



**USAID**  
FROM THE AMERICAN PEOPLE



## ADFP – PROAGRO ANGOLA

COOPERATIVE AGREEMENT: 690-A-00-06-000990-00

**FINAL PROJECT REPORT**

**2006/2012**



**NCBA**  
CLUSA INTERNATIONAL

**NATIONAL COOPERATIVE BUSINESS ASSOCIATION**

1401 New York Ave. NW, Suite 1100 • Washington, DC 20005 • USA

Ph: (202) 638-6222 • Fax: (202) 638-1374

<b>Implementing Partner's Name:</b> Cooperative League of the United States (CLUSA)
<b>Implementing Mechanism Name:</b> Agriculture Development and Finance Program (ADFP)
<b>Data of Submission:</b> December 28, 2012
<b>Submitted By:</b> Estêvão Barros Rodrigues, Chief of Party 
<b>Name &amp; Title:</b> Final Project Report

## Table of Contents

<b>Acronyms</b> .....	<b>4</b>
<b>Executive Summary</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>7</b>
<b>Getting Started: The Initial Stages of ADFP/ProAgro</b> .....	<b>8</b>
<b>Context</b> .....	<b>8</b>
<b>Goals</b> .....	<b>8</b>
<b>Strategies and objectives</b> .....	<b>9</b>
<b>A results orientation</b> .....	<b>9</b>
<b>The consortium and partnerships</b> .....	<b>10</b>
<b>A shifting focus</b> .....	<b>10</b>
<b>Logical framework</b> .....	<b>12</b>
<b>Overall ProAgro Performance</b> .....	<b>12</b>
<b>ProAgro Performance by Value Chain</b> .....	<b>14</b>
<b>BANANA VALUE CHAIN: PERFORMANCE AND ACHIEVEMENTS</b> .....	<b>14</b>
<b>COFFEE VALUE CHAIN PERFORMANCE AND ACHIEVEMENTS</b> .....	<b>29</b>
<b>HORTICULTURE VALUE CHAIN PERFORMANCE/ACHIEVEMENTS</b> .....	<b>53</b>
<b>Some ProAgro Highlights</b> .....	<b>57</b>
<b>Lessons Learned</b> .....	<b>63</b>
<b>Conclusions</b> .....	<b>64</b>
<b>Indicator Data Table 2007-2012</b> .....	<b>68</b>
<b>Annexes</b> .....	<b>71</b>

## Acronyms

<b>ADFP</b>	Agricultural Development and Finance Program
<b>ADRA</b>	Action for Rural Development & Environmental Protection
<b>BDA</b>	Development Bank of Angola
<b>BPC</b>	Savings and Credit Bank
<b>CCPF</b>	Coca-Cola Project Fund
<b>CAE</b>	Business Development Center
<b>CESACOOPA</b>	Central Union of Service Centers for Amboim Cooperatives
<b>CLUSA</b>	Cooperative League of the USA
<b>CNFA</b>	Citizens' Network for Foreign Affairs
<b>DPA</b>	Provincial Director of Agriculture
<b>ECA</b>	Agriculture Field Schools/Farmer Field Schools
<b>EDE</b>	EDE Consulting, the consulting arm of the Hans R. Neumann Stiftung, itself a foundation of Neumann Kaffee Gruppe (Germany)
<b>EDA</b>	Station for Agrarian Development: Municipal Representation of IDA
<b>FCA</b>	Faculty of Agronomy
<b>GoA</b>	Government of Angola
<b>ICO</b>	International Coffee Organization
<b>IDA</b>	Institute for Agrarian Development
<b>IIA</b>	Institute for Agronomic Research
<b>IR</b>	Intermediate Result
<b>MINADERP</b>	Ministry of Agriculture, Rural Development and Fisheries
<b>INCA</b>	National Coffee Institute
<b>TA</b>	Technical Assistance
<b>UNACA</b>	National Confederation of Farmer Associations and Cooperatives

## Executive Summary

This report documents the trajectory of the Agricultural Development and Finance Program, branded as ProAgro, during the period between August 2006 and September 2012. The report summarizes and combines points of view expressed in interviews carried out by the team, as well as in focus group discussions with cooperative leaders and stakeholders. The feedback from both the intermediate and final project evaluation reports has been incorporated, together with information obtained from sectoral studies and, above all, the first-hand experience gained through implementation of the project occupies a central position in the narrative.

Under the agreement or protocol known as the Angola Partnership Initiative, USAID and Chevron funded the Agriculture Development and Finance Program (ADFP). The ADFP was branded ProAgro locally and was implemented by the National Cooperative Business Association International Program, which was incorporated and registered in Angola as the Cooperative League of the U.S.A. (CLUSA). Implementation was governed by a Cooperative Agreement with USAID that took effect on August 21, 2006. Originally, the program was to end on August 20, 2011, but a modification extended that date until September 30, 2012. As of September 30, 2011, donors had contributed \$10.8 million to this program, including \$7.8 million from USAID and \$3 million from Chevron.

The program sought to work through producer cooperatives to increase production, access to finance, and market linkages, thereby improving competitiveness, fostering sustainability, and increasing the benefits derived by targeted small and medium-sized producers and other stakeholders doing business in the coffee, banana, and vegetable industries.

ProAgro's strategies for accomplishing these overall goals included working with farmer associations and supporting their development into primary and secondary cooperatives; assisting cooperative organizations to access production technologies and financing to increase productivity and production, as well as to improve coordination mechanisms among value chain actors; and, working at the level of the Government of Angola, to secure the passage and implementation of more workable and effective cooperative legislation.

The associations and cooperatives came into being primarily as nascent agribusiness entities. ProAgro, therefore, in its first implementation stage (2006-2009) worked mainly to identify specific market opportunities; to improve the production, both in terms of yields and quality, of selected agricultural commodities for both local and export markets; to increase revenue and economic benefits for the stakeholders in the value chain; and to strengthen coordination among value chain participants and support institutions in order for the whole structure to better respond to market demands in the short and long term.

Much of the work during the first two years of the project was focused on two main activities:

- Conducting research and developing an action plan for the project. In particular, ECI Africa, a CLUSA partner and subgrantee, prepared economic reports on the potential for Angola's domestic and export markets for bananas, coffee, and potatoes; and
- Initiating a broad array of "value chain" activities in the above three product areas, as well as in horticulture in Bengo Province, later expanding to Benguela and Kwanza Sul.

During the third year of the project, there was a major shift in emphasis to technical assistance, which was aimed at expanding production and marketing of bananas in Benguela Province, and of coffee in the Amboim area of Kwanza Sul Province; in 2009, at donors' recommendation, ProAgro discontinued its activities in the potato sector.

The final two years of the project saw concentrated efforts to carry out ProAgro's exit strategy. In addition to continuing ProAgro activities, this process included:

- Assisting cooperatives in Kwanza Sul and Benguela to establish multipurpose agribusiness service centers;
- Working with coffee cooperatives in Amboim to develop a union of cooperatives; and
- Helping to develop a federation of cooperatives in Benguela.

The intent of these activities was to increase self-reliance among farmers and cooperatives in both production and marketing, and to increase the interest of relevant government agencies and financial institutions in providing production and marketing assistance over the medium to long term.

To a significant extent, ProAgro was successful in carrying out a value chain project that benefited over 6,000 farmers in Kwanza Sul, Benguela and Bengo provinces. The project set the stage for increases in production and marketing for the future through the establishment of 25 cooperatives, 12 multipurpose agribusiness service centers, CESACOOA (the union of cooperatives in Kwanza Sul), and the Cooperative Federation in Benguela.

ProAgro accomplished its objectives for increasing the use by coffee and banana producers of more effective production practices; increasing banana production and sales; and enhancing cooperative development. It fell somewhat short of its objectives for assisting producers to access loans and for increasing market linkages.

ProAgro's shortcomings in these latter two areas were partly explained by lenders' resistance to providing credit to producers; the presence of an informal market for both coffee and bananas that absorbed almost all production without the need for accessing formal markets; and, in the case of coffee, a crop with a 4-5 year maturation period that precludes early advances in volume.

Both coffee and banana production appeared, by project's end, to be nearing a critical mass. Coordinated marketing through CESACOOA, the Benguela Cooperative Federation, and the co-ops had the potential to increase producer returns, while there was a good foundation on which to continue growth in production and productivity.

The statistics, of course, tell only a part of the story—the short-term part. The president of the Kangombe Cooperative, outside Luanda, said, "Since CLUSA and USAID came, we have made big changes here. After working hard the first year, we started improving our houses. After the second year's work, many of us sent our children to school; a lot of the people here have children in school in Luanda, Benguela and other places. The third year, many of us got motorbikes or cars, and those have helped us a lot with our farming and our marketing activities. Now we know how to get people together. I already had some ideas about that, but we had training from CLUSA and so now we get together and do things together. We are still just farmers, but we work together now."

It is just possible that the investment made here has started something new, for these people and for Angola.

## Introduction

This report documents the progress of the Agricultural Development and Finance Program, known in the field as ProAgro, during six years between August 2006 and September 2012.

Key partners in the project's implementation were the Institute for Agrarian Development (IDA) the National Coffee Institute (INCA), the Neumann Foundation/EDE Consulting, DAD/IDA-Benguela, and NGOs including ADRA (Rural Action for Rural Development and Environmental Protection), UNACA (National Federation of Farmer Associations and Agricultural Cooperatives) and AAEA (Angolan Association for Adult Education).

The report begins with a brief review of the historical and contemporary context of the project in Angola.

It then presents an overview of ProAgro, including a discussion of the primary goals and objectives of the program, as well as the program's achievements in relation to performance indicators.

The final sections of the report offer the lessons learned and recommendations for future programs, both from the clients' and the ProAgro team's point of view.

# Getting Started: The Initial Stages of ADFP/ProAgro

## Context

Angola achieved independence from Portugal in 1975 as a result of the liberation struggle that started in 1961. Friction and between the key liberation movements (MPLA, UNITA and FLNA) triggered a civil war that lasted from 1975 to 2002, destroying the bulk of Angola's economic and social infrastructure and service capacity. These events took a heavy toll on farmers and other rural residents of the country. Most Portuguese landowners fled the country shortly after independence and many Angolans fled the countryside during the years of conflict for the comparative safety of urban areas.

In the immediate postwar years, the primary need was to provide emergency aid to ensure that people had enough food and other basic necessities. USAID, Chevron and many other international donors played a role in helping Angola meet these emergency needs.

In 2006, when the program began, Angola's economy and agricultural sector suffered the consequences of prolonged civil war. Infrastructure such as roads, railways, warehouses, silos, and processing centers were destroyed or out of service in rural areas. In the years of 2007 and 2008, significant investments were made in the repair of roads and railways but much remains to be done in this field including the rehabilitation of productive infrastructure (refrigeration, storage, processing, etc.)



March, 2007: Marco Nhunga, Deputy General of IDA (Instituto de Desenvolvimento Agrário), Alan Kleier, Chevron's General Director for Operations in Angola, Cynthia G. Efirid, U.S. Ambassador, and Estevão Rodrigues, Director of CLUSA in Angola, during the launching of ProAgro in Benguela. (Photo: USAID/Angola)

By 2006, the immediate crisis in food security had passed. While many were still in extraordinary poverty, Angola's rural dwellers were no longer in danger of starvation, as had been the case in the aftermath of the civil war.

In that year, under the rubric of the Angola Partnership Initiative, USAID and Chevron funded the Agriculture Development and Finance Program (locally branded as ProAgro). ProAgro was implemented by the Cooperative League of the U.S.A. (CLUSA) under a cooperative agreement with USAID that took effect on August 21, 2006. The program sought to build rural agricultural cooperatives and then work with these nascent institutions to increase incomes and market opportunities for farmers involved in the production of coffee, banana, and vegetables. Originally, the program was to end on August 20, 2011, but a no-cost extension pushed the end date to September 30, 2012. As of September 30, 2011, USAID had contributed \$7.8 million to this program

(compared with an original investment of \$5.4 million), while Chevron had contributed \$3 million. The Dutch Inter-Ecclesiastic Organization for Development Cooperation (ICCO) also contributed some \$350,000 to the construction and equipping of multipurpose agribusiness service centers over the final two years of ProAgro.

Strategies to achieve the program's goals included facilitating the creation of farmer associations and cooperatives; providing training in the functioning of these rural institutions; expanding, reinforcing, and improving agriculture-related technical assistance; helping producers access loans; and facilitating supplier and distributor relationships. To ProAgro's clients, access to credit was perhaps the most important strategy; several noted that without bank loans, they were unable to do or take advantage of some of the program's other activities because they would not have resources, for instance, to invest in modernized production technology and inputs to increase productivity and improve the quality of production.

## Goals

From the beginning, the goal of ADFP was to establish cooperatives, whose members would contribute toward the creation of sustainable value chains in selected crops, which in turn would increase incomes and business opportunities

generally. Reaching that goal, though, was not a straight-line process; there were several changes of emphasis along the way, in response to conditions and shifting donor priorities.

