP) and Traceability (TR) are powerful tools for projects, governments and businesses to reverse the downward trend in productivity among small farmers. They also allow farmers to obtain a differentiated product, in terms of quality and safety, to access more demanding markets and better prices. GAP also helps reduce production costs by reducing inappropriate input use and by maximizing farmers' effort.

Three managers specialized in agronomy and finance implemented 'field days', 'educational tours', 'training sessions' and 'demonstrations at model farms' throughout the life of the project with diverse groups of small producers. These activities were co-managed with the partner firms, cooperatives and the farmers, and carried out by about 130 agronomists linked to the Program; 40 of these agronomists reported to PyP administratively, but reported to the anchor firms and the Program managers for technical supervision.

FIGURE I – SESAME AND COTTON YIELDS (KG/HA).



The group of professional technical agronomists played a key role in the Project. They were trained directly by the managers. Their work with small farmers was PyP's main method of improving the conditions in rural Paraguay. The other 90 agronomists were contracted by the firms, but participated in all training sessions and technical assistance. The co-management of the training sessions and technical assistance was innovative and facilitated firm, cooperative, and small farmer involvement. More importantly, it helped transfer responsibilities to key players and enhanced the sustainability of the Program's achievements.

The following key elements of GAP training expanded the opportunities for the 16,000 small farmers PyP worked with to change not only their method but also to develop a more entrepreneurial view about agriculture:

- Farm planning: establishing the soil parcels; crop rotation schemes; introducing crop diversification; focus on biodiversity.
- Farm records of activities and results: records of soil preparation; rainfall; use of seeds; use of fertilizers, insecticides and other inputs; results of harvesting; all relevant information on the impact on environment, labor and farm animals.
- Reducing losses and unnecessary residues: using records and plans, farms can reduce the use of inputs; establish norms and procedures for storage, transport, equipment and people at the farm.
- Clean and safe production: make sure that the people, the environment and the crop are clean and safe.
- Proper management of water, soil and agricultural pesticides.

PyP introduced a traceability system for food products and adapted it to the needs of the sesame value chain. Sesame was introduced in Paraguay 20 years ago and has been characterized as a labor-intensive food crop, with few technological innovations in machinery or inputs and with high levels of manual labor. The crop has typically been planted by small farmers and reached high standards of quality to access premium markets such as Japan. Traceability is becoming more relevant in world markets.

Traceability is relevant because:

- It affects everyone in the productive chain
- Each actor knows where the product came from and where it will be delivered
- Data and important milestones are stored
- Identifiers or codes are used that relate milestones back to headquarters

- It is a new way of selling: it helps logistics, improves efficiency, differentiates products, provides security, ensures hygiene and food quality; in summary, it is a system that complements management

Using Canadian technology, PyP developed software and technical assistance to introduce traceability to the sesame industry building the capacity of local technology firms and extension agents. The traceability system tracks the product through the entire value chain from cultivation to sale. The main advantage of traced sesame is that the product gets a label of safety, and increases its presence in very sophisticated markets like Japan. Paraguay's sesame is competing with African exporters, which are similar in quality but are not traceability.

Furthermore, a firm that embraces traceability engages in a partnership with small farmers, which means that it has to change its policy regarding middlemen. Middlemen are irrelevant to a firm that has reliable traceability systems; the firm has to setup new alliances, mostly with small farmer's organizations, like cooperatives or associations. The result is that the prices paid at the farm gate increases because cooperatives and associations do not charge intermediation costs.

Today, more than 7,000 sesame farmers are incorporated into the traceability system, and exporting traceable sesame to some of the world's most selective buyers in Japan. In more traditional markets, like beef, only 400 farmers participate in the national beef traceability system (SITRAP). Small farmer participation is a direct result of the changing perceptions surrounding the value chain. The middleman is considerably reduced, the quality is greatly improved, and the firms are more open to assist farmer's organizations because now they are directly linked up to their farms via GPS and via the SMS system delivered by the project. Most importantly, the farmers are getting better prices and better incomes.



1.6 INCORPORATING A GENDER APPROACH

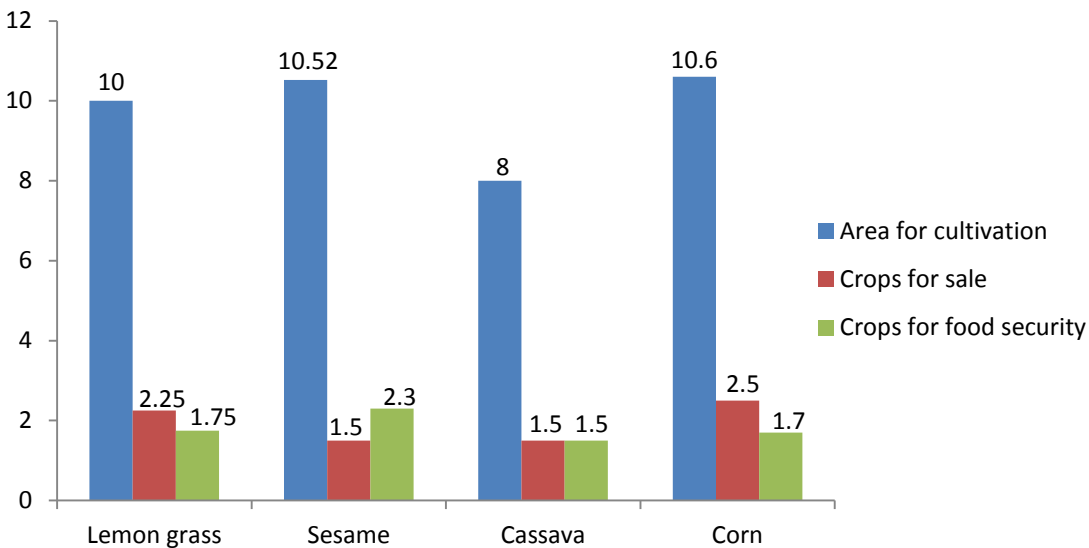
In 2011 PyP incorporated a gender approach into its technical assistance, by first training the staff and agronomists, and then by organizing meetings with small farmers to do case studies and introduce the approach⁴. There were many reasons for PyP to focus especially on women instead of all small farmers: effective outreach to women was key to large buy-in to the shared value approach; increasing crop production of family units; the shortage of labor at small farms; strong demand for crops from small farmers; and also because of PyP's awareness for a need to increase gender equity among beneficiaries and focus more on people instead of products.

⁴ The result of this meeting is represented in USAID Paraguay Productivo, 'Enfoque de Género en la Agricultura' (September 2012).

PyP was increasingly aware of these trends: plants needed more supply of crops like cassava, sugar cane, sesame and lemon grass; there were increasing difficulties to find personell to hire on small farms in rural areas; this type of agriculture does not have easy access to mechanization. The project noted that in order to generate sales and increase exports, smallholder farmers could no exclude a major member of the family unit: women.

The government and many international agencies in Paraguay are now focusing on improving food security. PyP was searching for a way to improve its outreach to other families interested in entering the vaue chains supported by the Program. Our gender study, implemented in 2012, found that men do not usually fulfill, they have not been present at most of the training and technical assistance sessions provided by the the role of comunicating lessons learned as well as women do, despite the fact that women participated in most of the production stages Program.

FIGURE 2 – AREAS OF CULTIVATION AT DISPOSITION FOR SMALL FARMERS IN HA



Source: Training Meetings Organized by the Program for Incorporating Gender

As Figure 2 shows, there is no competition between crops for sales and crops that increase food security if 'land' is available. But there could be a competition because of a scarcity of 'labor'. The Program maintained an intensive dialogue with the Government about the value chain approach, as it was looking for ways of interacting to have positive impacts on food security.

PyP's staff incorporated a gender approach into all activities, knowing that the program's sustainability largely depended on it. One of the first actions taken was to train PyP's staff, along with allied business' managers and technicians. Generally, there was a resistance in incorporating the gender approach into projects because of the assumption that such activities could endanger the family unit. However, this assumption has proven to be false if the intervention strategy is based on the family unit and considers every member of the family to be equal regarding their needs and interests.

A gender approach recognizes that women, as members of agricultural family units, are at a disadvantage in comparison to men, especially in key resources required to achieve sustainable socioeconomic growth, such as access to land, loans, trainings, information, organizational strengthening, and decision-making positions. Understanding the gender approach involves abandoning the belief that social and cultural roles assigned to men and women are natural.

With a gender approach, value-chain based projects put people and their relationships at the center of the intervention, instead of products. It involves a broader knowledge of how the market functions, along with an understanding as to why certain production stages are inclusive or exclusive of men and women, or why women are usually excluded from markets.

A gender approach on value chains does not only imply a change in technologies, organization or sales structures, involves a change in attitudes and behaviors. The results, however, are increased income generated through more sales that can be used to cover basic family necessities, such as food and education. Women also have a tendency to be better administrators and more capable of paying off loans more than men.

THE WOMEN OF BRITZE CUE: INCORPORATING WOMEN INTO PRODUCTIVE VALUE CHAINS

In January 2012 the project organized two participatory diagnostics in Britze Cue, where the *‘Asociación de Productoras y Productores por el Desarrollo Integral de Britze Cue’* is leading a large group of farmers headed by women. Britze Cue has an agreement with Arasy, and the project signed a GDA with this firm, whereby it accepted to buy the sesame from the farmers. For the first time, the project performed a survey based on a new form developed specially for family agriculture and the role of women, which has been distributed by the technical assistants of the project. The information will be used to improve the analysis made during the mentioned workshops. The same survey has been used in corn and cassava.

A total of 41 production committees and 110 families in Britze Cue have been participating in the sesame plan this season. The farmers of Britze Cue sell jointly to the firm, storing all the sesame in one place, where the firm arrives to buy the crop from the Association. The women of the Association believe that being incorporated into the sesame value chains is a great achievement and they consider themselves small entrepreneurs now. The concept of a value chain helped them understand the importance of negotiation. “If it were not for a support team we would be having trouble negotiating. We need to be prepared and we need to increase our relationships with the internal workings of the firm”.

The Association is now better organized to harvest and store the products centrally, as well make the necessary negotiations with the anchor firm. Because of ‘group-organized sales’ (*‘comercialización conjunta’*), the Association is receiving an important bonus for quantity from the firm. There are still challenges, like transport and quality control, but the women of Britze Cue – part of the rural extreme-poor population which receive special aid from the Government – consider the value chain model a great step in the right direction.



Gender Specialist, Venus Caballero, is at a training for men and women in Britze Cue on incorporating a gender perspective in the sesame value chain.

2 ACHIEVEMENTS

2.1 CHANGING BEHAVIOR

PyP surpassed its targeted results in most of its 14 indicators (see Table 8). During the closing event, a field day in Coronel Oviedo with more than 200 farmers present, many stressed that the Program had changed their thinking about small farming. PyP wanted to focus on people to assist them in making the change. The indicators that were surpassed and had the kind of human impact were:

1. Small farmers trained (879%)
2. Training events (621%)
3. Environmental improvements generates income increases (410%)
4. Leverage by partner firms (287%)
5. Jobs created (190%)
6. Microloans received (162%)

By focusing on training, making efficient use of resources from partners, and paving the way for accessing microloans, PyP generated a visible improvement in employment in the zones where it was active. GAPs have generated more jobs and a safer environment on small farms in Paraguay. Microloans for rural families incorporate them into the economy and empower rural Paraguayans. The 20 partners, leveraged by the project, have played a key role in generating these changes.

TABLE 8 – Achievements per Indicator at the End of the Program

TRAINING AND ASSISTANCES GENERATING THE FOLLOWING:	PROGRAM TARGETS	FINAL RESULTS	% OF TARGET
AMOUNT LEVERAGED BY PARTNERS (US\$ MILLION)	9.65	27.72	287%
SALES INCLUDING EXPORTS (US\$ MILLION)	57.00	63.78	112%
EXPORTS (US\$ MILLION)	38.00	51.12	135%
NUMBER OF FTE JOBS	15,000	28,482	190%
NUMBER OF SMALL FARMERS ASSISTED	14,000	16,433	117%
NUMBER OF SMALL FARMERS RECEIVING MICROLOANS	6,500	10,546	162%
NUMBER OF TRAINED DURING EVENTS SUPPORTED BY USAID	900	7,909	879%
NUMBER OF BENEFICIARIES OF IMPROVED ENVIRONMENT	1,600	6,564	410%
NUMBER OF PARTNER FIRMS	20	20	100%
NUMBER OF FIRMS ASSISTED IN TRADE CAPACITY	125	168	134%
NUMBER PF TRAINING EVENTS SUPPORTED BY USAID	105	652	621%
NUMBER OF INDIVIDUAL ADVISES TO VALUE CHAIN PLAYERS	105	107	102%
NUMBER OF DIAGNOSTICS TRADE AND INVESTMENT DIAGNOSTICS	24	30	125%
NUMBER OF SUPPLIERS OF MICROFINANCE & SERVICES IN MF	14	13	93%

Source: Monitoring and Evaluation unit

2.2 THE RESULTS OF ‘PLANTING ALLIANCES FOR SALES’

The Program achieved new exports and domestic sales of \$ 63.7 million, which was the locomotive behind the four key thrusts of the project: GAP, microfinance, gender and traceability. The opportunity to access a secure source of trade opened another door for implementing new ways of small farming. GAP and traceability made small farming more sustainable because of the increased quality of their products, environmental improvements, and improved working conditions. Gender equity has broadened the base of small farming, increasing inclusiveness and participation. Microfinance incorporated small farmers into the national financial system.



The approach was effective because it leveraged the Programs’ resources. PyP invested only \$207 per full time job created. The total cost of creating one job was closer to \$1,180, including leverage. In other words, most of the cost of generating employment was taken on by the private sector. For each dollar that USAID invested, the private sector invested 6 more dollars.

TABLE 9 – Key Results per Partner Firms

PARTNER FIRMS	LEVERAGE	EXPORTS	TOTAL SALES	EMPLOYMENT
ARASY ORGÁNICA	6,811,398	13,754,852	13,754,852	4,781
SHORISAWA COMPANY	1,324,212	10,542,060	10,705,200	3,721
COOP. COLONIAS UNIDAS	66,778	0	0	0
GRANULAR PARAGUAY	44,439	308,000	308,000	170
ADM	89,831	12,000	12,000	4
COOP. CAPIIBARY	35,663	0	0	0
FRUTIKA	177,510	0	150,179	49
KEMASEM	360,227	986,592	986,592	343
COOP. LA NORTEÑA	201,068	1,384,176	1,554,084	1,011
BIOEXPORT	3,234,902	5,872,656	5,931,575	2,062
CODIPSA	1,838,725	15,309,724	21,098,347	12,836
COOP. MANDUVIRÁ	3,008,156	2,954,956	3,157,009	1,820
LA FORTUNA	179,720	0	6,124,288	1,685
COOP. SANJUBA	74,487	0	0	0
FINANC. EL COMERCIO	8,004,198	0	0	0
BANCO VISIÓN	923,542	0	0	0
COOPEDUC	151,340	0	0	0
BANCO FAMILIAR	443,665	0	0	0
BANCO REGIONAL	400,000	0	0	0
CAH	350,571	0	0	0
TOTAL	27,720,432	51,125,016	63,782,126	28,482

Source: Monitoring and Evaluation unit

One of PyP's goals was to strengthen the relationship between small farmers and their respective markets. With 'Joint Training Initiatives' the Program assisted small farmers in learning the skills to negotiate, to achieve results by engaging in participative planning and improved their relationship with allied agro-processing firms. In this way, the relationship between the agro-businesses and producers went beyond an increase in incomes for both parties. Planting Alliances for Sales has empowered small farmers and prepared anchor firms to engage shared value strategies.

2.3 ACHIEVEMENTS OF THE GENDER APPROACH

The gender component in the Program increased in relevance after this approach was incorporated into training and assistances. At the Midterm Evaluation, 10% of the beneficiaries were women, at the end of the Program the participation of woman in the key components was between 16% and 21% (see table 10). The Final Evaluation showed that in an analysis of 100 families, 37% of women participated in at least one of the production stages.

TABLE 9 – Training and Assistances per Gender

INDICATORS	FINAL RESULTS	MALE		WOMEN	
		Count	Percentage	Count	Percentage
NUMBER OF SMALL FARMERS ASSISTED	16,433	13,804	84%	2,629	16%
NUMBER OF TRAINED DURING EVENTS SUPPORTED BY USAID	7,909	6,287	79%	1,622	21%

Source: Monitoring and Evaluation unit

One of the fears of PyP's implementation team was that the promotion of cash crops would lead small producers to reduce the area of cultivation of crops dedicated to home consumption. However, the evaluation concluded that most of the producers maintained their self-consumption crops while increasing their cash crops. In fact, PyP's intervention not only allowed an increase in productivity of cash crops, but producers were able to apply good agricultural practices in their own crops, which also increased productivity⁵.