### ***Strategies and objectives***

As mentioned above, ProAgro began its work with a number of complementary strategies: Identify specific market opportunities; improve the competitiveness of local growers and enhance SME performance so as to promote more effective and efficient production of selected agricultural commodities for both local and export markets; create job opportunities, and increase incomes for all stakeholders in the value chain; and improve the coordination among value chain participants and support institutions in order to foster sustainability in all the supported areas of activity.

These strategies were intended to meet several objectives: Increased productivity and reduced post harvest losses; an expanded range of market opportunities; promoted market linkages between value chain participants; and augmented access to credit and other financial services.

### ***A results orientation***

The above strategies and objectives were meant to lead to an array of results: Increased yields; reduced production costs per MT; lower post-harvest losses; acceptance of selected products in both national and international markets; higher sales levels of selected crops; formal business linkages between value chain participants; creation of new forums



August, 2009: Agriculture Minister Kanga and Petroleum Minister Vasconcelos, Secretary Clinton and Foreign Minister dos Anjos witnessed the signing of Chevron-USAID-CLUSA Memo of understanding. Signing the MOU are Left to Right: Chevron Director Alan Kleier, Ambassador Dan Mozena and CLUSA Representative in Angola Estêvão Rodrigues, at the Ministry of Petroleum auditorium. (Source: State.gov)

that would promote and coordinate market connections; the creation by banks and non-bank lenders of new financial services and products adapted to local agribusiness; and expanded access to credit.

### ***The consortium and partnerships***

ProAgro was designed to be implemented by a consortium that initially comprised four organizations and was led by the Cooperative League of the USA (CLUSA). This group included ECI Africa, a development consulting firm from South Africa, and two Angolan NGOs: Action for Rural Development and Environment Protection (ADRA), one of the oldest Angolan NGOs specializing in the development of rural community; and Agromarket, a nonprofit organization based in Huila that was founded by former CLUSA technicians in order to assist farmers in developing cooperative organizations and accessing finance and markets.

As the program evolved, ADRA and AgroMarket dropped out. ADRA felt, as they told the external evaluators who did a “mid-term” evaluation of the program in 2009, that the value chain approach would pay more attention to economic growth than to the wellbeing of the smallholders who are their preferred target population.<sup>1</sup> AgroMarket disengaged when ProAgro, at the donors’ request, dropped its work with potatoes in Huila, which was AgroMarket’s only area of operation.

The subagreement with ECI-Africa was terminated for purely administrative and financial reasons, since that organization was unable to provide documentary support for its claim for an indirect cost rate (NICRA).

ProAgro maintained close collaboration with the Ministry of Agriculture, Rural Development and Fisheries (MINADERP), with several commercial banks, and with other key institutions, both private and public, over the life of the program. The list of organizations with which ProAgro partnered changed over time, as the program’s needs evolved; but at any given time, there was a core group of partners who were providing input and support in a variety of forms, and without whom results would have been much less.

### ***A shifting focus***

At the beginning of the program, an effort was made to work on four product lines, based on the outcome of the market analyses done in conjunction with ECI Africa. These products were bananas, coffee, potatoes and vegetables. Each product line lent itself, moreover, to a geographic concentration, with Benguela being an area for banana, Kwanza Sul for coffee, potatoes in Huila, and vegetables in Luanda/Bengo. CLUSA had worked in Huila and Bengo during an earlier project, so it already had networks and knew potential partners in those areas.

By 2008, the program had narrowed its focus to two sectors: bananas and coffee. This shift was based on high domestic demand, combined with export potential. Based on the economic analysis contained in ProAgro’s 2008 subsector studies, however, USAID and Chevron decided to concentrate the program’s efforts on banana and coffee considering the lack of sufficient resources and experience to pursue value chain development approach.

The target audience for the program’s intervention also changed over time, at the least in the banana value chain. ProAgro was initially intended to collaborate with medium and large farmers. This was because of the dynamics of the banana market, as well as the possibility of a large investment by Chiquita that would favor larger-scale production for export. The notion was that progress by these medium- and large-scale farmers would have a larger impact on the region’s economy than would that afforded by small producers who were at the level of subsistence farming. Additional advantages were seen in the potential for streamlining production and marketing, and creating greater numbers of jobs.

In subsequent years, however, and as the work in coffee progressed, program interventions were aimed at a broader spectrum of farmers. During one visit by senior USAID staff, the comment was made that the larger farmers did not need much ProAgro assistance to advance. The response was that each medium or large farmer, in the context of the value chain approach, would serve as a model that could inform smaller farmers and, ultimately, help them to progress, as well. Consequently, ProAgro began working with a balanced emphasis on farmers of all sizes, endeavoring to bring all segments into productive relationships in both banana and coffee sectors.

---

<sup>1</sup> Whether ProAgro did indeed reduce its involvement with smallholder farmers is debatable, though there was in the case of the banana work in Benguela, a different balance struck between small and larger producers.

In the coffee area, most of those who might be termed medium or large producers were not actually farmers; they made their living elsewhere and used coffee-growing as an investment. It, therefore, made sense to focus on smallholder farmers, where there could be as many as a hundred producers on just 17 ha of land.

These dynamics are reflected in ProAgro's summary statistics, as will be seen below. Of the 6,450 clients with whom the project worked, 722 of them are in Benguela; the bulk of beneficiaries, more than 5,000, are Gabela coffee producers.

Technical assistance was, in the first three to four years of ProAgro, viewed mostly as a means to an end: the end was the creation of strong cooperatives. The effort to prepare banana farmers for the large-scale production requirements of a Chiquita factory<sup>2</sup> in the Benguela area led the project to pay increasing attention to technical assistance, so that by 2010 the Benguela-based technical staff was spending the bulk of its time working with farmers and cooperatives on increasing yields.

In 2011/12, a major effort was put forth to assist a handful of large lead farmers to import new banana plants from Central America. This effort involved identifying plant suppliers, creating business plans and using these to obtain the necessary loans, and coordinating the complex systems involved in shipping, clearing customs, transporting and planting the new trees in special shelters, and then in demonstration fields. The project also supported large farmers, and the co-ops of which they are members, to analyze their irrigation needs and to obtain the resources necessary to expand the area of irrigated land.

A similar evolution occurred in the coffee area. In 2009, CLUSA was approached by the National Coffee Institute (INCA) to assist in INCA's coffee-plantation rehabilitation program. ProAgro had already worked with INCA to disburse microloans to members of the farmer co-ops in Kwanza Sul; between 2007 and 2008, some \$2.3 million of such loans were disbursed, to more than 4,700 farmers. Now, however, INCA wanted CLUSA to work with farmers, including some co-op members, on exploring coffee fields that had lain fallow since 1975 and assessing possibilities for future production.

The initial work was successful, demonstrating the potential gains to farmers, but CLUSA was not equipped to carry such work beyond the beginning stages. In late 2010, NCBA opened discussions with EDE, the consulting arm of the Neumann Kaffee Gruppe, a Hamburg-based, global coffee enterprise. From 2011 onward, EDE provided, under a subcontract with NCBA, a series of consultants who carried out fact-finding missions and training interventions. ProAgro staff actively supported this work and made sure that the EDE's interventions targeted INCA's own extension corps so as to ensure a lasting effect. The work of facilitating the growth and consolidation of these processes, working in tandem with INCA extensionists on one hand, and 13 agricultural service cooperatives on the other, would come to absorb the full capability of the ProAgro team in the region.

The final 18 months of the project were dominated by the effort, approved by USAID in early 2011, to build a network of agribusiness service centers. The construction component represented a major effort, and it was carried out simultaneously with a consistent level of technical assistance in both provinces.

These buildings are owned and operated by the cooperatives, and were built with modest allocations from USAID funds, as well as major contributions of local resources and labor provided by cooperative members. ICCO, a Dutch NGO, also played a central role in the development of these centers by providing matching funds for construction and training of center operators. The centers, of which 12 (including one belonging to CESACOOA) were completed by project close, will serve the co-ops as convenient local sources for inputs and supplies, as well as concentration points where product—whether coffee or bananas—can be aggregated for handling and eventual sale. Contracts were signed, or are in the final stages of negotiation, between several cooperatives and regional input suppliers; in two centers, small stores have already been set up by these suppliers and are operating.

The other area of effort during the final year was to make meaningful progress on water and sanitation (WASH) in co-op

---

<sup>2</sup> Ultimately, the factory was not built and Chiquita found itself obliged to invest instead in Mozambique, from where they are now exporting a significant volume of bananas to Europe and elsewhere.

areas. This initiative had not figured in any of the plans for ProAgro; it was not until mid-2011 when, during a routine program review with USAID in Luanda, it was pointed out that the increased funding for the 9/30/2010 modification included a sum that was earmarked for WASH activities. Accommodating this new strategic direction was a challenge for ProAgro. With USAID approval, however, it was incorporated into the center-construction activities and irrigation schemes for banana demo plots: each center is designed to have a WC, which in these rural areas is a significant advance; and selected centers have community standpipe arrangements for the benefit of co-op members and neighboring families alike.

### ***Logical framework***

ProAgro's logical framework was based on four principles: Assure the competitiveness of selected industries over time; foster a reduced role for government, donors, and project implementers and expand the role for private businesses/SMEs in addressing industry constraints; intervene appropriately to foster increased business capacity to resolve chronic constraints; and adhere to a planned exit strategy so that project impacts are sustainable.

Based on those principles, ProAgro outlined a results framework (RFW) composed of 5 pillars, called Intermediate Results (IRs), as means of measuring ProAgro's performance. The IRs are: Improving the production practices of farmers; developing associations and cooperatives as a means to disseminate the knowledge and skills farmers needed to improve their performance, help them secure loans and link them to the input and output markets; and, finally, working with producers, government institutions and local authorities, to introduce water services and improved sanitation facilities. This last IR was included on the ProAgro's RFW for the last year of the project. A complete list of the components of ProAgro's results framework is incorporated below.

### ***Overall ProAgro Performance***

- ProAgro has accomplished its objectives for:
  - Increasing involvement of coffee and banana producers in improved production practices;
  - Increasing banana production and marketing; and
  - Enhancing Cooperative development by supporting a network of 25 primary cooperatives and two apex/umbrella organizations.
- It has fallen somewhat short of its objectives for:
  - Assisting producers to access bank loans; and
  - Increasing formal market linkages with supermarket chains and other distributors (wholesalers and retailers).
- It is important to note that ProAgro faced challenges outside its control in accessing credit for producers and in strengthening market linkages, including:
  - Lenders' resistance to providing credit to producers as described above, combined with only a rudimentary culture of repayment bank loans which are perceived as being secured by governmental and nongovernmental organizations;
  - The presence of an informal market for both coffee and bananas that absorbed almost all production without the need for a formalized market; and,
  - In the case of coffee, which is a crop with a 4-5 year development period prior to harvesting, results of work done under ProAgro will only be realized after project close.
- Both coffee and banana production now appear to be nearing a critical mass in which coordinated marketing through CESACOOPA, the recently formed Cooperative Federation in Benguela, and the co-ops has the potential to increase producer returns and continue gains in production and productivity. In particular, coffee production, as the trees planted during the project reach productive maturity, could increase by as much as five-fold by 2015.

The following table provides an overview of ProAgro's performance in comparison with its initial objectives:

**Table 1 – Summary of ProAgro Performance**

<b>Measure</b>	<b>Plan</b>	<b>Performance</b>
# Producers	3,800	6,450
# Associations	-	106
# Cooperatives	-	25
# Co-op service centers	-	12
\$ Loans disbursed	\$9 million	\$4.7 million
Market transactions	\$24 million	\$24.8 million

Source: ADFP

Several things are apparent here. First, the project did not have specific objectives for the number of associations and cooperatives to be created. Thus, there is no benchmark point of comparison for these two indicators. The same is true for the development of cooperative service centers. These goals were on a best-efforts basis, which was especially true in the case of cooperatives, given the great complexities involved in creating new institutions and getting them legally registered and fully operational as agribusiness entities.

Secondly, the project assisted farmers to access only about half the amount of credit that had originally been projected. The shortfall in attaining this objective is discussed later in the report.

The project has served far more producers than were originally intended. In fact, the original objective was exceeded by about 2,500 producers, or two-thirds more than the target.

The project achieved its objective related to market transactions. However, this turned out to be a questionable indicator to measure because of the many informal transactions that took place—women coming to the farm gate to buy direct, for instance. It also happened that producers were reluctant to share this information, either for competitive reasons or out of their concerns regarding taxes. Given these factors, the number is not as thoroughly documented as the project would have liked but probably errs on the low side.

# ProAgro Performance by Value Chain

## BANANA VALUE CHAIN: PERFORMANCE AND ACHIEVEMENTS

The Benguela area is the primary producer of bananas in Angola, supplying Luanda and local markets in Lubango and Huambo. The Catumbela, Cavaco and, most recently, Dombe Grande valleys are the key production areas in Benguela. There is considerable untapped export potential here.