Results of the gender approach:

- Increase participation of women leaders benefitting from the program, from 10% to 16% at the end of the program
- During the Final Evaluation, the percentage of women leading their farms was 37%
- Increase in women's incomes
- Improve family planning and access to financial and technical assistance

⁵ Results obtained from USAID Paraguay Productivo 'Reports of Final Evaluation' (September 2012)

- Develop women's participation in the community
- Increase awareness among men that they can and should assume part of the reproductive roles in their homes
- Help women coordinate productive tasks

2.4 OUTCOMES OF ASSISTANCE ON TRACEABILITY AND GOOD AGRICULTURAL PRACTICES

The program established an objective of including 7,000, of a total of 40,467 sesame farmers into a traceability system; close to 5,000 farmers are now included in some type of traceability. All four sesame exporters are now developing traceability systems, first with their local suppliers and second with their Japanese buyers. As a result of the training and technical assistance offered by the Program, these firms have started to change their management and focus on traceability.

The Japanese market is not yet demanding traceability, but it is interested in providing high-quality products to its consumers, and traceability can assure the quality control of Paraguayan sesame (see section on sesame achievements). The Program has installed and supported the take-off of traceability, but now, agribusinesses in Paraguay will have to take this to the next stage of its development. In order to stimulate traceability across industries, the Program has transferred the software to businesses, cooperatives and NGOs dedicated to lemon grass, organic sugar, other organic crops, and stevia.

PyP has organized 652 training events during the project's 36 months, or about 12 events per month, which are almost three events per week. This has helped PyP reach 7,909 small farmers, which now are introduced to and trained in GAP, traceability, gender approach and microfinance.



The results for the small farmers are better prices for their products, thanks to a simplified supply chain, with reduce intermediary costs. According to the midterm evaluation, the annual income for small farmer with traceability and GAP increased from \$1,583 to \$2,726 (see Table 10). The improved reliability and quality of the products received by the exporters form heir suppliers with GAP and

traceability, has still not have had visible large impact, like better market access and prices. This will come over time and have a long-term impact on farmers.

TABLE 10 – Impact of Good Agriculture Practices (GAP) and Traceability (TR)

CASSAVA		SESAME		CASSAVA/SESAME		AVERAGE	
WITHOUT GAP	WITH GAP	WITHOUT GAP AND TR	WITH GAP AND TR	WITHOUT GAP AND TR	WITH GAP AND TR	WITHOUT GAP AND TR	WITH GAP AND TR
1,500	2,198	875	1,891	2,375	4,089	1,583	2,726

Source: Midterm Evaluation Report

In terms of GAP, passion fruit yields increased from 5.500 to 8.000 kilograms per hectare, lemon grass yields from 2.000 to 2.800 kilograms per hectare, sesame yields from 320 to 720 kilogram per hectare and cassava yields from 15.000 to 30.000 kilograms per hectare.

2.5 MICROFINANCE IS ENTERING SMALL FARMING

According to a survey of 100 families made for the Final Evaluation, the beneficiaries of the Program satisfactory accessed micro-financial services. Based on the alliances with the exporters and the financial firms, small farmers received adequate financial services. Most used these resources for soil preparation, weed control, and harvesting.

The selection of microfinance providers strongly depended on the alliance between the exporter and the bank. The Program usually invited many potential banks interested in the business and organized training sessions, where the specific partnerships grew from mutual interests between the firm, the small farmers, and the bank. Some examples:

- In the case of lemon grass, most small farmers received loans from Cooperativa La Norteña because this is the firm buying up their crop. The loans provided by Cooperativa La Norteña were used for soil preparation and weed control. Before harvesting, the farmers got a small disbursement of \$70 and when they delivered the harvest this prepayment was discounted from the final payment. Close to 20% of the beneficiaries received resources for making investments, like buying more land or improving infrastructure.
- Those cultivating corn received a loan from ADM of \$280 in products like seeds, fertilizers and herbicides; in this case as well, the firm is the one which is buying the crop.
- The cassava farmers accessed microloans provided by Banco Visión, because the bank had an alliance with CODIPSA, the cassava buyer.
- Passion fruit producers have received most of their loans from the public bank CAH and used the loans for weed control, buying poles and wires. Frutika preferred to work with CAH because of its performance. Passion fruit farmers were content with the services provided.

- In the case of sesame there is more competition from microloan providers, like Banco Familiar, Banco Visión and Financiera El Comercio. Farmers expressed that once the export firms reached an agreement with the microloan provider, the process of accessing the services by them was considerably easier and conditions relaxed. Interest rates dropped as a result of these alliances from 35%-42% to 28% and the terms adapted better to the agricultural cycle.

The agreements between exporters and microfinance providers paved the way for more efficiency, better timing, and less bureaucracy. The exporters were interested in having services for saving and payments, and are now requesting this from the banks. Right now the firms are still paying the farmers in cash for their crops and assuming a lot of risk, which the bank could reduce if it developed appropriate products.

2.6 ACHIEVEMENTS BY VALUE CHAIN

At the beginning of PyP's implementation, the team identified high-growth potential value chains suitable for small-scale production. Some of these selections have been a great success and others, while innovative, have not been as successful. As Table 9 shows, the alliance with CODIPSA, ARASY, SHIROSAWA, LA FORTUNA, BIOEXPORT, MANDUVIRA and COOPERATIVA LA NORTEÑA have achieved the most leverage (60%), highest sales (98%), increased exports (97%) and employment (98%). In terms of sales, the ranking of the crops assisted is as follows: sesame (49%), cassava (33%), dairy (10%), sugar cane (5%) and lemon grass (2%). The other two crops – stevia and passion fruit – although they have not been successful in terms of sales, they have been greatly innovative and served as incubators for larger long-term ideas that are already having an impact.

Sesame

In the sesame value chain, traceability and trainings in GAP were central to PyP's assistance. The traceability system was developed during PyP's first year of implementation and was installed at Kemasem, Shirosawa, Bioexport, and Arasy. For details on the traceability initiative, see section 2.4.



On the other hand, PyP's assistance also included strengthening or helping establish producers' organizations to create a direct relationship with buyers, which is required for a seamless integration of the traceability system. A direct relationship not only means a better price for producers, but also an improved channel of communications to strengthen the level of trust between the actors involved.

As in most other value chains, the main concern was recovering the soil's fertility. Through PyP assistance, sesame farmers applied tillage and green fertilizers to increase productivity. Producers also learned to improve the management and usage of chemical fertilizers and disease control products. Producers replaced the practice of burning or burying chemical containers by taking them to recycling

facilities. Sesame producers commented that with agreements between agribusinesses and financial institutions, they were able to receive timely loans with lower rates.

Sesame in the northern district of Horqueta was also a good starting point for incorporating the gender approach. According to the information from the Final Evaluation⁶, in Horqueta, female participation on farms is high and are organized into farmer committees: 63% were male and 37% women. This region is also a region categorized by extreme rural poverty, which receives subsidies from the Government's Tekopora Program. The typical division of labor was that men worked in all phases of sesame production, whereas women only worked in harvesting, cleaning and packaging. The technical assistants of the Program worked closely with these farmers to connect them to a buyer, introduce GAP, traceability, microloans and generate awareness of gender equity.

Another sesame producing district which was evaluated is Guayaibi, where the farmers are organized in the Bertoni Poty Producers Association. All 126 farmers, 60% were men and 40% women, participated in the training sessions and technical assistance. Of a total of 88 farmers which accessed microloans, 55 were men and 33 women. Some 50% of the women participated in cultivation, weeds cleaning, harvesting and post-harvesting; the other 50% only participated in harvesting and in post-harvest.

Due to the drought that lasted through 2011 and the beginning of 2012, the sesame farmers have not reported specific increases of yield per Ha as a result of the Program's technical assistance, but also did not register losses, as did many farmers in Paraguay. The farmers did report an improvement of soil due to GAP, especially direct seeding techniques and the use of green fertilizers (black oats and 'mucuna'). Sesame producers hope to expand their production area by 30% as a result of their optimism with Sesame farming. An important achievement of the assistance was also the use of authorized pesticides instead of using informal products, and the environmentally friendly disposal of packaging of herbicides and pesticides. All farmers evaluated reported that they had improved their food crops.

Lemongrass

To complement sesame production, members of Cooperativa La Norteña produce lemongrass, an attractive short-cycle crop. In 2003, the cooperative began exporting organic lemongrass to Germany. PyP strengthened the cooperative's methods of technical assistance in many areas, through GAP, microloans, traceability and gender equity⁷. A 7% increase in sales during the 2011/2012 harvest was registered and an increase of 30% is planned for the next season.



The crop is especially suitable for women, because it requires no harsh pesticides or tough physical labor. During the Final Evaluation, of the 39 farmers interviewed, 24 were male and 15 women. Both men and women received training and technical assistance. 70% the beneficiaries of microloans were men and 30% were women.

⁶ Based USAID Paraguay Productivo, "Final Evaluation - Qualitative Assessment of Impact" (September 2012)

⁷ Based USAID Paraguay Productivo, "Final Evaluation - Qualitative Assessment of Impact" (September 2012)

The GAP assistance incorporated soil improvement techniques that promoted the cultivation of plant varieties to cover the soil, such as lupin, black oaks, mucuna, kumanda yyrai (local variety) and rotation of cassava, sesame, corn and lemon grass crops. The use of biofertilizers has been introduced by the anchor firm to the lemon grass farmers.

Cassava

CODIPSA is a cassava production company, whose owners are engaged in giving small farmers opportunities to overcome poverty. CODIPSA has three cassava processing plants, two in Caaguazú and a recently inaugurated one in San Pedro. The new plant has the capacity to process 200 tons per day, and will increase to 600 tons per day in the coming years.

In 2010, only 50 percent of the raw material processed by their plants was received under any form contractual agreement. This represented a challenge to the firm, not only limiting their capacity to provide assistance to the farmers and improve the quality of the product, but also increasing the uncertainty of the amount of raw material available. CODIPSA was interested in increasing the number of raw material providers under contract to overcome these limitations. In the third plant, CODIPSA plans to produce natural modified starch destined for the European market.



The alliance between PyP and CODIPSA was formalized to expand cassava production and improve its productivity through good agricultural and soil conservation practices. PyP technicians also focused on strengthening producer organizations and their relationship with the company.

These organizations were trained and encouraged to draft sales contracts with CODIPSA. The capacity to organize is important in establishing a sense of unity among small producers. Before the alliance with CODIPSA, most cassava producers sold their products to the local market. Through PyP's assistance, farmers sold more than half of their production through sales contract with the firm. They benefitted from a secured market and a previously set price-agreement. This allowed them to access to loans more easily, which they used to expand crop areas.

The firm also provided technical assistance – with PyP's guidance – in good agricultural practices. Producers increased crop areas and productivity, translating into more income for families⁸. By the end of PyP's assistance, interviewed cassava producers interviewed increased their yields by around 40 percent.

With the construction of its third production plant in San Pedro, CODIPSA aims to become a leader in the production of cassava starch. The plant was constructed in 2009 and 2010, and began operations in March 2010 with a capacity of 200 tons of cassava per day and reaching 600 tons per day in 2012.

⁸ Results obtained from Qualitative Assessment of Impact

The initial investment for the plant was estimated at US\$ 4 million followed by US\$ 3 million to expand processing capacity. The plant is estimated to have a useful cycle of 40 years. Around 196,000 people have a relationship with the processing plant. Of this group, an estimated 13,800 people will have a strong economic and social relationship with the new plant investment.

Accumulated sales for the next 40 years are expected to be around US\$ 300 million with sales of 638,956 tons of cassava at a price of US\$ 469 per ton. The business expects to export US\$ 209.8 million, an average of US\$ 5.2 million per year.

In these 40 years of operation, income for small farmers is expected to value at US\$ 178 million through the sale of 2,555,831 tons of cassava. The cassava production plant is expected to generate 2,300 direct and indirect jobs.

Passion fruit

Frutika, one of the largest fruit and concentrates processing industries in the country, has expanded successfully since its establishment in 1995. It has its own 1,800 hectares of citric plantations and it buys fruits from small producers all around the country. However, its industrial plant works only at half capacity because of insufficient raw materials. In December 2009, PyP signed an alliance with Frutika to work with producers' organizations to introduce organic passion fruit as a high value market alternative.

PyP designed a training program for technicians and producers on the organic certification process and organic production techniques. Producers and technicians have both participated and given extensive trainings and assistance to producers interested or already producing the fruit. The introduction of organic production had a positive environmental impact and farmers worked under healthier and safer conditions.

Through PyP's alliance with Frutika, the firm was able to build stronger relationships with producer organizations through a crop expansion plan. With PyP's guidance, Frutika provided farmers with seeds and technical assistance. The firm also committed to buying the production. Because of PyP's intervention, producer organizations developed a long term relationship with the business. Trainings in good agricultural practices, focused on organic production techniques, and helped producers achieve higher productivity. Passion fruit producers involved with the PyP program, had yields more than 60% that that of producers not involved in the program.

On the financial end, because of PyP's intervention in the financial sector, producers accessed loans adapted to the particular characteristics of the crop. Producers invested most of their loans in soil preparation, crop cleaning, and harvesting.



Organic sugar cane

Cooperativa Manduvirá is a world leader in the production of organic and fair trade sugar. More than 800 of its members produce 150,000 tons of sugar cane a year. In 2008, the cooperative exported 6,200 tons of processed organic sugar which represented an income of US\$ 3.7 million.

As part of a fair trade deal each sugar cane producer receives a “Fair Trade Premium”. Half of the payment stays in the cooperative as social capital and farmers keep the other half. Cooperativa Manduvirá has invested part of this Premium into health care programs and school supplies.

With the international demand for organic sugar growing daily, there is considerable room for expansion. However, Cooperativa Manduvirá has found it difficult to expand its facilities to be able to process all of its members’ sugar cane production. Although farmers produce 150,000 tons of sugar cane a year, the cooperative has the capacity of processing only 60,000. The cooperative does not own its sugar mill and has to rent a processing plant that is 90 kilometers away from the main production area. This leads to enormous logistical bottle necks and high transportation costs.

Distance also represents a risk to sugar quality. Ideally, sugar cane should be processed within 48 hours of harvest, but producers had to wait 4 to 5 days. This was a direct negative impact on the cooperative members’ economic return.

Paraguay Productivo signed an agreement with Cooperativa Manduvirá in December 2009 to support them in analyzing different options to build and finance a new processing plant. The PyP team also assisted the cooperative in understanding the scope of a project of that scale.



The plant should start operations during the 2013 harvest with a production capacity of 1,000 tons of sugar cane per day and a total of 120,000 tons per year. Paraguay Productivo helped identify strategic partners and provided financial technical advice on how to tap and mobilize the required financing. As a result of this advice, Oikocredit, InterAmerican Development Bank (IADB), CRESUD (CTM Altromercatto representative), Responsibility, and local private financial institutions took part in the investment.

Manduvira's sugar cane production plant began construction in 2011 and will be finalized in 2013, becoming the first producers' organization that owns its own sugar mill, exporting its products to the highest quality markets around the world. It is expected to operate for 40 years.

With an investment of US\$ 17 million, around 76,000 people are expected to be linked to the project. Around 10,000 people are expected to have a strong economic and social relationship with the processing plant. The processing plant will generate 2,000 indirect and direct jobs.

Sales during the 40 years of plant operation is expected to reach US\$ 395 million with the sale of 556,271 tons of organic sugar at a price of US\$560 per ton and 192,886 tons of brushwood at US\$85 per ton. The cooperative expects to export US\$ 7.7 million to Europe each year.

Utilities for farmers are expected to reach US\$2 million per year for the first 10 years of operation and US\$1 million per year as part of the Fair Trade Premium, which is invested in education and health for members of the cooperative.

Stevia

For many decades Paraguay tried to explore the commercial possibilities of the Stevia Rebaudiana Bertoni, or ka'a he'e, plant, a native herb 300 times sweeter than sugar. In the 80's the Japanese took the herb from Paraguay to Singapore and China where they developed some commercial varieties which were used as natural sweeteners in food and beverages.

However, it wasn't until the late 2000's that the FDA allowed the sales of ka'a he'e as a natural sweetener in the United States (up until then it was only accepted as a nutritional supplement) and sales of ka'a he'e around the world soared. This trend is likely to continue.

In Paraguay, the native variety of ka'a he'e grows and adapts easily and needs little care. However, it does not produce a consistent amount of the main sweetening component. Imported industrial varieties, which have the amount of sweetening component required by the industry, are not easy to manage and are more expensive and risky for small producers to grow. The big challenge for Paraguayan farmers is to find an appropriate variety that meets industry standards.

Ka'a he'e represents a potential source of income for rural workers and small farmers. During the first year of growth, one hectare of Stevia or ka'a he'e requires an average of 140 days of labor, making it a very labor intensive crop. An improved and adequate technology could contribute to lower costs and expand the area of production, providing an important source of work to many rural workers and their families.



PyP allied with Cooperativa Colonias Unidas to help find more appropriate varieties and production techniques for small farmers, in terms of technology and logistics. The know-how developed by Colonias Unidas trials with new varieties and new multiplying methods will be shared with other cooperatives of small producers associations around the country.

PyP also partnered with Archer Daniels Midland Company (ADM) Paraguay S.A. to offer more families the option to produce stevia or ka'a he'e of the local variety to increase their sources of income. Paraguay Productivo provided the technical assistance, ADM facilitated access to loans and then purchased the production.