### Subsector study

ProAgro commissioned a sectoral study of banana in 2006-07 in order to have baseline figures. This study was conducted initially by a technical assistance specialist from Chiquita's Angola operation and later expanded by consultants from ECI Africa. The study identified a total of 353 farmers in the project area, while the average area under cultivation for bananas varied from 0.27 to 50 ha, as indicated in the table below.

**Table 2 – Production by farm size and number of farmers in the project area (Nov. 2006)**

Farm data	Small	Medium		Large	Total
	< 5 ha	5 – 20 ha	21 – 50 ha	> 50 ha	
Number of farmers	242	87	20	4	353
Area under production (Lucas)	65,25	903,5	538,1	256,5	1.763,35
Average Ha / Farm	0.27	10.38	26.90	64.13	n/a

Source: Banana subsector study

The subsector study enabled ProAgro to identify the different participants in the banana value chain, as well as the constraints and opportunities described on the following table.

**Table 3 – Overview of Constrains and Opportunities**

Constraints	Opportunities
<p><b>Low Yields.</b> Currently yields vary between 16 Mt/Ha (small producers) to 55 Mt/Ha (large producers). Low yields may be attributed to poor production practices and old plant material.</p> <p><b>High Retail Prices.</b> Retail prices are far in excess of world prices. High retail prices restrict the size of the market due to purchasing power of the majority of the people in Angola.</p> <p><b>Quality.</b> While the market does not currently formally differentiate product in terms of quality this will become an issue once supply and competition increases. Quality aspects relating to bunch age and ripening do currently play a role, with early ripening fruit affecting the wholesale and retail players.</p> <p><b>Transport.</b> The high cost of transport of product to market is endemic in Angola. Poor roads also contribute to crop losses and poor quality. This may in part be addressed by proper packaging. There has however been a substantial improvement in the road linking Benguela to Luanda.</p> <p><b>Access to Finance.</b> While finance is starting to be available to producers from various banks, the terms and structure of the loans are not suited to agricultural lending.</p>	<p><b>Potential investment by a multinational banana producer.</b> The advent of large-scale export oriented production would result in lowered input costs (synergies in volume purchasing), improved infrastructure, contract supply opportunities, commercial nurseries and availability of technical assistance that could be leveraged by the subsector.</p> <p><b>Yield Improvement.</b> Indications are that application of appropriate training could result in yield improvements of up to 9 Mt/ha for small farmers and over 15 Mt/ha for medium and large producers.</p> <p><b>Establishment of Nurseries.</b> The establishment of commercial nurseries able to provide top quality plant material would be vital to the continued growth of the subsector.</p> <p><b>Input Supply Linkages.</b> Given the relatively high prices being charged for inputs sourced from Europe, linkages to alternate suppliers from the region should result in lower input prices.</p> <p><b>Improved Margins.</b> Addressed through improved yields and market efficiencies.</p>

Source: Banana subsector study

The study also estimated the margins that could be obtained under three different production scenarios: current methods of production; improved techniques; and using new plant material.

The details of the two new scenarios are:

*Improvements in production techniques:* Includes change in fertilizer regime (regular application as opposed to single application); selecting “pups” correctly; improved crop husbandry.

*Introduction of new plant material:* Includes improved plant material through the use of new varieties (tissue culture plant materials); micro Irrigation; change in fertilizer regime; selecting “pups” correctly; improved crop husbandry; access to finance; regular access to markets (gross margin may be further improved should the producer transport directly to market, though these risks should be carefully considered).

**Table 4 – Net farmer income projections under various scenarios**

Item	Local plant material		New plant material
	Current methods	Improved techniques	
	(US/Ha)	(US/Ha)	(US/Ha)
Yields (Ton per ha)	25	40	65
Price per ton	240	240	240
<b>Gross Income per ha</b>	<b>6,000</b>	<b>9,600</b>	<b>15,600</b>
Establishment cost (plant material, irrigation equipment, land preparation)	2,780	2,780	6,983
Operational Cost (labor and inputs)	3,280	3,980	4,267
Harvesting cost per ha (labor and transport cost to collection point)	128	204	332
Packing and ripening cost per ha (packing material and labor cost)	0	526	855
<b>Production cost</b>	<b>3,408</b>	<b>4,710</b>	<b>5,454</b>
<b>Interest Costs</b>	<b>99</b>	<b>120</b>	<b>199</b>
<b>GROSS MARGIN PER Ha</b>	<b>2,494</b>	<b>4,770</b>	<b>9,947</b>
Loan Repayment	990	1,198	1,990
<b>Net Income per Hectare</b>	<b>1,504</b>	<b>3,571</b>	<b>7,957</b>

Source: Banana subsector study

#### IR 1 - Technical Assistance Expanded, Reinforced & Improved

##### *Production Methodology transition*

In order to realize the potential as outlined on the table above, ProAgro met many challenges in facilitating the transition from a traditional system of banana production to a modern system. Changes in practice, due to the adoption of a value chain model or of new techniques, happen slowly and require very strategic investment in the evidence base and/or demonstration. However, when adopting new techniques productivity usually goes up.

The importation of meristem plants, as well as the results obtained following the introduction of modernized irrigation systems, or observed in the project’s model fields, ultimately encouraged a change in producers’ mindset. They began to think of agriculture as a business and to introduce new techniques. With facilitation by ProAgro, over 80,000 meristem plants were imported from Honduras during 2011/2012.

The transition from the traditional system of banana production to a more modern system also involved using recommended plant spacing, increasing the density of plants per hectare: before, using a traditional spacing design of 4x4 or 3x3, producers had a population density of 625 and 1,111 plants per hectare. Now, using spacing of 2.5 x 1.5, farmers achieved a population density of 2,500 plants per hectare, which significantly increased the yield per hectare.

Moreover, the introduction of other agricultural practices produced other benefits. Interleaving selected short-cycle crops with bananas increased revenues, for instance, making it easier for producers to cover the costs associated with field maintenance, and contributing toward producers' personal financial viability. This factor is especially important in the first year of production, when bananas provide no revenue.

ProAgro served some 75% more producers than were projected in its original plan. However, a little less than one third of these producers engaged in improved banana growing practices. Part of the reason for the shortfall was the loss of two cooperatives, which disappeared when road construction linking the Benguela-Catumbela-Lobito corridor cut off their water supplies for irrigation, in addition to natural causes that damaged a significant portion of the old irrigation canal. ProAgro added two new smallholder cooperatives to replace these inactive co-ops, but demonstration banana plots for both co-ops were added too close to project end to yield much in the way of results.

As the summary table below indicates, there were 56 commercial producers with five or more hectares. These medium-scale farmers account for most of the 573 improved hectares in the program. As a result of their involvement, the project exceeded its goal for improved hectares by almost one-third. ProAgro's TA advisor estimated that approximately 600 hectares of bananas will be planted before the end of 2012, if expected bank loans are made available. If this estimate of cultivated area is realized, it would represent a more than doubling of the productive acreage. Most of this new banana production would come from medium-scale and large farmers who are using modern irrigation system equipment and meristem plants.

**Table 5 – Banana Performance**

<b>Measure</b>	<b>Plan</b>	<b>Performance</b>
Producers	400	722
Producers with improved practices:	400	222
- <i>Smallholders</i>	-	166
- <i>Commercial with 5+ has</i>	-	56
Improved hectares	400	573
Improved productivity (M tons/ha)	45	Average 45
Cooperatives	-	7
Cooperative service centers	5	4
Loans	-	\$1.9 millions
Market transactions	-	\$21.2 million

**Source: ADFP**

#### *Introduction of new practices*

ProAgro's goal was to increase the productivity of bananas to 45 tons per hectare, which has been achieved; in fact, estimates for banana yields in 2013 are expected to surpass this objective. Below are some pictures that illustrate some of the changes in farmers' methodology.

**Table 6 – Plant density and ground preparation**

Before ProAgro - Traditional practices



After ProAgro -Best practices



Source: ADFP

With the help of ProAgro, some of the larger individual producers have become very productive banana producers. They use nurseries to grow uniform, high quality banana meristem plant seedlings (photo at left) before transplanting them into their fields. The back of the field shown on the right picture is inter-cropped with watermelon. This combination of crops greatly expands the efficiency of production.

**Table 7 – Nurseries and inter-cropping applied**

Before ProAgro there was only one large-scale producer with a banana meristem plant nursery. Now there are several.



Banana inter-cropped with beans, irrigated by a drip irrigation system using fertile-irrigation



Source: ADFP

### *Introduction of demonstration plots in the cooperatives*

Palmeirinhas is a cooperative located in Canjala, about 120 km from Benguela, almost all of whose members have 5 ha or less of agricultural land. The co-op has just begun a demonstration plot project involving five members who are growing bananas on one-hectare plots. The field picture below, left, is a one hectare demonstration plot that intercroops bananas and peanuts. Because peanuts are nitrogen-fixing, they are an excellent complement to bananas.

The plots are irrigated with water from a nearby river. Water is conveyed to the demonstration site by a diesel pump installed by ProAgro (photo on the right).

**Table 8 – Demonstration plots in Canjala**

*Picture shows best practices Inter-cropping bananas with peanuts)*



Irrigation system (including pump and system ready to receive micro-sprinkler system) capable of irrigating 5 hectares



Source: ADFP

### *ProAgro - Escom/Chiquita attempt at partnership*

Starting in January 2007, project staff assumed that, once Escom/Chiquita started operations in Benguela, there would be greater opportunities for the development of this value chain. In fact, Chiquita supported ProAgro in conducting production assessments and in training local staff. However, Chiquita's local partner, Escom, was unable to get land for producing bananas for export. In order to encourage Angolan authorities, in particular MINADER, to grant land concessions, Escom changed its program model to include forward contracts with interested local banana producers, who would also receive technical assistance from Chiquita, as well as a guaranteed market for bananas that met export quality standards. ProAgro was consulted about its willingness to become a partner in the program by providing services to those out growers, including cooperative development, access to credit and business training.

If Escom/Chiquita received the required 3,000 hectares of land for banana production by the end of 2007, they committed to support production on an additional 3,000 hectares of land under cultivation by small, medium and large-sized banana growers in plots of between 10 and 100 hectares each. Obtaining the necessary concessions in Dombe Grande and the Catumbela valley would require agreement from MINADER and the Benguela provincial government. The final decision would have to be made by the Ministry of Industry. In addition, local holders of those lands, which they rented on a yearly basis, would have to agree to relinquish their rights, which proved to be complex.

Despite its early promise, and a good effort by ProAgro to support the initiative, the partnership did not materialize and Chiquita pulled out of the enterprise after about 4 years of startup investment.

*Cooperative legislation, creation and legalization*

The project devoted much work to the creation, organization and legalization of cooperatives. This work was valued by respondents in all sectors, especially by co-op members themselves.

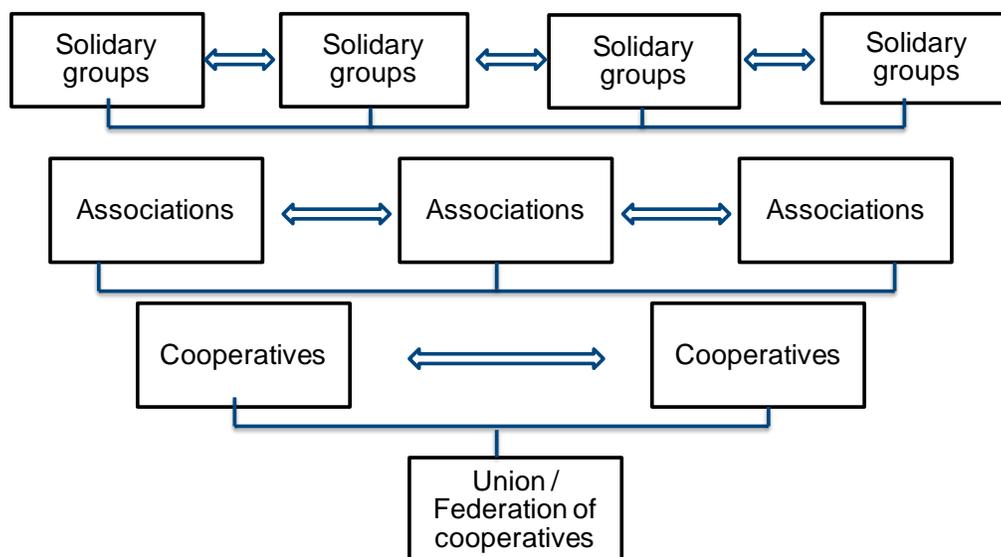
There are seven cooperatives in operation in Benguela; five of them were assisted by ProAgro through the registration process, and four co-ops have service centers. In addition, a combined effort by ProAgro, the Benguela Provincial Office of the Ministry of Agriculture, other local authorities, private sector partners and cooperative leaders, resulted in the formation of a Cooperative Federation in Benguela. This was another component of ProAgro’s exit strategy.

At the time the legislative initiative came up, it was decided that CLUSA would hire a consultant who would work with the Justice Ministry to get regulations issued that would guide notary offices in registering co-ops under the existing 1967 cooperative law, until a new law could be passed. ProAgro supported IDA/Ministry of Agriculture in preparing a memorandum that was submitted to the Minister of Justice. The memorandum argued for the application of the Regulation of Agricultural Cooperatives of December 18, 1967, which in section III, Art. 16, says: "... the articles of formation of agricultural cooperatives, as well as their changes and respective registrations in the Commercial Registry, and the publication by extract in the Official Gazette, are exempted from any and all charges, taxes or fees ...."

The Minister of Justice was responsive, issuing an order to all notary services in Angola, directing that agricultural cooperatives are to be exempted from payment of any registration fees. This provision of the regulation had been ignored on a number of occasions, as reported by client cooperatives; ProAgro and its partner organizations changed this situation, which led to major cost savings on the part of several client co-ops.

The legalization of cooperatives and service centers, as well as the other work CLUSA has done in facilitating the acquisition of operating licenses for agricultural lands, has been instrumental in reinforcing investors’ confidence; this has created a favorable atmosphere for farmers to invest in their own futures. The authorization of almost unlimited land use rights, which generally used to be for a period of only 7-8 years, also gives a certain guarantee and reliability to financial institutions desiring to grant credit to producers.

**Table 9 – Producer Organization Process**



Source: ADFP

## Exit strategy

### *Shifting from a centralized Agribusiness Development Center (ADC) to a network of local agribusiness centers and a co-op federation*

In 2008, ProAgro proposed the creation of an Agricultural Development Center (ADC) as a way to promote sustainability and deliver the services which ProAgro currently provides to its clients and partners after ProAgro closed. The ADC was to be a comprehensive service center based in Benguela providing a uniform set of services to all producers and producer organizations. ADC was designed to meet the needs of value chain actors that are the same across different product lines: writing business plans to access bank loans; providing expertise in accounting and management; developing skills and facilitating access to inputs for more efficient production and marketing operations.

Donors' orientation at the beginning of ProAgro was to assisting farming enterprises with the most capacity to adopt new production techniques and, therefore, increase production and productivity; this would lead to import substitution and exports, promoting economic growth in the farming sector. Those value chains included banana, coffee, potatoes and various vegetables. The view was that, once gains in the high-end farming segment, resources could then be diverted to smaller entities.

Under these circumstances, the ADC was perceived by ProAgro staff to be a workable exit strategy that could meet the needs of the beneficiaries involved because, over time, they would be able to pay for the various services provided by the center. The center would be operated by a few paid staff and associated local consultants, trained by ProAgro in business planning and loan applications, registration of enterprises and properties, and in accounting and financial management.

Shortly after receiving USAID approval in 2008 to begin implementing the ADC strategy, stakeholder meetings were held to present the ADC concept and explore other options for ProAgro's exit strategy. These meetings brought to light the challenge of implementing the ADC at the same time ProAgro focused on the smallholder producers, organizing them into primary cooperatives in the banana production areas of Benguela province. Then, the lack of water for irrigation in the Catumbela valley led ProAgro to expand its interventions to new areas of Canjala and Dombe Grande in order to meet its target of assisting 400 banana growers and placing up to 400 hectares under improved production. As more small producers became involved with ProAgro, it became apparent that the high level of services required to support them would result in the ADC becoming overwhelmed. The feasibility of an ADC-type organization assisting some 6,000 smallholders in the three provinces (Bengo, Benguela and Kwanza Sul) seemed unlikely.

In November 2009, stakeholders met and decided that provincial cooperative unions running their respective service centers would be preferable to a centralized agribusiness development center; the unions and centers would be closer and tailored to their constituencies. Banana stakeholders reached a consensus that the creation of a secondary cooperative, provisionally called the Benguela Federation of Agricultural Producer Cooperatives, would allow for a more specialized multi-service center that could support new and existing primary cooperatives within the region by facilitating production technology dissemination, input supply, credit intermediation, and market information and linkages. This new exit strategy option was presented and discussed with stakeholders in Kwanza Sul and Bengo provinces, who also saw the value of establishing secondary cooperative unions.

Therefore, during ProAgro's final year, the project supported the creation and legalization of cooperative unions as a means to fulfill the expressed needs of beneficiaries and promote a more sustainable and accessible cooperative development system. CESACOPA, in Gabela, was founded in 2011 and has already conducted significant business transactions on behalf of its co-op members. The Federation of Cooperatives of Benguela, founded in March, 2012, was to be legally registered during September.

The other component of this plan was the establishment of local pilot centers for processing and marketing of farmers' product. During 2011-12, ProAgro initiated a series of activities to prepare for these cooperative service centers. Meetings were held with each of the 25 cooperatives with which ProAgro had worked; architectural plans were drawn up; land or, in Gabela, buildings available for rehabilitation, were identified; concessions were obtained from the various authorities with power over land-use rights and, in some cases, the buildings themselves; and the necessary documentation was assembled for the registration applications for the 12 sites ultimately chosen. Memoranda of

understanding were signed between ProAgro and the co-ops that should become the owners of the centers, specifying that ProAgro's contribution of funds (up to \$15,000 per center) would be matched by the cooperatives in the form of locally available materials and labor. To reinforce these activities, ICCO, the Dutch Inter-Ecclesiastic Organization for Development Cooperation, decided to add the funds needed to complete the construction of seven cooperative centers and to train their leaders and managers in accounting and management.

Consultants were found, mainly with the help from CNFA FtF volunteer-program and deployed in order to provide training in basic business planning and management skills. The process of registering the centers was initiated—a vitally important and time-consuming process, that affords protect beneficiary cooperatives from arbitrary seizure of their properties by third parties. The simple building design provides a headquarters for the cooperatives, as well as a multi-use patio for training, literacy, leisure, meetings, cleaning and processing of agricultural products; a store for the sale of raw materials, agricultural products, inputs and first-need consumption and household products; and a warehouse for product storage. The usefulness of these facilities is limited only by the imagination of the coops and their membership.

Below are some pictures showing before and after views of the centers and the activities for which they will be used that best describe these advances.

*The pictures showing before and after ProAgro activities*



Before ProAgro, cooperative members use to meet under the trees

Now the co-ops have a service center to meet, among other activities



Before ProAgro, villagers and members of co-ops located in Dombe Grande had to travel 60 Km to Benguela to purchase inputs

Now with the recently inaugurated center, co-op members have their own service center with an input store that benefits the whole village

*Land study*

In Catumbela, construction of roads blocked the principal irrigation channel linking the Catumbela River to nearby farming areas. There was also an incursion of the ocean that destroyed a part of the channel that had fed these fields for many years. The resulting aridity has diminished production and forced many producers to reduce or abandon farming and seek alternative sources of income. Those who stayed dug wells or boreholes and use water pumps for irrigation, a practice that might result in saline groundwater being used; this could, in turn, reduce medium- and long-term productivity. Failure to use the land productively increases the chance that farmers' land would be turned over to commercial interests to accommodate the growing development in the area.

To address the issue of land insecurity, particularly for those working lands in the Catumbela valley, in 2008 NCBA/CLUSA was invited by the provincial director of MINADER and the FAO Land Project in Benguela to participate in conducting a land tenure study aimed at informing the Angolan government regarding local claims to land, as well as the current usage patterns of occupied plots in the area. This is an issue that has deep political and commercial implications, in addition to the agricultural issues involved. The study was jointly funded by FAO/Land Project and ARD/USAID.

After completing the study in Catumbela, Mr. Abrantes Carlos, the Benguela Provincial Director for MINADERP, suggested that the same study be done in Dombe Grande and the Cavaco valley. To that end, Mr. Abrantes made MINADERP technicians available for land surveys. USAID offered collaboration through its land tenure project, managed by ARD Inc., a US-based consulting firm. ARD Inc. offered financing of up to \$100,000 for the study, while FAO offered to contribute another \$30,000. ProAgro contributed an association adviser, who was integrated into the field research team led by an FAO Coordinator.

The land tenure study had the purpose of determining the implications of growth and development on land security and property rights in three farming regions of Benguela. The study was completed and submitted to the Provincial Directorate of Agriculture for further review and to inform the Government of Angola's future course of action regarding the development of the areas in question.

### IR 3 - Access to financial services strengthened

#### *Building financial relationships*

ProAgro developed working relationships with many commercial banks. By supporting farmer applicants in doing feasibility studies, business plans and loan applications, ProAgro was able to promote agricultural lending as a more important part of the banks' overall intervention strategies. For example, according to the intermediate evaluation report of ProAgro, BFA indicated that 41% of the projects submitted in the regions where ProAgro worked were supported by ProAgro and some of these projects were funded. Another example is that BPC decided to open an agency in Gabela; one of the reasons for doing so was to better respond to the demands of farmers involved in the INCA coffee rehabilitation project, which was supported by ProAgro, as well.

It was noted by producers that not only did the project succeed in introducing new farming techniques, but it helped establish an entrepreneurial culture among some medium farmers, and assisted in the preparation of many feasibility studies that were used to apply for loans.

Accessing loans has been difficult for banana producers, especially given the reluctance of lenders to make such loans without government subsidies and/or guarantees. The process of establishing good producer/banker relations was also hampered by the post-civil war dynamics in the country. This process, though slow, proved vital in order to guarantee a good environment for unblocking credit aimed at supporting agricultural production. ProAgro often acted as the go-between in bringing these two parties together by promoting an array of events that included trade fairs, through which lenders and producers seeking bank loans could meet.

Building these relationships involved lobbying, seminars, field visits with bank representatives, adaptation of development models for feasibility studies to the formats used by lending institutions, and submitting feasibility studies for selected producers whose capabilities could change perceptions of risk in this kind of lending. While some banking institutions considered agricultural lending a high risk activity, members of cooperatives have stated that the current situation is greatly improved following their work with ProAgro.

Even though ProAgro did manage to build good relationships with lenders, the inability of the majority of producers to meet bank requirements still hindered expansion in credit access. Lenders reluctant to lend, and large numbers of unbankable farmers, combined to prevent ProAgro from achieving its target for bank credits.

#### *Repayments and droughts*

Most of the producers who have gotten loans are repaying them. Some of them are doing it slowly, but in such cases there are often external factors that hinder them. One major case that is relevant in this connection is the drought in the Cavaco Valley.

ProAgro monitored and evaluated the impact of water shortages in the Valley, due to lack of rainfall which, in turn, caused the level of groundwater to fall during the 2011/12 agricultural season. The lack of rain had dramatic consequences for the production of bananas and vegetables. The drought affected nineteen producers who are members of the Camenhe Cooperative, and who in 2010 had benefited from a \$150,000 loan from the Soba Fund, managed through a commercial bank.

According to the evaluation by the ProAgro team, nearly 14 hectares of land belonging to these 19 farmers, which they planted with bananas and various vegetables, were hard-hit by the drop in water supplies; banana production was dramatically lower on fields which, with normal irrigation levels, would yield an average of 30 tons per hectare.

The farmers in this group were interviewed. They stated that the losses resulting from the lack of substantial groundwater are preventing them from honoring their commitment to pay their loans on time. Furthermore, the 2012 harvest, not only of bananas but of other crops in the region, will be compromised, since recorded rainfall in Benguela's coastal zone has not been significant, and thus ground water levels in Cavaco continue to be dangerously low.

Despite the farmers' painstaking efforts, the devastation of their fields is near total, as is evident to any visitor and in the pictures, below.

Since there clearly did not exist, in the short term, any way for the affected producers to resume payment on their loans, ProAgro proposed that a meeting be convened with the Provincial Directorate of Agriculture and Rural Development of Benguela, the 19 producers from Camenhe and representatives of the Soba Fund, together with representatives of the agent bank, in order to discuss a moratorium and come up with a new repayment plan, assuming production can be resumed at a later date.

## Drought in Cavaco



Pump unused due to lack of water, on the edge of an empty field.



Producers in the Cavaco Valley dug five meters deep in search of water and found none



Farm of a co-op member, abandoned due to lack of water.



This 2012 harvest of banana and other agricultural products is nearly lost due to ecological disaster.

### IR 4 - Market linkages improved and strengthened

Information is key to linking farmers to markets. Originally ProAgro was supposed to consolidate a radio broadcast program with a program produced jointly with the Ministry of Agriculture in order to disseminate market information, a process that would also be done via email, as handouts and SMS via cell phones. However, all these good initiatives and ideas turned out to be difficult or too costly to put into practice and so ProAgro decided to collect and disseminate market information through 'Relâmpago' and 'Punga' handouts, a price bulletin, which has become a reference among input suppliers and producers' association members.