With ADM, PyP also promoted the introduction of an early-variety of maize, to provide additional incomes for small farmers throughout the year. With a secured market, producers will more easily access loans and increase their production area by 33 percent. Average productivity increased from 2,050 to 2,500 kilograms per hectare expecting sales to increase significantly. Since the alliance was consolidated during the last year of PyP's implementation, before the end of the productive cycle, sales are based on projections⁹ and there is still a lot of potential for growth in this sector.

⁹ Results obtained from Qualitative Assessment of Impact

Dairy

In Paraguay, the demand for milk has progressively increased, motivating milk companies to increase their industrial capacity. This increase has not, however, been closely followed with an increase in the volume of production. PyP identified the needs of this sector and allied with a local cooperative, Cooperativa La Fortuna, interested in sourcing larger quantities of milk produced by small farmers.

PyP technicians provided technical support to elaborate a best practices manual in milk production, which served as a basis to train producers. With proper management and hygiene techniques, the raw material reached the quality standards as well as the volume required by the industry. With the assistance, producers sold an additional US\$6 million, and created 1,685 jobs.

The PyP program also worked closely with the cooperative and financial institutions to develop financial instruments appropriate for the dairy value chain.

3 PROGRAM ESSENTIALS

The Program's approach discussed in Section 1 and its achievements commented in Section 2 were possible thanks to four key components, which have had far reaching influences: A. The technical staff; B. The budget; C. The communication strategy; and D. The Trilateral Agreement between the US, Chile, and Paraguay.

3.1 THE IMPLEMENTER AND THE PARAGUAYAN STAFF

PyP was implemented by CARANA Corporation as a prime contractor, and ACDI/VOCA as a subcontractor providing support in the financial component. The Program was managed by a 15 member staff located in Asunción office, led by the COP, Reinaldo Penner, and a Deputy, Henry Moriya, and guided by the Financial Specialist, Fleming Duarte, all from Paraguay.

In the third quarter of FY 2011, the Program selected the new COP mentioned above and changed most of the staff and positions. Except for Mr. Moriya and Mr. Duarte, all key personnel were changed. Thanks to CARANA's guidance and ACDI/VOCA's support, as well as continuous support from USAID/Paraguay, the project maintained its strategic vision, which was given good reviews by the Midterm Evaluator (see Section 4). Many of the strategic sustainability goals achieved in the final year were due to the extensive experience of the new staff and the support of the older staff.

The PyP Program partnered with 20 firms under the GDA model; each of these 20 GDAs was a project on its own, with an MOU, with its own targets and its own project resources, explicitly leveraged by the anchor firm. The objective of these twenty GDA's was to provide technical assistances (see Section 1) in order to reach the target results (see Section 2), mainly sales and employment among low-income rural family farms.

In order to achieve these results, the program deployed 155 professional consultants to provide technical and financial assistances, 34 contracted directly by the project and 121 by the partner firms (see Table 11). These 155 professionals were managed carefully by the three PyP GDA managers working closely with the anchor firms and reporting to the Deputy Chief of Party and the Financial Specialist of PyP. USAID/Paraguay played a key role in supporting and advising the activities. The project was also able to harness CARANA's home office and international expertise.

TABLE II – Technical Assistants under Contract per 14 Real Sector GDA's¹⁰

GDA	CROP	TECH. ASSISTANTS OF THE PROGRAM	TECH. ASSISTANTS OF PARTNER FIRM
ADM	CORN, STEVIA	2	
GRANULAR	STEVIA		
FRUTIKA	PASSION FRUIT	2	2
ARASY	SESAME	7	16
KEMASEN	SESAME		4
SHIROSAWA	SESAME	10	60
BIOEXPORT	SESAME, MOYASHI	3	4
CAPIIBARY	PASSION FRUIT		2
COLONIAS UNIDAS	STEVIA		
LA NORTEÑA	SESAME, LEMON GRASS	1	4
CODIPSA	CASSAVA	5	19
LA FORTUNA	DAIRY	2	1
MANDUVIRA	SUGAR	1	6
SANJUBA	SUGAR, PASSION FRUIT	1	3
TOTAL		34	121

Source: PyP Office Manager

3.2 PROGRAM BUDGET AND MANAGEMENT

The \$5,955,110 budget was focused on providing targeted technical assistance within the 20 GDAs, which absorbed about 73% of total spending (see Table 12: total LOE + ODC GDA's). During the first fiscal year of the project, careful attention was paid to setting up the alliances and contracting the professional for the field activities. Once the Work Plan and PMP were established, the activities during FY 2 and FY 3 absorbed similar amounts resources. At the end of the project, a significant amount of ODC resources were invested in outreach and communication material.

During FY3, the spending in LOE was gradually leveling off from its peak. Most of the technical assistance provided by the 34 project-hired professionals was gradually discontinued and many partner firms assumed these costs at the end of the Program, in numerous cases with the same personnel. The agricultural cycle of Paraguay is such that the project was fully active for only two seasons during its 36 month.

In order to accredit results of the technical assistances, the restriction to only two agricultural cycles limited the activities of the Program to non perennial crops. Many other limitations imposed by the Mission, like citrus fruits, ethanol and sugar¹¹, further imposed restrictions for selecting the right crops, professionals and farmers for achieving the results. Flexible and efficient project management was a key to success considering the short seasons, USAID agriculture restrictions, and harsh weather.

¹⁰ The other six financial GDA's did not have these types of ST consultants which were in the field for the complete agricultural cycle (7 – 9 month), but had ST assignments composed of many specialist with an effort of some weeks or month.

¹¹ The waiver for organic sugar was received only at the end of second agricultural cycle of the Program.

TABLE 12 – Quarterly Spending per Cost Category (\$ 000')

	Q1 FY1	Q2 FY1	Q3 FY1	Q4 FY1	Q1 FY2	Q2 FY2	Q3 FY2	Q4 FY2	Q1 FY3	Q2 FY3	Q3 FY3	Q4 FY3	TOT.
LT LOE	141	126	325	243	236	230	232	271	233	216	220	190	2,661
ST LOE	0	3	19	25	117	163	148	166	219	135	126	107	1,227
TOTAL LOE	141	129	344	268	353	393	379	437	452	351	346	297	3,888
ODCs (GDA's)	0	0	5	43	72	60	48	48	62	31	42	22	432
ODCs (OTHER)	118	122	99	79	144	78	186	136	135	108	149	282	1,635
TOTAL ODCs	118	122	103	122	215	138	234	184	197	139	191	303	2,067
TOTAL	259	251	447	390	568	530	614	620	649	490	537	600	5,955

Source: PyP Office Manager

In order to manage the ST consultants efficiently paying special attention to the interests of the anchor firms, to the project conditions and targets, and the requirements of the beneficiaries, the project organized activities through the three GDA managers. They were key to managing the project. For this, they negotiated with the Office Manager the use of 'their' budget; managed the contacts with the anchor firms' management; informed the M&E unit; and reported to the staff each Monday during staff meetings.

3.3 COMMUNICATING THE APPROACH TO THE PEOPLE

The initial communications slogan for PyP was "Small Producers Large Opportunities" and was changed during the project's second year because the project thought it was important to include the concept "sales" or "business" in it. The key audience, especially the small farmers, the cooperatives, firms and the Government were not aware of the meanings behind 'shared value' or even 'value chain'.

Value chain was the most important concept used by PyP but many confused it with the production chain, and did not associate it with sharing value. The technical staff and the communication unit agreed in 2011 to use the slogan "Planting Alliances for Sales".

In order to communicate with the professionals, small farmers, cooperatives and partner firms, the Program used many tools like the SMS system; large meetings at some farms; folders summarizing the keys for success in small farming; videos; conferences; roundtables, technical reports and academic courses at universities.

The SMS Tool

The challenge was to effectively bring changes at the farm level for small producers. USAID/Paraguay's original idea was to reach ten thousands farmers with technical assistance and training was translated into a more realistic indicator of 14,000 beneficiaries. This target implicitly established that the project would need some 140 professionals in the field (100 clients per assistant).

PyP reached this target but the size of family units that needed assistance far outnumbered the capacity of the agronomists. The plants processing sesame, sugar cane, cassava, lemon grass, stevia and dairy simply have a severe problem of unused capacity due to scarce raw materials. For this, the Program introduced a system of contacting the farmers via SMS, using software installed at the anchor firm or cooperative which deals directly with them. Messages were passed along to the farmers on technical and

trade issues, meetings and recommendations, saving considerable time for the extension agents because they did not have to visit each family separately.

Technical folders for farmers

Small farmers received a two page folder, with simple language, plenty of pictures, graphs and technical recommendations for producing white and black sesame, sugar cane, cassava, lemon grass, stevia, passion fruit and dairy. All agronomists were asked to disburse the folders along with five other cross-cutting folders on: sales alliances, gender, microfinance, GAP and traceability. The technical assistants used these folders during meeting and visits to the rural families. After PyP ended, the master and layouts of these folders were delivered to the anchor firms, cooperatives and banks in order to facilitate the reproduction.

COMMUNICATING BEST PRACTICES THROUGH TECHNICAL FOLDERS

5 BUENAS PRÁCTICAS DE GÉNERO



3. ANÁLISIS DE LOS ROLES DE GÉNERO EN EL ÁMBITO PRODUCTIVO: En forma previa se debe tener un diagnóstico de la organización de tareas al interior de la finca. ¿Quién hace qué? Esto es fundamental para programar las acciones futuras en cuanto a capacitaciones y acceso a los otros recursos productivos ofrecidos por el programa, garantizando que ellas conforme a sus roles también sean beneficiarias. Esta información, permitirá que la asistencia técnica esté dirigida a las mujeres, y a los varones, conforme a los roles que ambos realizan al interior de la cadena, ya sea en la producción, transformación, y/o la comercialización, según el esquema que se presenta.

4. IDENTIFICACIÓN DE LIDERESAS Y SUS PROCESOS ORGANIZATIVOS:

Se debe identificar líderes, mujeres que pueden informar y transmitir el mensaje a sus pares sobre el proyecto, y trabajar coordinadamente con ellas y sus organizaciones para promover la participación de mujeres no organizadas y su incorporación a los niveles organizativos existentes. También es fundamental, identificar los hogares donde las mujeres son jefas de hogar, facilitarles la información y promover su participación en el Programa.

5. METODOLOGÍAS PARTICIPATIVAS DE COMUNICACIÓN:

Es importante tener un diálogo abierto, sencillo y horizontal con los varones y las mujeres; procurando mantener una escucha activa de los intereses que manifiestan ambos, con la mayor empatía posible, de manera a responder sus necesidades y prioridades.



PARA FAVORECER EL ACCESO MÁS EQUITATIVO DE MUJERES Y VARONES A LA ASISTENCIA TÉCNICA



PARAGUAY PRODUCTIVO
Sembrando el futuro para vender

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PARAGUAY PRODUCTIVO
Sembrando el futuro para vender
UN PAÍS DE OPORTUNIDADES
UNIÓN DE AMÉRICAS

Best Practices for Gender Equity in Value Chains

Sésamo

8. Cosecha/corte/emparvado

- Se inicia cuando las plantas presentan una coloración amarilla, comenzando en el centro de la parcela.
- Pérdida de hojas: su ciclo es de 110 a 120 días.
- Se realiza el corte antes que las vainas se abran y dejen caer las semillas.
- Realizar el corte a 30 cm. del suelo.
- Realizar parvas no muy grandes para facilitar el secado, y obtener grano de buena calidad tipo exportación. Se necesita de 12 a 15 plantas para la formación de un mazo.
- 4 a 8 mazos forman una parva que se sujetan con hilo y traban con el resto del cultivo que se encuentra en el suelo.
- Se deja en la chacra aproximadamente 15 días al sol para el secado.



8.2 Trillar

- Esta operación se realiza a los 15 días después del corte. Consiste en tumbar el mazo y agitarlo con las manos y/o una varilla para que caigan los granos.
- Se realiza sobre una carpa limpia.



8.3 Zarandeado y Limpieza

- Consiste en eliminar la impureza (hojas, arenas, pabillos y otros), mediante una malla metálica, ayudado por un ventilador.
- Se recomienda separar las arenas de los restos de hojas y otros.

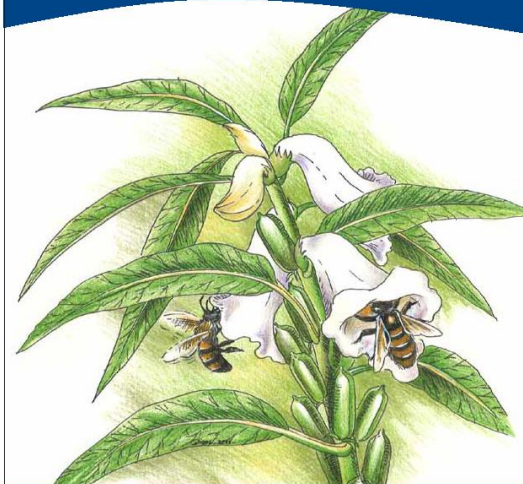


9. Cargado y embolsado

- El producto debe estar seco y limpio cargado en bolsas limpias de 50 kilos bien atadas.
- Almacenar sobre tabloncillos de madera en el depósito.
- No arrimar a las paredes.
- Cubrir con carpas para evitar contaminaciones.



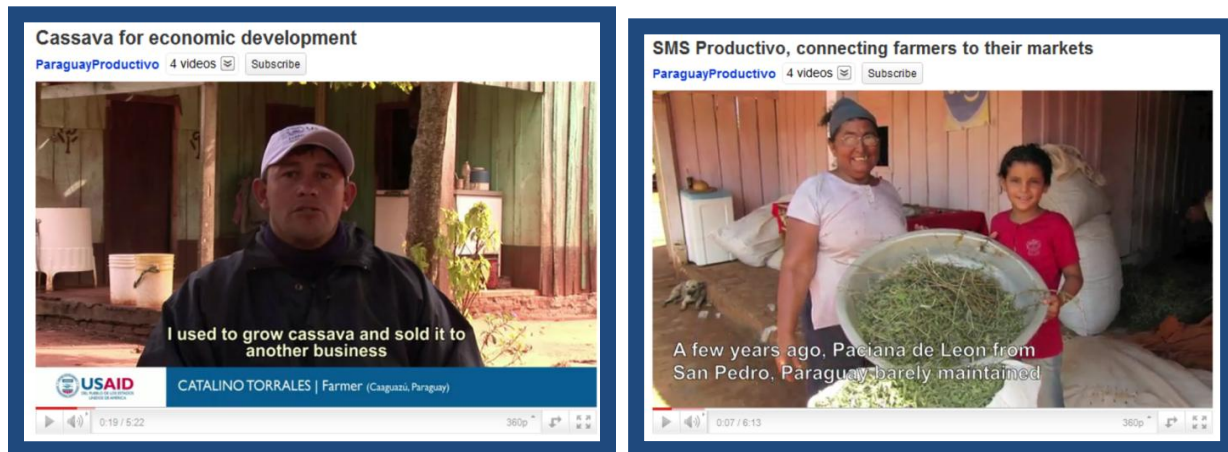
BUENAS PRACTICAS AGRICOLAS EN EL CULTIVO DE SÉSAMO, VARIEDAD ESCOBA



Best Practices for the Cultivation of Sesame

Video Production

The arguments and recommendation of the five key technical issues – sales alliances, gender, microloans, GAP and traceability – have been incorporated into videos which were showed during meetings. The cultivation, processing and sales of cassava and sugarcane are as well documented in videos and have been showed at two ‘Cracking The Nut’ conferences in Washington.



YouTube Links: [SMS Productivo, connecting farmers to markets;](#)
[Cassava for economic development](#)

Cassava Conference

Cassava is the largest crop produced by small farmers in Paraguay and used for both food and industrial purposes. Paraguay is the largest exporter of cassava starch in South America and the fourth internationally, but the farmers and the Government still approach the crop as a basic food product. PyP found that cassava cultivation should be expanded because of the availability of land and buyers in the region. Furthermore, the Program concluded that the firms and Government should setup a research unit for improving varieties and yields in order to meet competition from Asia and Latina America.

For this, the project helped to set up a business association for starch producers – CAPAMA – and in August 2012, partnered with the Government to organize an international conference on cassava starch which had more than 300 participants. The results was that the Government of Paraguay and CAPAMA are now launching a special project with the CLAYUCA CORPORATION and the International Center of Tropical Agriculture (CIAT) to promote research and increase the farming area in Paraguay.

Microfinance Conference

In September 2012 the Program launched a study and organized an international conference on rural microfinance in Paraguay with the objective of promoting private investment in this area. As already mentioned in Section I, rural microfinance should expand in Paraguay because of the excellent opportunities for increase cultivation and export of small farmer’s crops.

The study on rural microfinance used secondary sources for compiling the tables, but it shows convincingly that the penetration of microfinance in rural areas is about 15% and that Paraguay's high ranking (N° 12) by international standards relies heavily on urban microfinance. Since Paraguay, compared to the rest of South America, is one of the countries with one of the largest rural populations, the real issue should not be urban microfinance, but rural microfinance.