ProAgro used these bulletins to disseminate best post-harvest practices and furnished market information aimed at increasing sales of all three supported value chains, as well as other commodities that included onions, garlic, Irish potatoes, tomatoes, cabbage, maize, beans, peanuts and fruits such as pineapple and avocado.

The team was involved in organizing and participating in several market fairs and other events that brought together producers, input suppliers, wholesalers and the other main value chain actors. These events were also used as a way to disseminate market information and link producers, input suppliers and buyers to regional markets, as for instance NAMPO, the continent's the largest annual fair event in South Africa.

ProAgro won awards for the best agricultural stand at CAN Orange, and the Benguela International Fair, among others. The project served as facilitator for the Project Incubator Award 2012, held on the June 18, 2012 in the Netherlands,

during the Africa Finance and Investment Forum (AFIF 2012). The CESACOOPA project was awarded recognition as the best project proposal submitted, receiving a standing ovation from the attendees at the International Business Forum. With the award came a prize of \$15,000, which is to be invested in laboratory and quality control equipment that will



A member of CLUSA staff (top) receiving the trophy and the certificate of participation on behalf of the team



A former ProAgro employee, Roque Gonçalves, receiving a standing ovation on behalf of CESACOOPA

be placed in service at the CESACOOPA Service Center.

ProAgro also encouraged a number of leading input companies to develop packages and other private-supplier services specific to the banana industry. These packages included developing new input kits for bananas and setting up demo plots in collaboration with large, medium and small farmers and their cooperatives, as well as sharing new technologies such as modern irrigation systems and setting up nurseries to supply banana plants.

ProAgro channeled considerable energy into facilitating imports of meristem banana plants, as well as introducing modernized irrigation systems and other new techniques to cooperatives and individual farmers. With ProAgro's help, over 80,000 meristem plants were imported from Honduras during 2011/2012.

In addition, ProAgro facilitated the establishment of a contract between the CAPIAD cooperative and FertiAngola, an agricultural input supplier, in which the input supplier pays the co-op rent for space in its service center to display and sell its products and carry out training activities. The amount of the monthly rent is intended to cover the most basic overhead costs, thus helping to promote the sustainability of the center project in this locality. Several other co-ops are in negotiations with a few other suppliers to make similar, mutually beneficial arrangements.

#### *Fresh Market/Shoprite: An attempt to explore opportunities for exporting banana to neighboring countries*

Freshmarket/Shoprite, the major South African grocery chain that has stores in Angola, was invited by ProAgro on several occasions to send a representative to Benguela to explore the feasibility of exporting locally-produced banana to Namibia and/or South Africa. Mr. Eduardo, a senior Shoprite manager, expressed his desire to pursue the banana export initiative using the refrigerated containers that bring goods from South Africa every week and return empty.

The major obstacle to the export of Benguela bananas seems to be the farm gate high price (Kz40-50 or US\$0.42 - \$0.53 per kilo of processed high quality bananas), which is due to low yield and high local demand. Once productivity increases, with larger scale adoption of modern planting and post-harvest techniques, local demand could be met and there would be surplus for export at a more competitive price.

Shoprite was willing to make a trial export to Namibia of about 10 tons per week if producers accepted \$0.40 per kilo for the exported banana. Shoprite agreed to provide plastic crates to pack the bananas. The bananas would be treated and packed in a farm storage facility belonging to a leading banana producer (Mr. Tonecas Figueiredo). The business did not come together, however.

#### IR 5 – Access to Water and Sanitation Facilities Improved

During the last year of ProAgro, activities involving access to water and sanitation facilities (WASH) were added to the workplan, as requested by the USAID Angola economic team; earmarked funding for this purpose had been included in the budget of the sixth agreement modification, in September, 2010. ProAgro was not notified until August, 2011 that it had been given, by mistake, \$200,000 of WASH funds.

Because the process of building the service centers was just getting under way, ProAgro staff could not turn its attention to the WASH objectives right away. In January 2012, ProAgro hired a local consultant to conduct a baseline WASH assessment in the co-op areas in Benguela and Bengo/ Luanda provinces. The assessment's purpose was to find out perceived needs for interventions and ways in which cooperatives might participate in improving water and sanitation conditions in their communities, in coordination with local authorities.

The survey was conducted between January 18 and February 1, 2012, by the consultant, Mr. Inácio Zacarias, with orientation and logistical support from ProAgro staff; close collaboration was maintained with representatives of the Benguela Provincial Directorate for Energy and Water and other local authorities in Canjala, Catumbela, Cavaco and Dombe Grande, and in Mabuia/Cabiri in Luanda province (formerly Bengo province). Kwanza Sul was not included in the initial phase owing to the concern that available resources and time would not be sufficient to carry out proposed activities.

In theory, the consultant was looking for certain things. For those local communities where agricultural cooperatives might play a catalytic role, i.e., where the ratio of co-op members/family is over 10 percent, a cooperative engagement might be considered a social responsibility for community development. Other criteria include the existence of water and sanitation facilities that might require little financial investment to be rehabilitated or improved, provided that local communities are willing to guarantee their sustainability in terms of repair/maintenance and operations management.

Based on those criteria, the consultant discussed with ProAgro staff a number of intervention possibilities.

Generally speaking, in all communities surveyed, with or without public water distribution systems, there was a clear lack of education programs addressing issues related to the safe uses of water for consumption and sanitation. In some more structured communities, there are so-called committees for water and sanitation, known in Portuguese as *Grupos de Água e Saneamento* (GAS). Very few houses can be found with bathrooms or latrines. As a whole, sanitary conditions are critical as waste or garbage is not properly managed and defecation is usually done in the open field.

Suggestions were made to prepare cooperative members in ways they could complement activities undertaken by governmental and non-governmental organizations that were implementing WASH projects, as well as ways local residents and co-op members could sustain such actions once ProAgro closed down.

In this regard, stakeholders meetings were organized to discuss the following points:

- Follow up on the evolution of the current Government-led national program known as “Water for All” and its implementation in targeted communities with cooperatives (e.g., Palmeirinhas and 1º de Maio in Canjala, Benguela province) to identify complementary activities to be carried out by these cooperatives with ProAgro support. Key partner institutions are the Provincial Directorate for Energy and Water (DPEA), the municipal administration of Lobito, and the communal administration of Canjala.

- Improve the existing alternate water distribution system in Mabuia, installed by the Kangombe Cooperative, taking advantage of its current irrigation system, to increase the quantity and quality of water for consumption that is already being distributed.
- Design, in partnership with DPEA and municipal/communal authorities, an educational program on the safe uses of water and sanitary facilities that could include theater presentations, leaflets and other relevant information on best maintenance and management practices for water and sanitation in rural communities. This could include training of GAS members in all communities where cooperative members represent more than 10 percent of the family units.

Regrettably, it was not possible for ProAgro to follow up on the training activities outlined in the consultant's report.



Palmeirinhas Service Center

Bathroom in the Service Center

More concretely, however, each of the twelve rural service centers has a latrine, which is used by co-op members during organizational functions, and is available for visitors and customers who visit the center. Increased pumping capacity, whether in the form of new, larger pumps or using second pumps, was installed in the final stages of the project in CAPIAD/Dombe Grande, Palmeirinhas and Kangombe, in order to permit the establishment of community standpipes on the center premises in each of these three, relatively strong cooperatives. In all, then, several hundreds of co-op members and business-center customers will have improved access to both consumable water and sanitary facilities.

### ***Banana value chain performance review***

#### *Accomplishments related to bananas*

- The numbers of producers involved in co-ops were well in excess of the initial objective.
- The initial production objective for bananas has been exceeded by over 40%.
- There is an excellent prognosis for additional banana production in 2012/2013 and beyond.
- Four co-op service centers completed.

#### *Areas that should be improved related to bananas on future programs*

- Increase the number of small producers involved in commercial banana production.<sup>3</sup>
- Improve access to commercial loans for small and medium producers.

<sup>3</sup> In Benguela most of the producers who are members of co-ops developed by ProAgro are smallholders. However, only a minority of them are growing bananas commercially. Thus, the stage has been set for increased smallholder commercial production.

- Repair existing irrigation systems and develop new ones.
- Improve quality control and marketing coordination.
- Prepare business and strategic plans for the Federation, union and co-op service centers.
- Conduct a careful analysis of expected net earnings per hectare from banana production for small, medium scale and large producers.
- Form a technical assistance team to work with the Federation and co-ops after ProAgro ends – providing production assistance, co-op development, credit and business and strategic plans, and market linkages.

## **COFFEE VALUE CHAIN PERFORMANCE AND ACHIEVEMENTS**

### **The historical context for Angolan coffee**

Angola was, during the colonial period, the fourth largest producer of coffee, almost entirely of the *robusta* variety. Large-scale commercial coffee estates were established during the Portuguese era. These estates were nationalized after independence and were operated as state enterprises, but were impacted so severely by both mismanagement and civil war that the fields were abandoned and the economic and social infrastructure destroyed. In searching for way out of this chaotic situation, the large land-holdings were eventually divided up to accommodate large, medium and small-scale farmers who were supposed to rehabilitate the old coffee plantations in a post-war era characterized by the market-oriented agricultural policy.

Financial constraints, bad roads and generally inadequate rural infrastructure, poor producer prices and a lack of expertise all combined to produce the current situation, in which many of the coffee-producing areas have been only slowly recovered. Coffee fields in flatter lands have been burned and tilled under, for the most part, to make way for the production of such short-cycled food crops as maize, beans, Irish potatoes, banana and pineapple. The remaining coffee area, however, is still sizable and has the potential to contribute in a major way to the advancement of the Angolan economy.

Before the Amboim Rehabilitation Smallholder Coffee Project,<sup>4</sup> under which CLUSA/ProAgro was invited by INCA to collaborate, farmers in Gabela had replanted small areas of coffee, but, lacking working capital for harvesting, and with the fields on steep slopes, there was a marked tendency to plant food crops instead of coffee. This practice was severely eroding the soil on the hillsides, and it also failed to realize the economic potential inherent in coffee culture. The remaining plantations in the region were old: there had been no new coffee plantings since independence, so the farmers were reduced to picking the relatively few ripe beans these exhausted plants were producing almost on their own.

More active producers had rehabilitated sections of their farms, usually with enormous effort and little assistance. For its part, the Angolan government is serious about rehabilitating the coffee sector so that it can take its rightful place in the national economy. An emergency task force was formed some years ago, with a mandate to accelerate small-scale initiatives and to provide processing equipment for coffee-producing areas.

### *Historical Background on ProAgro and coffee*

The partnership between INCA and CLUSA under ProAgro began when INCA contracted CLUSA, paying \$150,000 for CLUSA to support INCA's rehabilitation program through organizing co-ops in Kwanza Sul. In 2007 and 2008, INCA worked through CLUSA to organize smallholders into solidarity groups and farmer associations with a stated purpose of accessing \$2.3 million of micro loans to coffee farmers in the Gabela area, channeled through the state bank BPC; CLUSA

---

<sup>4</sup> This program was jointly funded by the GoA , the International Coffee Organization (ICO) and the Common Fund for Commodities (CFC).

was to assist the intermediary bank, BPC, to prepare loan applications, organize the distribution of agricultural inputs, open collective bank accounts and monitor the reimbursement of loans.<sup>5</sup>

After what proved to be a trial period, CLUSA and INCA signed a partnership agreement to implement ProAgro in the coffee sector, between August 2009 to September 2012.

In early 2011, ProAgro brought in EDE, the development consulting arm of the Neumann Foundation, which is itself a subsidiary of the Neumann Kaffee Gruppe, a Hamburg-based multinational coffee enterprise.<sup>6</sup> After a fact-finding mission in February of that year, a contract was negotiated between CLUSA and EDE for a longer term, phased series of consultancies designed to provide technical assistance to coffee growers in Gabela, as well as to the extension corps of INCA itself at the provincial level.

---

<sup>5</sup> Ultimately, the rate of loan repayment would be low; INCA signaled early on to the borrowers that it was not especially interested in recovering its capital, nor did it demand care from the agent bank in accounting for the loans. CLUSA continued to remind the co-ops about the importance of repaying credit but, to date and with some notable exceptions, major repayments have not occurred.

<sup>6</sup> See <http://www.nkg.net/> for more information on Neumann Kaffee.

### Project location



Initially ProAgro’s operating areas were to have been Gabela and Calulo, both located in Kwanza Sul Province. Ultimately and in consultation with INCA, ProAgro focused its activities in Gabela alone. Robusta coffee is well adapted to the project area, having been grown very successfully there during the colonial period.

Kwanza Sul is a mountainous region located on the central plateau; its hills rise from the Atlantic Ocean to altitudes ranging from 1,000-1,200 meters (3,300-6,600 ft.) above sea level. Both growing areas experience a wet season that begins in October and ends in March. The humidity is high in winter as mist hangs over the mountains, sometimes for entire days. This is beneficial for both the growing crop as well as the stored product, since the humidity helps the plant to survive the dry winter months.