This was the main issue addressed at the conference and most banks, cooperatives and financial institutions were present at the event, which was closed with a roundtable of the main players (investors, international agencies and banks, bankers and public supervisors). One of the first insights which came out of this meeting was that the Central Bank of Paraguay does not disclose statistics on rural vs. urban micro financial data. The 'Red de Microfinanzas', mentioned in Section I, is now preparing activities based on the conclusions of the conference.

Saturday morning roundtables

Three roundtables were organized in order to discuss the key subjects tackled by PyP:

- The lack of rural microfinance in Paraguay and the opportunities for the private sector to invest in it;
- The need to refocus public sector agencies that promote small farming towards a value chain approach instead of only centering on community development and food security;
- The need of initiating a program at universities for researching value chains and strategies like shared value between firms and small farmers

These somewhat delicate issues were approached professionally by the PyP team by organizing roundtables with the Government, the universities, the private sector and the professional community. The three events were important for their analytical value and openness between Paraguayan decision-makers and professionals and may facilitate changes which are urgent in order to effectively approach the high levels of rural poverty in the country.

Outreach to Academia

The technical approach discussed in Section I shows that the Program followed an eclectic path towards alleviating poverty and, although the team identified with the value chain approach, no specific theory or agency's method was prominent in the implementation. In order to advance the academic study of the approach, PyP organized a course on this approach given by local members of the university community as well as a prominent professional from the German GIZ's rural value chain method, and an experienced teacher of the Brazilian SEBRAE approach.

The alumni of this course closed the event by participating at a PyP organized 'Saturday Morning Roundtable' at the National University of Asunción, which is the main academic center of the country. This event provided interesting insights into the Paraguayan method of reactivating small farming by using private leadership (exporting firms and cooperatives) and that complements well with food security objectives.

Technical Reports

The Program's closing activities include three reports on gender, microfinance and traceability, which are issues the team considered to be important for promoting further developments after finishing PyP in September, 2012.

- The gender report provides the tools for incorporating this approach to any project for value chain farming. PyP's experience is based on a late start to the approach, but the results are visible and encouraging because it managed to incorporate women but also youth into sales alliances with family units. Rural youth normally would not be interested in farming, but with this effort to generate a more balanced participation within the family, it is possible to get the youth on board¹².
- The micro finance report provides many insights for investors interested in this activity. All private and public banks, cooperatives and NGO's which operate in rural finance are analyzed in the report.
- Traceability is being introduced very quickly into agribusiness and when thousands of small providers are involved, the only experience in Paraguay is based on PyP's sesame involvement. The report shows how the firms are changing their management style once they opt for traceability, and most importantly, how they get a more direct relationship with small farmers.

The Closeout Event was dedicated to the Families

The most important closing event for PyP took place in Coronel Oviedo, where 200 rural families benefited by PyP were present and took the opportunity to speak at the microphone to all participants about their personal experience. This moment showed clearly that PyP was a project meant to develop people, not for the products, the firms or the cooperatives, and especially, not for the professionals. Thanks to the hard work of our Gender Consultant, Venus Caballero, the gender and poverty impacts were clear by the large amount of women and youth participants.



¹² Paraguay's population below the age of 25 represents 55% of total population (at global level, this percentage is 43%).

3.4 THE US/CHILE/PARAGUAY AGREEMENT

An important part of the Program was the agreement between USAID and the Chilean development agency (AGCI) and the Paraguayan Ministry of Agriculture and Livestock (MAG). The main activity of this agreement considered analyzing the several categories of small farmers; furthermore, the agreement considered training the agronomists from the MAG to assist the different small farmers in a more appropriate way.

After the research was performed under this Agreement, the MAG's Department of Statistics described the characteristics of the four categories of small farmers (see Table 13 below). The data shows that only 12% of the families assisted by the MAG have a high percentage of crops reserved for personal consumption (51%) whereas the remaining three categories are mostly dedicated to selling their crops. The conclusion is that there is a great potential for integrating food security into value chain strategies.

This is what the Program has experienced in the field; small farmers wanted to be part of sales alliance to produce sesame, cassava, sugarcane, passion fruit, lemon grass, stevia and dairy. At the same time, these small farmers are beneficiaries of the subsidies from the 'Programa Tecopora' (monthly aid money given to the poorest) and/or they receive assistance from the MAG's 'Programa PPA' for food security.

TABLE 13 – CHARACTERISTICS OF FOUR CATEGORIES OF SMALL FARMERS

	VERY LOW INCOME	LOW INCOME	MEDIUM INCOME	RELATIVELY HIGH INCOME
FARMERS IN % OF TOTAL	12%	34%	41%	7%
INCOME IN GS.	1.500.000	3.000.000	7.755.000	16.000.000
AGRICULTURE INCOME IN % OF TOTAL	48	68	79	85
CAPITAL EQUIPMENT IN GS.	0	150	560.5	750
CATTLE # ANIMALS	0	1	2	4
PORK # ANIMALS	1	2	2	3
CHICKEN AND OTHERS # ANIMALS	11	15	20	30
CROPS FOR PERSONAL CONSUMPTION	51%	28%	13%	6%
CROPS FOR SALES	49%	72%	87%	94%
AVERAGE NUMBER OF CROPS	3	4	4	4
FAMILY MEMBERS	4	4	4	4
MONTH SPEND AT FARMING P/YEAR	9	9	9	10
PERSONNEL CONTRACTED #	0	0	1	2
EXTENSION OF THE FARM IN HAS.	2	4	5	8
FARMS WITH LAND TITLES IN %	15	25	31	44
RECEIVING TA IN %	49	55	62	63
RECEIVING MICROLOANS IN %	7	16	26	46
ORGANIZED IN %	77	83	89	90

Source: Edgardo Nuñez, MAG/RENAF

In order to generate a better understanding of the integration between the value chain and food security approaches, the Program organized training sessions and courses with the technical staff of the MAG. The sessions and courses took place in seven locations and contributed strongly to generate more integration between the project's technical & financial assistance and the public sector's institution. One important component of these courses was to provide training to technical staff of the public micro financial bank CAH for dealing more appropriately with the different categories of small farmers.



4 MONITORING & EVALUATION

The monitoring and evaluation activities were directed to show results per GDA. This was achieved by working closely with the three managers and the IT manager, in order to get the precise information from the firms, store it effectively into the system, and produce the required reports. The impact measurement started with the Program Monitoring Plan, approved by the Mission, which established a set of 17 indicators.

These indicators were changed after the Midterm Evaluation recommended simplifying the monitoring of the Program, and introduced it to 14 indicators which effectively represent the achievements and impacts of PyP (see Table 8). Many important issues regarding the M&E responsibilities of the Program are anchored in the Midterm Evaluation.

Midterm Evaluation

This document introduced many issues and recommendations which are now part of the lessons learned, the Midterm Evaluation was done in 2011 and its conclusions generated some important changes to the Program. The summary of the report is as follows¹³:

- The Program has been redirected to focus towards productivity issues, with emphasis on best agricultural practices, farmer organization, small farmer access to credit and traceability. This change appears to be headed in the right direction, especially given the changes to its original design by shifting its primary focus towards production rather than marketing, as well as including best agricultural practices and traceability in the services that the Program offers to small farmers. The linking of small farmers who understand the need for high quality agricultural products to credit access and secure markets embodies the real issue behind the sustainability of Program's activities long after its termination.

The PyP staff was fully aware of the Missions' focus shifting from trade to productivity. The Program was trying to make the economy of small farmers more sustainable thanks to its actions developing access to higher value markets. These actions were not performed directly, but indirectly by choosing the right trading partners in Paraguay and by focusing on the products value instead of prices.

- The heavy emphasis on policy changes in the trade and investment enabling environment are not within the realm of the Program to revise, and have been dropped. But the Program still has to take care of many sensitive policy issues (see Subsection 3.4)
- The Results Indicators list is at best confusing and does not provide guidance as to their priority towards project goals, namely sales, jobs, and, possibly, leveraged funding. Therefore, a complete reorganization of the performance indicators in both form and substance, as well as in the numerical targets agreed to under the contract is recommended.

¹³ Taken from Paraguay Productivo Quarterly Report April-June 2011

The staff has had many meetings with the Mission and discussed it at length. The conclusion was that it would be possible to restate the terms of the PMP but that it would not be recommendable to change the performance indicators.

- The original Program's time frame of three years, its funding level of \$ 5.9 million, and its late start up correlates with only two agricultural cycles.

The team's consideration – which has been approved by the Mission – was that since the PyP Program ended before the completion of the third agricultural cycle, the M&E unit should include in the final results of the Program at least some 50% of the projected sales and employment.