The soil consists mainly of deep, well drained, sandy clay loams. The combination of natural resources provides an ideal environment for the production of high quality, high yield Robusta coffee; the areas around Calulo and Gabela (Amboim region) were renowned for the production of large volumes of quality Robusta.

### Subsector study

In order to get baseline figures, ECI AFRICA (CLUSA’s implementing partner from 2006 – 2010) conducted a coffee study. The study presented an economic analysis of the coffee subsector in Angola, providing an assessment that took into consideration all the agronomic, environmental, financial and market aspects of present-day coffee production. Although the study focused on rehabilitation of medium and large scale coffee farms, small-scale operations were also studied.

As mentioned above, the analysis concluded that active producers have rehabilitated sections of their farms with enormous effort by removing competitor plants and allowing for more light to penetrate and for laborers to move more easily through the fields.

The study also provided some statistics regarding the area planted to coffee, the number of producers and total production for the overall plantings, including coffee jungle. From the table below it appears that in 2007, some 7,063 producers marketed 1,173 tons of coffee, grown on 103,610 ha at an average yield of 11 kg per ha.

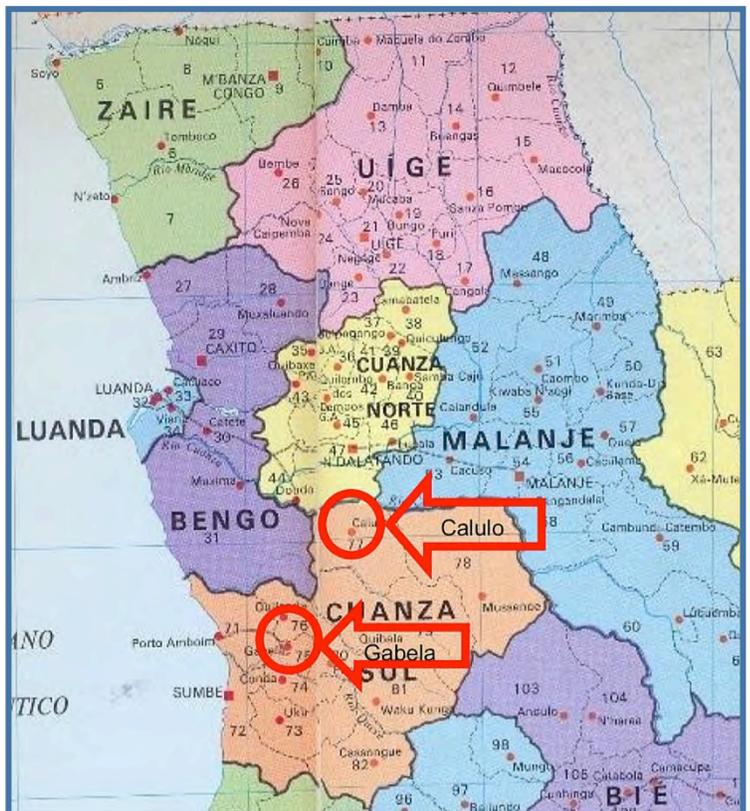


Table 10 - Angolan map, coffee sites marked in red

**Table 11 – The Status of Coffee Production in Calulo and Gabela**

Farm size	Small	Medium	Large	TOTAL
Area established with coffee (coffee jungle plus rehabilitated plantations) (ha)	18 810	42 800	42 000	103 610
Number of producers	6 631	377	55	7 063
Calulo	881	206	48	1 135
Gabela	5 750	171	7	5 928
Average area per farmer (ha)	3	114	764	15
Total production green coffee (ton)				1 173
Calulo				575
Gabela				598
Yield per ha (kg)				11

Source: ANÁLISE ECONÓMICA DO SUB SECTOR DO CAFÉ EM ANGOLA (INCA Personnel: Miranda & Vega, 2008; p. 20)

#### *Adopting new farming techniques*

Adopting new techniques involves mental process with five stages: awareness; interest; evaluation/comparison; trial; and adoption.

The rate at which a new farming practice or technology is adopted depends on the characteristics of the farmers, the social system, farmers' views of the nature of the innovation, exposure to communication channels and the extension worker's efforts. It takes time for an innovation to diffuse through a community, especially if there is access to only a few communication channels.

The coffee establishment program started in 2008 with the identification and preparation of nursery sites. According to the program plan, designed on the basis of the study referred to above, between 2008 and 2012 small-scale farmers would plant 6,704 ha in coffee using new plant materials. Medium-scale farmers would account for a total of 31,593 ha, while the large-scale farmers would plant some 4,609 ha by 2015. An estimated total of 42,906 ha would be planted in coffee between 2008 and 2015.

#### *Improved coffee production*

According to the study, coffee planted in year one would flower in year two and produce a full crop, ready for harvest, in year three; the first harvest, however, would produce very low volume. The first real crop would be in year four, with a yield of about one 1 ton per ha. This was a conservative yield forecast, deliberately understated because further increases in yield would depend on nutrient status and the proper application of fertilizers.

The total estimated coffee production could be calculated as shown below (*Table 13*). Yield from existing rehabilitated coffee plantings was estimated at 250 kg per ha. According to the assumptions made, coffee production would increase to 893 tons in 2011 and 61,832 tons in 2017.

**Table 12 – Coffee establishment program with new planting material (ha)**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	TOTAL
<b>Small Farmers</b>	<b>86</b>	<b>614</b>	<b>1 896</b>	<b>2 738</b>	<b>1 370</b>						<b>6 704</b>
Innovators	86	86									172
Early adopters		528	528								1 056
Early majority adopters			1 368	1 368							2 736
Late majority adopters				1 370	1 370						2 740
<b>Medium</b>	<b>162</b>	<b>1 157</b>	<b>3 736</b>	<b>6 319</b>	<b>6 319</b>	<b>6 156</b>	<b>5 161</b>	<b>2 582</b>			<b>31 593</b>
Innovators	162	162	162	162	162						811
Early adopters		995	995	995	995	995					4 976
Early majority adopters			2 579	2 579	2 579	2 579	2 579				12 893
Late majority adopters				2 582	2 582	2 582	2 582	2 582			12 912
<b>Large</b>	<b>24</b>	<b>169</b>	<b>545</b>	<b>922</b>	<b>922</b>	<b>898</b>	<b>753</b>	<b>377</b>			<b>4 609</b>
Innovators	24	24	24	24	24						118
Early adopters		145	145	145	145	145					726
Early majority adopters			376	376	376	376	376				1 881
Late majority adopters				377	377	377	377	377			1 884
<b>TOTAL</b>	<b>272</b>	<b>1 940</b>	<b>6 177</b>	<b>9 978</b>	<b>8 610</b>	<b>7 055</b>	<b>5 914</b>	<b>2 959</b>			<b>42 906</b>
<b>CUMULATIVE</b>	<b>272</b>	<b>2 212</b>	<b>8 389</b>	<b>18 367</b>	<b>26 978</b>	<b>34 032</b>	<b>39 946</b>	<b>42 906</b>	<b>42 906</b>	<b>42 906</b>	

Source: op. cit., p. 34

**Table 13 – Coffee production, including production from newly established coffee (ton)**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production from existing rehabilitated coffee plantings	1 173	1 173	1 173	1 173	1 173	1 173	1 173	1 173	1 173	1 173
<b>Production from new planting material</b>			<b>68</b>	<b>893</b>	<b>4 862</b>	<b>15 078</b>	<b>29 704</b>	<b>42 230</b>	<b>52 527</b>	<b>60 659</b>
2008 planting			68	408	408	408	408	408	408	408
2009 planting				485	2 910	2 910	2 910	2 910	2 910	2 910
2010 planting					1 544	9 266	9 266	9 266	9 266	9 266
2011 planting						2 495	14 967	14 967	14 967	14 967
2012 planting							2 153	12 915	12 915	12 915
2013 planting								1 764	10 582	10 582
2014 planting									1 479	8 871
2015 planting										740
<b>TOTAL</b>	<b>1 173</b>	<b>1 173</b>	<b>1 241</b>	<b>2 066</b>	<b>6 035</b>	<b>16 251</b>	<b>30 877</b>	<b>43 403</b>	<b>53 700</b>	<b>61 832</b>

Source: Op. cit., p. 39

*Net cash flow per ha of coffee established with new planting material*

The estimated net financial flow per hectare of coffee planted with new material is shown in Table 14, below.

**Table 14 – Coffee Cash Flow**

<b>Item</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>
Coffee yield ripe cherries (ton)	6	6	6	6
Coffee yield green coffee (ton)	1.5	1.5	1.5	1.5
Price per ton	1 800	1 800	1 800	1 800
<b>Inflow</b>	<b>2 700</b>	<b>2 700</b>	<b>2 700</b>	<b>2 700</b>
Coffee sales	2 700	2 700	2 700	2 700
<b>Outflow</b>	<b>890</b>	<b>890</b>	<b>890</b>	<b>890</b>
Direct pre-harvest operational cost	615	615	615	615
Harvesting cost	275	275	275	275
<b>NET FLOW</b>	<b>1 810</b>	<b>1 810</b>	<b>1 810</b>	<b>1 810</b>
<b>Less loan repayment</b>	<b>725</b>	<b>725</b>	<b>725</b>	<b>725</b>
Establishment cost	610	610	610	610
Mechanical package	115	115	115	115
<b>NET FLOW AFTER LOAN REPAYMENT</b>	<b>1 085</b>	<b>1 085</b>	<b>1 085</b>	<b>1 085</b>

Source: Op. cit., p. 42

#### *Training - research - extension*

The study also concluded that the extension officers then in the field generally had basic agronomic backgrounds but little coffee knowledge or experience. The emphasis was on providing farmers with coffee seeds and plastic sleeves so nursery sites could be established. Training in all aspects of coffee culture and agronomy in general was vital for the success of the coffee enterprise in Kwanza Sul.

In consultation with Mr. Pascual Miranda, the INCA researcher and Delegate of the Ministry of Agriculture at the Municipality of Amboim, in Kwanza Sul province, it was agreed that there was a need for field experiments in several areas, including:

- Cultivar evaluation
- Plant population and the impact on yield of different populations
- Fertilizers
- Shade trees

Basically, the economic study recommended that attempts be made to mobilize private sector capital and know-how for the establishment of a large scale coffee producing project, including farmer support services including training, the supply of planting material and inputs, and assistance with marketing.

#### *Overall coffee performance/achievements table*

The number of farmers assisted by the program was more than 20% higher than the initial target. INCA's records of site visits to producers' fields indicated that a high percentage of producers participating in the program – over 90% – are using improved practices in their coffee plots. INCA also estimated that the average producer is cultivating one hectare of coffee, on average.

CLUSA developed 14 cooperatives, just one fewer than the original objective of 15. In addition, it organized CESACOOPA, which is a union comprised of these 14 cooperatives. Because of limited funds, CLUSA decided to assist with the construction of only seven rural service centers at this time. Staff chose cooperatives for the initial round of service centers based on their level of development as co-ops and their willingness to provide matching funds and in-kind contributions for center construction.

Some \$2.3 million in loans was provided to farmers through a previously mentioned matching fund provided by the GOA to the Coffee Smallholder Rehabilitation Project in Amboim province, co-funded by the ICO and CFC. About 5,015

producers received three-year micro-loans averaging \$500 in 2007 and 2008. Thus far, there has been a low repayment rate, estimated at about 40%. There are several reasons for this experience: treatment of these loans by some producers as if they were grants; provision of three-year loans on a crop that takes five years to come to maturity; and lack of enforcement of loan repayment. Several people familiar with the program were optimistic that loan repayments would increase substantially once the farmers' coffee plots become ready for harvest in the 2013-2015 time period, together with the requirement that delinquent loans be repaid before producers can receive new credit from any lending scheme publically available.

As mentioned earlier, tabulating market transactions proved to be a difficult indicator to measure because of all the informal market activity related to inputs and sales.

The table below presents established targets and performance goals achieved in the coffee sector:

<b>Measure</b>		<b>Performance</b>
Producers	4,000	5,015
Producers with improved practices	--	4,700
Improved hectares	--	4,700
Associations	--	105
Cooperatives	15	14
Cooperative Service Centers	13	7
Loans	--	\$2.3 million
Market transactions	--	\$1.4 million

#### IR 1 - Technical Assistance Expanded, Reinforced & Improved

##### *Reinforcing the agricultural extension system*

Development workers from diverse fields, such as adult education, health, and agriculture have shown that community development can be streamlined by facilitating learning processes among participants who have constructed their knowledge together. According to this thinking, the goal of an intervention was not only the adoption of technologies, but also enhancing farmers' ability to manage increasingly complex processes. The Farmers Field School (ECA) model was built with these findings in mind, and sought to facilitate experiential learning on a guided, peer-to-peer basis.

INCA had begun working, prior to the involvement of ProAgro, with producers in the Amboim area of Kwanza Sul to rehabilitate coffee farms. INCA entered into a \$150,000 contract with CLUSA in June 2007 to assist with organizing farmer associations in order to expand training and access to credit. The initial contract was followed by a partnership agreement that ran through September 2012. In 2010, CLUSA contracted EDE in order to bring new dimensions to the existing technical assistance available to coffee growers, as well as provide training-for-trainers support to INCA's extension agents.

EDE made its first intervention in December 2010. Dr. Robert Rosskamp, an EDE consultant from Hamburg, came to Angola to review progress to date and to propose goals and actions designed to improve coffee production systems in the municipality of Amboim.

The actions Rosskamp suggested were to increase productivity through a system of Farmer Field Schools (locally termed *Escolas de Campo Agrícolas*, or ECAs); introduce methods for producing and applying natural fertilizers; train farmers in



farm economy and establish a system of Farmers Field Books; improve post-harvest processing and quality control; train cooperatives in marketing and management; and work with cooperatives in improving transparency and governance.

From these recommendations, INCA and ProAgro agreed that the Farmer Field Schools would be a logical point of entry, since these rural training sessions would benefit the farmers directly, at the same time they expanded the capacity of INCA's own field workers. To that end, EDE Consulting sent Mr. Máximo Ochoa, a consultant from Ecuador, to start the schools. He completed four missions, for a total of nine months in-country, between April 2011 and August 2012. A second consultant, Dr. Beatriz Fischesworrying, a Colombian expert in natural or organic fertilizers, came to Angola and delivered training through the ECAs during the months of September and October 2011.

Dr. Rosskamp returned in August 2011, to prepare the way for a more in-depth intervention related to quality improvement and market research. INCA had set different priorities, however, and this third line of action, focused on product quality, was never opened.

#### *Farmer Field Schools (ECAs)*

The extension framework of the ECA had three levels, in which training was carried out incrementally: trainers were trained by the consultant; then these trainers trained facilitators; then the facilitators, under the supervision of trainers, carried out actual courses with farmers. This overall process included the participation of 1 facilitator/coordinator, 11 facilitators/supervisors (only 9 came in the end), 95 production association heads, 55 ECAs, 4 to 5 ECAs per supervisor, and an average of 20 to 30 students in each of the ECAs as shown in the diagram, below.

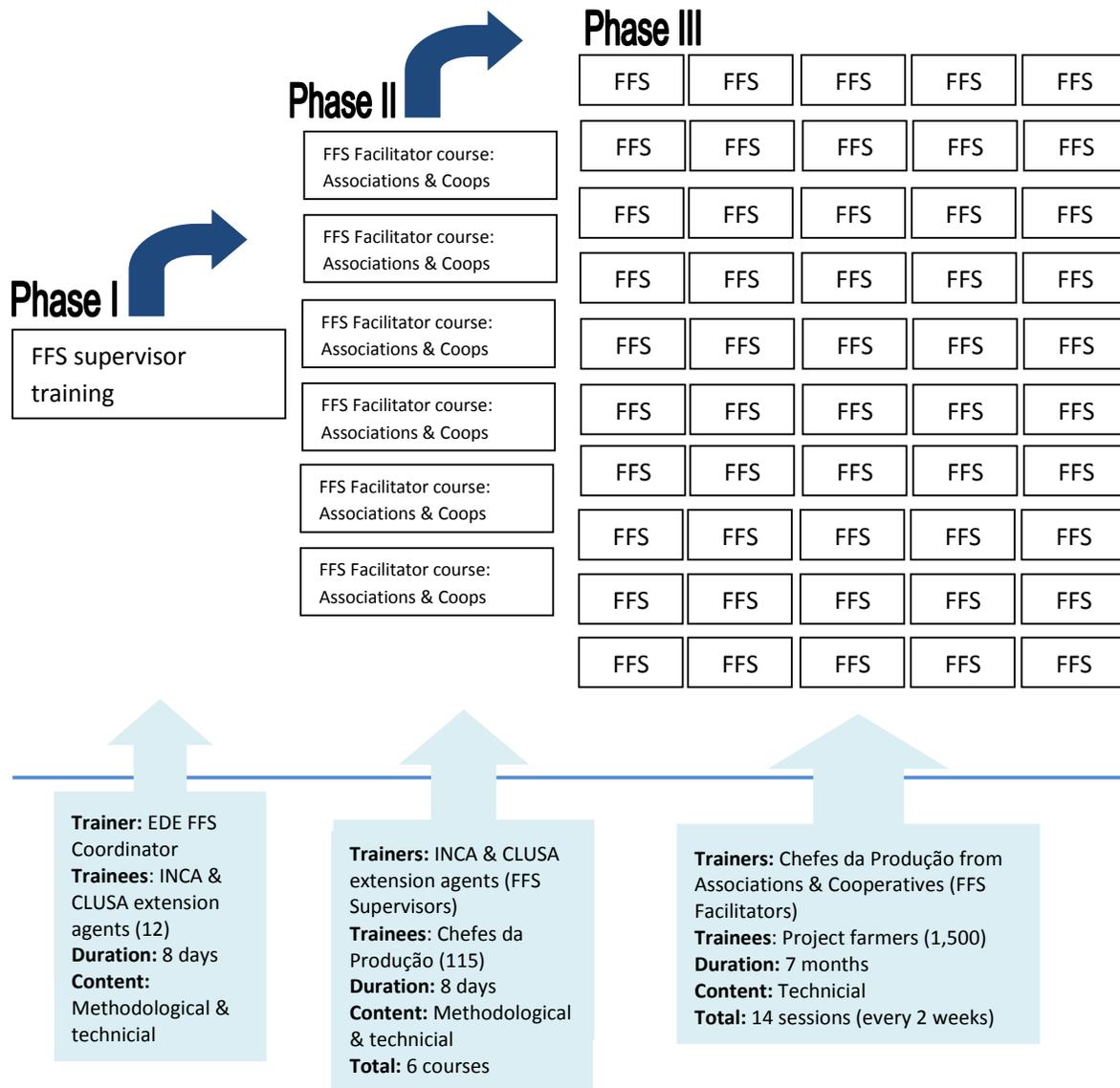


Figure 1: ECA Training Sequence (Source: Summary Evaluation Report – Jan 2012; p. 10)

*Execution of ECAs by zones*

In the beginning, a total of 56 ECAs was established, involving some 1,100 producers. Forty-four groups were able to reach the end of the first training cycle, with approximately 885 member-participants, of whom 91% were men and 9% women. The number of producers participating in ECAs was about 18% of the total number of farmers assisted by ProAgro in Kwanza Sul.

The activities of the facilitators were distributed according to work areas or zones. In the municipality of Amboim there are seven zones, namely: Assango, to which three technician/facilitators were assigned, and the zones of Cadá, Carlaongo, Damba of Cungulo, Honga, Vinte Sete, and Xieto, each with one technician. Overall, seven INCA extensionists and two CLUSA staff served as facilitators and supervisors to the 95 Association production facilitators.

Each technician assisted an average of 11 associations; the minimum number of associations supported was 6, the average was 10 assisted associations and the maximum was 23 associations. A total of 103 associations were assisted by the technician facilitators. Of the 103 associations assisted by the team, a total of 44 organizations completed the first Farmer Field School training cycle during the 2011-2012 harvest season, corresponding to 43% of the associations that began the process. Of the nine technicians, only one failed to realize his assigned ECA, in the area of Damba Cungulo, due to personal problems.

**Table 15 – Number of associations assisted by zone**

<b>Zone</b>	<b>Name of Facilitator</b>	<b>No. Associations Attended</b>
Assango 1	Lucas Sacalando	18
Assango 2	Eduardo Julio Galangue	10
Assango 3	Abrantes Pereira	23
Cadá	Antonio Manuel Ferreira	6
Carlaongo	Joao Arnaldo	14
Damba	Olivio Alfonso Joaquim	5
Honga	Carlos de Carvalho	9
Vintese	Alexandre Jonatão	7
Xieto	Bernardo Patricio Melo	11
<b>Total</b>		<b>103</b>

Source: ADFP

### *Assessment of learning in ECAs*

The technicians of INCA and CLUSA attended a series of courses on the facilitation of ECAs, These courses looked at a variety of technical and methodological issues related to coffee growing. The technical component focused on different crop and farm management practices using an agro-ecological approach.



A survey, administered to the technicians and intended to show their priorities for learning, showed that 89% preferred topics related to the production of organic fertilizers, 56% topics related to coffee tree pruning, 44% issues of regulation of shades, 33% with the development of botanical insecticides, and 22% subjects with the terracing of coffee fields.

In relation to subjects that should be enhanced or introduced in new ECA training sessions for technicians, heads of production, and coffee farmers, the survey indicated that 33% favored learning about Integrated Pest management, 22% mentioned agricultural extension and fertilizer application, and 11% mentioned various topics including soil conservation, organic certification, market dynamics, coffee quality, the management of

complementary annual crops, the establishment of plantations, and agro-forestry.

### *Major crops and farming practices in the allotments of members*

ECA participants work, on average, with twelve different crops; the main ones are coffee, present in 100% of the allotments of farmers, together with maize, palm oil, bananas, cassava, peanuts, beans, and pineapple. Farmers who grow coffee also breed chickens, pigs and goats. As one farmer explained, “Coffee can only be picked every once in a while. The trees take a long time to grow. I have to have something else, too, to eat or to buy notebooks for my kids to take to school. I can’t always wait for the coffee or the coffee buyer if I need cash.”

### *State of coffee plantations in the areas served by ECAs*

Field School participants were working three kinds of coffee plantations. Three-quarters of the farmers, having, on average, 1.89 hectares planted to coffee, are working rehabilitated fields, and these are in production. Another 40% have some old, abandoned plantations, without production; here, there is an average of 1.52 Hectares. Plantations with newly planted trees are present in 94% of the cases; members have planted, on average, 1,061 seedlings, equivalent to 0.53 or 0.96 hectares, depending on the density of the plantings (1,100 or 2,000 plants per hectare).

State of Plantation	Percentage	Area (Ha)
Rehabilitated coffee or in production	74,5	1,89
Abandoned coffee or without production	40,4	1,52
Planted coffee or new plantation	93,6	0,53 – 0,96 (1,061 plants/Ha)

Source: Máximo Ochoa/EDE Consulting Final Report

### *Practices and methodologies widespread in ECAs*

A total of 29% of the practices promoted through ECAs were implemented in individual or private allotments during the first pilot phase of ECAs. This means that one third of the techniques were being used by members of schools at present.

Farmers reported a renewed or more informed focus on: food safety; the application of best practices; organic crop management; production management systems; land and water management; and management of small animal species and other livestock.

The following sections describe some of the central points shared with producers during the ECA courses. The illustrations that follow each topic are to facilitate understanding of these practices.

### *Selective harvest of coffee*

**Objective:** Improve the quality of the coffee harvest, in two or three stages: identify plants with higher amounts of red coffee berries; and leave the plants with green coffee berries for a later harvest.

#### *Results:*

- Using the traditional harvesting method, in place in most of ECAs, the farmer collects 30-40% red cherries and 60-70% of green cherries in each sack.
- Using a selective harvest method, a farmer collects between 80-90% of red cherries and 10-20% of green cherries.

**Table 16 – Selective Harvest**



### *Pruning*

Coffee trees in the municipality of Gabela are usually plants from the colonial era; it is common to find plants more than 50 years old. Many fields are still not rehabilitated, whereas the fastest way to so is by pruning and properly maintaining

the trees. Without methodical pruning, the farmers face the current situation: it is very common to find unproductive trees, which tend to be too tall, with high proportions of stems and buds or shoots.

*Objectives:* Understand the principle of pruning in relation to the improvement of production; promote the practice of pruning in demo plots, model fields and individual fields.

**Table 17 – Pruning**

State of the trees in abandoned plots (before)



Field rehabilitated (pruning scroll, after)



Source: ADFP

#### *Terracing, crowning and bands in coffee*

Terracing coffee plants is a known method in Angola, since terracing was applied on farms even during the colonial era. Farmers consider this practice important for cleaning the coffee but with the passage of time, this knowledge was part of the knowledge preserved by older farmers who, as a senior generation, are without much influence, so terracing is practiced only sporadically.

*Objective:* To analyze the reasons why it is important to terrace; know and compare different disease, water and fertilizer management practices in coffee growing, such as terracing, crowning and manure application.

Table 18 – Terrace, crowning and bands



Traditional Terracing



Crowning



Bands



Bench terraces

Source: ADFP

### *Controlling the fruit borer*

The borer of the coffee fruit is a pest that affects the quality of coffee. In the municipality of Gabela the pest is found in many fallen trees where the coffee fruit has over-ripened.

**Objectives:** Identify the life cycle of the pest; find the places where the pest concentrates after harvest; practice different control strategies that include techniques for collection of the coffee berries, picking up fallen fruit, and deploying traps.