- The GDA firm's technicians should fully take part in the hiring of project provided technicians, and a mechanism for replacing poorly performing technicians.

The Program's team has been reorganizing in order to strengthen the links between the short term consultants and the partner firm's managers. But there are as well opposite considerations. Many small farmers' organizations complain about the difficulties of getting the consultants stick to the planned activities, namely that they really are present at the farms as agreed upon.

As stated above, the consultants were subject to a shared management model, where the firm manager takes the technical lead, the Program manager the administrative lead, but the small farmers are the final beneficiaries of their activities. This was complex to manage. If evaluated with the great results in terms of sales and employment, the model is the model is the right one, but that the Program managers have been empowered to take corrective actions, coaching and supervising the ST consultant's activities, in order to get a balanced effort and benefit for the firms, the farmers and the Program.

- As part of the Final Evaluation the Mission and CARANA agreed upon three analyzes: 1. Impact of the Program at family level of at least 100 farmers; 2. Impact at small farmers and urban population of the new plants of CODIPSA III and of MANDUVIRA; 3. Poverty assessment according to the USAID's PAT model.

The Beneficiaries Database

After these important assessments, the M&E unit made more appropriate definitions of the indicators regarding the beneficiaries, which resulted in the four indicators, mentioned in Table 14. These changes have been fully discussed with the Mission and the team. At the end, the M&E unit setup a new database, reviewing all the historical records regarding beneficiaries. In order to ensure the integrity of the results, each beneficiary had to have at least a name and surname on file and indicator 1 was to be a number solely on its own that did not include any beneficiaries listed under indicators 2, 3 and 4.

TABLE 14 – THE FOUR INDICATORS MEASURING THE SMALL FARMERS BENEFICIATED

1. NUMBER OF SMALL FARMERS ASSISTED	16,433
2. NUMBER OF SMALL FARMERS RECEIVING MICROLOANS	10,546
3. NUMBER OF SMALL FARMERS TRAINED DURING EVENTS SUPPORTED BY USAID	7,909
4. NUMBER OF BENEFICIARIES OF SUSTAINABLE ENVIRONMENTAL ACTIVITIES	6,564

Source: Monitoring and Evaluation Unit

Qualitative Assessment of Impacts

The assessment of the small farmer’s families was assigned to a local consultant during the months of May and June of 2012, at the end of the Program implementation. The consultant interviewed 100 families in the value chains of lemon grass, corn, cassava, passion fruit and sesame. The analysis was conducted around six subjects on gender, food security, good agricultural practices, natural resources management, connection to markets, and access to microloans. The most important conclusions of this study are already commented on in Section 2.

Poverty Assessment

The PAT – designed to identify the percentage of people living underneath the extreme poverty line among the programs beneficiaries – was conducted among the producers assisted during the last 18 months of the Program implementation. 10,646 farmers was identified, of which 502 were successfully interviewed, reaching a precision level of less than 95 %. The surveys showed that 100 percent of PyP’s beneficiaries are extreme poor – meaning they are earning less than 1 dollar per day.

Long Term Investment Impact Assessments

Long term investment impact assessments were conducted with two of PyP’s allies, CODIPSA and Manduvira. The reports analyze the potential effects and impacts of the long term investments – CODIPSA’s cassava processing plant and Manduvira’s sugar mill – on socioeconomic development in Paraguay. The research process included interviews with key players, including managers, authorities and families, along with secondary information. It was conducted in the months of May, June and July of 2012. The long-term impact assessment found not only an increase in sales and yields, but also an increase of almost 10% in female participation in economic decisions, improved food security, and a marked reduction in deforestation as a result of good agricultural practices.

5 LESSONS LEARNED AND RECOMMENDATIONS

Selecting Anchor Firms. The first step toward sustained success and building long-term alliances was the strategic selection of anchor firms. The staff's personal networks as well as heavy interest from partners built strong alliances. Of the twenty signed agreements, only one did not reach its targets. (Cooperativa Capiibary, did not have the management capacity to work with PyP as closely as the other firms.) Frutika and Granular, in the passion fruit and stevia sectors respectively, achieved great results and improved the quality of life for smallholder farmers, but the products required far more investment and man hours that the project could withstand. The two firms were ready to be engaged at a deeper and more concentrated level. There is demand from all twenty firms for continuous work to help leverage funds and build the capacity of the cooperative structures. Areas for additional investment, that will yield significant additional results include building local capacity, crafting and strengthening new and existing market linkages, and resolving additional value chain bottlenecks.

Selecting Crops. Crop selection was crucial in reaching some of the poorest small farmers in Paraguay. The choice of crops in which to was not taken lightly, and required close cooperation with anchor firms, careful study of market demand, and estimation of relative impact. All seven crops were successful in different ways. Cassava and sesame created the yields and sales that allowed for the expansion of innovation technologies such as traceability and the SMS Productivo. Lemon grass and dairy improved the resilience of smallholders by diversifying their crops. Organic sugar cane was a conduit to true innovation in cooperative governance and financial packages structured to meet these innovations. Stevia and passion fruit had impacts on very high-value crops and integrating women into these chains.

Leveraging project resources. The right mix of agricultural technical assistance, improving access to finance, and private sector investment had meaningful impacts on sustainability and livelihoods. This was an innovation for Paraguay and will have results long after the project. A small farmer, on his own, cannot increase cultivation, improve yields, and farm more sustainably. However, the program was able to combine private sector demand, financial sector interest in agriculture, and global best practices to provide small-holder farmers with the tools necessary to have sustained impact. PyP worked as a facilitator for all these services, but also provided many of the most impactful services. The management model for ST consultants generated great rewards but was complex. As mentioned in Section I, PyP invested only \$207 in creating one full time job, when the total cost was \$1,387. The shared management model for short term consultants required extensive management and cooperation. The platform of alliances constructed and nurtured by the project represent a valuable foundation for future inclusive supply chain development.

Integrating new partners. PyP's nimbleness in working with new partners and developing strategies contributed significantly towards achieving project goals. The Trilateral Agreement is a clear example of this kind of innovative cooperation. The Trilateral Agreement is at the heart of the project's goals to improve livelihoods. Most local NGOs, public agencies and professionals in Paraguay would probably not understand the value chain approach. Thanks to the Trilateral Agreement, PyP had the platform to reach the target audience.

Incorporating a gender approach. The incorporation of the gender approach is largely the result of the midterm and gender reports which found a clear correlation between incorporating gender and increasing incomes. Without doubt, the incorporation led to great achievements. The most important effect was a long-term mentality change. The gender interventions were only starting to have impact at the end of the project. There is still room for pointed interventions, especially in areas of extreme poverty, like Britez-Cue, where investing in improvements in gender equity can have maximum returns.

Focusing on key interventions. The focus on five key interventions (GAP, sales alliances, micro finance, traceability and gender) was essential in developing a strategic vision to assure the project's long-term sustainability. There is still however much that can be done to bring the alliances and the farmers to the next level of inclusion, resolution of supply of chain inefficiencies, and income generation. The project was not able to reach out to buyers explicitly as it was not within the scope of the project. International buyers demand traceability, and the PyP approach would be very appealing to them. Stevia and passion fruit had a lot of room for growth, especially in international markets. Paraguay Productivo has laid the foundation for continued, sustained growth in supply chains. Additional support from the public, private, and donor sectors would leverage the accomplishments to date and yield significant benefits.

Communicating Results. The outreach and communications effort of the Program (see Subsection 3.3) was a strategic investment with enormous impact. More than 16,000 beneficiaries are immensely grateful to the United States and understand the key role the Mission played.

Managing a fluid environment. The design of the Program was complex, but the Mission complemented this by allowing appropriate flexibility in implementation. The contractor was open to innovations and facilitated the changes, and the management team adjusted interventions thoughtfully..

Hiring the right people. Selecting the key personnel is a key success factor. The initial team was strong, and after the personnel and management changes in 2011, the project gained important new skills that were appropriate for the final year's strategies. The team was always motivated to achieve targets, empower middle management, and delegate tasks. The change of personnel in 2011 was necessary but could have had negative implications; thanks to the contractor's decisions to incorporate other talents, it turned out to be a success.

Setting the course for future alliances. PyP has demonstrated that market-led, alliance-led agricultural development yields significant dividends for the nation's poorest farmers. Public and private sector investors are encouraged to leverage the successful platform that has been created in order to build on the benefits galvanized, and generate additional alliances and activities to boost farm income, increase food security, incorporate women into value chains, heighten Paraguayan exports, protect the environment and natural resources, and continue to improve opportunities for Paraguay's rural poor.