**Table 19 – Controlling the fruit borer**

Training in proper collection techniques



Deployment of traps



Source: ADFP

*Combating soil erosion*

In the training sessions, it was observed that farmers have ideas about soil conservation practices; in most of the sessions, for instance, participants could make terraces to prevent erosion.

*Objectives:* To observe the process of soil erosion caused by rain on the slopes; identify ways to conserve soil and protect it from erosion, through using contour lines and traditional construction equipment that does not involve additional cost.

**Table 20 – Combating Soil Erosion**

Soil erosion



Soil conservation



Source: ADFP

### *Preparation of organic fertilizers*

Dr. Beatriz Fischersworing provided training in soil fertility and the preparation of organic fertilizers through Farmer Field Schools. The primary goal was to train INCA extensionists, ProAgro advisors and heads of associations and production cooperatives in these improved techniques produce organic fertilizers.

The training used different learning tools to help the participants become familiar with different ecological principles for sustainable soil management, such as the use of organic matter to enhance soil fertility and retain moisture, using legumes for soil nitrification, and waste identification and nutrient cycling.

During her visit, training sessions were held in four areas (Assango Sede, Chieto, Pange and Quipuco), and 174 people participated (including 111 heads of production, associations and cooperatives, 12 INCA staff, and 4 ProAgro production advisors). The aim of training the technicians and production heads was primarily to improve the knowledge they already had about these subjects, so that they could subsequently be the main actors in replication and multiplication of the techniques at the level of the Farmer Field Schools.

*Objective:* Develop solid and liquid organic fertilizers from local materials for application in coffee and other complementary crops. The fertilizers studied were bokashi, composting with organic compounds, an herbal “tea” with manure, and “biol” or “biostimulant.” Summaries of the ingredients for each follow, below.

*Bokashi* - 10 bags of coffee straw or residues of palm leaves, 10 bags of fresh animal manure (goats, pigs, cattle), 10 bags of sand without stones, 3 bags of charcoal in small pieces, 25 - 30 kg of corn bran, 25 kg of kitchen ash or lime, 3 liters or 1 kg of sugar cane juice, 500 grams of bread yeast or 3 kg of fermented corn, 150 - 225 liters of water (adjusted to make the proper consistency).

**Table 21 – Preparation of organic fertilizers**



Source: ADFP

### *Organic Compound*

Vegetable materials such as coffee straw, remains of palm leaves, banana stem, fresh and dried leaves, leftover harvest corn and beans, kitchen waste; animal material, such as pig, goat, cattle, chicken manure; ash, lime, soil, water, fermented corn, sugar cane juice.

### *Herbal tea and manure*

One barrel with a capacity of 120 liters; two bags of raffia—one to contain the manure and the other to cover the drum; 2 meters of rope; 18 kilos of manure (fresh); 3 kilos of chopped leaves of legumes; 3 kilos of ash; 1/2 liter of sugar cane juice or 1 kilo of sugar, a 5 kg rock.

**Table 22 – Herbal tea and manure**

Herbal tea



Manure Tea



Source: ADFP

*Biostimulant (Biol)*

A 200 lt drum; 20 kg of fresh animal manure; 10 kg of leaves from *cura tudo* (*tetonia*), calembe, chili, or other plants with insecticidal characteristics; 250 gr of fermentation agent (yeast); 5 kg of molasses or sugar; 3 meters of rope; water; a 2 meter hose; a plastic bottle; 1 meter of plastic sheeting; a machete.

**Table 23 - Biostimulant**

Preparation of boil



Source: ADFP

*Development of local botanical insecticides*

*Objective:* Use local plants with insecticidal characteristics for pest control. Ingredients: Chili plants or *cura tudo* (*Tetonia* sp.), Calembe, cassava, papaya; a pestle; water; pump sprayer. Soapy water: 5 liters of water and half of blue soap bar or 100 grams of detergent.

**Table 24 – Training on the preparation of organic insecticides using local ingredients**



Source: ADFP

*Economic analysis of 2012 harvest*

<i>Income per hectare (Kg of commercial coffee)</i>	384
Price/kg of commercial coffee	US\$ 1,40
Gross profit per hectare	US\$ 537
Cost of production per hectare	US\$ 281
<b>Net profit per hectare</b>	<b>US\$ 256</b>

*Coffee yields in plots assisted by INCA and CLUSA*

<b>Year</b>	<b>Income Kg/Ha</b>	<b>Source</b>
1970	485	<i>INCA Database</i>
2000	80	<i>INCA Database</i>
2011	544	<i>ProAgro, Study-yields in treated fields</i>
2012	384	<i>ProAgro, Study-yields of improved fields</i>

## *Coffee Production and Projected Production by Amboim Co-op Producers<sup>7</sup>*

<b>Year</b>	<b>Tons of Coffee</b>
2010	1,300
2011	1,600
2012	1,000*
2013	2,500
2014	3,500
2015	4,000-5,000

\* Drought conditions prevailed during the 2012 season

### *Accomplishments related to coffee production*

- Approximately 4,700 producers are using improved coffee production practices as a result of the partnership among INCA, CLUSA and the Neumann Foundation/EDE.
- The Farmer Field Schools, demonstration plots and training of trainers programs appear to be working effectively.
- Because of the large number of producers using improved practices, INCA, ProAgro and EDE anticipate major increases in production in 2013, 2014 and 2015.

### *Suggestions for future use in field extension*

- Involve newly graduated youth to accompany current technicians to learn the principles, objectives and uses of methodological tools.
- Boost the involvement of heads of production of Associations and Cooperatives to be part of the extension team and extend the number of beneficiaries of the training process.
- Follow up on the plantations of individual ECA participants to increase the 30% usage rate of the techniques promoted through ECAs. This function should be taken care of by the heads of production associations and cooperatives.
- Involve other members or partners, e.g., the Agrarian Development Institute (IDA), to complement and integrate the training of other crops, and to help achieve integrated management and sustainable production systems for coffee.
- Consider the extension structure's design and capacity for effecting training initiatives, reporting, monitoring and evaluation of new programs and projects. Such a review would encompass the coordination level (direction and coordination), the supervision and monitoring level (i.e., the technical brigade), the execution level (heads of production), and the farmer level, looking at the usage, adoption and adaptation of new methods.
- Ensuring adequate resources and basic conditions, including physical plant and equipment, necessary for an efficient, effective outreach program..

---

<sup>7</sup> Estimates made by Pascual Miranda in an interview conducted by program evaluator, April 27, 2012.

*Organization, legalization, and establishment of headquarters*

The project devoted much work to the creation, organization and legalization of cooperatives. There are fourteen cooperatives in operation in Kwanza Sul; six of these have service centers built and legalized with ProAgro's help.

In addition, ProAgro structured a partnership that included the Ministry of Agriculture's office for the municipality of Amboim, local authorities, private sector partners, various international donor organizations, and area cooperative leaders, in order to form a cooperative union that is to serve the cooperatives and their members in the province. This union is called CESACOOPA.

A key element in the consolidation of the cooperatives was the construction of processing and marketing centers, owned by the co-ops themselves. The principle was approved in the modification of September, 2010 to the Cooperative Agreement with USAID, and contemplated a center for each ProAgro-assisted cooperative, or 25 in all (thirteen in Kwanza Sul, five in Bengo and seven in Benguela).

The establishment of such centers proved to be a much more difficult, prolonged process and more expensive than initially expected. The negotiations with the cooperatives, assessing their available resources and their willingness to invest these resources in a center are all, it is now understood, an integral part of the coop development process. In order to be sustainable, and in order to break through the model of dependence that is so prevalent in this post-conflict environment, the necessary negotiations must be given the time and focus they need for a successful and viable outcome.

All the leaders and members of the cooperatives were involved in a consultative process of identifying and selecting the construction sites. The cooperatives agreed to take responsibility for supplying stones, sand, water and other locally available materials, including non-specialized labor. ProAgro took responsibility of providing non-local materials to a value of US\$15,000 for each center, providing technical assistance for construction, assistance in obtaining construction licenses and for finding additional donor funding. The sum of all these efforts represented a co-financing mechanism; the co-ops put in an amount approximately equal to that provided by USAID through ProAgro, while additional donor funding was sought for the remainder of each center's costs. To ensure the safety of the facilities and the workers, and so the building would be done properly, CLUSA sub-contracted the services of a construction company to facilitate and supervise building.

The documentation required for the construction of service centers included statements by the Soba, the Communal and Municipal Administrations, and the Municipal Agriculture Services; architectural sketches and land surveys for each location; a construction or rehabilitation plan; a request for project approval; the construction/rehabilitation license; and finally the registration of property ownership with the notary, which is a long and time-consuming process to be followed after the end of the program. ProAgro personnel were closely involved with co-op members and leaders in preparing all these materials.

Several training courses were offered to the co-ops, in collaboration with CNFA, as part of their participation in USAID's Farmer-to-Farmer program. Training focused on business planning, writing loan proposals, and store management. This latter topic supports the negotiations several co-ops have carried out with a number of local input suppliers (e.g., Sirius, Fertiangola, and Taurus) to set up small stores within the centers, often with the supplier paying, at least, a nominal space rental to the cooperative. In one case, the store is already up and running, and doing good business.

The modest center facilities, constructed in part with materials and labor supplied by each individual cooperative are places where coffee can be prepared for sale in accordance with the training received via the Farmer Field Schools; where the purchase and sale of goods, inputs and products can occur; and where training sessions and cooperative administrative meetings can take place. The centers also represent an investment and legacy of USAID and ProAgro, a durable infrastructure for future growth following ProAgro's close-out.

*Coffee co-ops service centers overview map: Kwanza Sul*

COOPERATIVA NZOY:	S10 50.886	E14 21.992
COOPERATIVA CARLAONGO:	S10 48.047	E14 21.866
COOPERATIVA SANGUE DO POVO:	S10 57.578	E14 19.776
COOPERATIVA CAMUETCHE:	S10 58.619	E14 27.935
COOPERATIVA ASSANGO SEDE:	S10 59.000	E14 24.618
COOPERATIVA DAMBA DO CUNGULO:	S1051.593	E14 16.612

**Table 25 – Service center overview**

Coffee co-op service center map



Source: ADFP – GPS coordinates

**CESACOOPA Service Center**

CESACOOPA is the cooperative union for 14 cooperatives in Amboim representing approximately 5,000 farmers, almost all of whom are coffee growers. With financial assistance from ICCO, a Dutch NGO, in-kind and cash assistance from its own members, and technical and financial assistance from ProAgro—which is in turn funded by USAID—CESACOOPA constructed its service center in the first half of 2012.

The center was designed to serve as a marketing depot for coffee, a place to purchase agricultural inputs, and the office headquarters for the union. CESACOOPA has already negotiated a 39 ton sale of coffee to Kotomar, half of which has already been delivered. The coffee bags in the photo at right are part of this order. The union also negotiated with Sirius, an input supply company, to lease space at the center and provide inputs and training to union members. An annex has been built, next to the main center building; it will house offices and a small laboratory for quality testing, using equipment to be purchased with the \$15,000 award received from the African Finance and Investment Forum.

**Table 26 – CESACOOPA Service Center**

CESACOOPA service center



CESACOOPA warehouse with partial coffee shipment



Source: ADFP

**Table 27 – Several of the service centers**



Co-op Assango Sede – Act of inauguration of the service center



Co-op Weira Pungo – Construction completed (no photo available)



Co-op Carlaongo – Rehab



Sangue do Povo Co-op– rehab



Nzoy (Chieto) Co-op – Inauguration of the service center



Ngana Chinge Co-op – rehab

Source: ADFP

### **IR 3 - Access to financial and business services strengthened**

ProAgro consolidated and expanded its services aimed at association development, access to micro-finance and marketing to coffee smallholders under the INCA Rehabilitation Project. BPC (Banco Poupança e Crédito) disbursed a cumulative \$2.3 million in loans by the end of September 2008 under an agreement with INCA, using funds provided by the Angolan Ministry of Finance as part of an assistance package jointly supported by the Government of Angola (INCA/MINADER) and the Common Fund for Commodities (CFC) and International Coffee Organization (ICO). The number of beneficiaries from this program reached 4,917 coffee smallholders cultivating, on average, 2 hectares of coffee, in additions to other consumption and cash crops.

#### *Training of leaders and managers of cooperatives on management and basic accounting*

With a view to putting the new cooperative centers into operation, ProAgro, in partnership with CNFA, identified several volunteers, including Lynda Swenson, Tara Sabre, David Webb, and Scott Stovall, who facilitated training sessions for co-op leaders and managers in Benguela and Kwanza Sul on skills for management, business planning, marketing and basic accounting.

With these courses, these leaders could fortify organizational capacity through the training of other cooperative leaders. The tools conveyed during the trainings, for the management of service centers, included the revenue journal, expense journal, cash flow sheet, the overall income statement, and the co-op balance sheet.

These courses represented the very beginning stages in training; the project's remaining time was too short to do more. Regrettably, there is still much to do in order for the co-ops to manage their own affairs effectively.

**Table 28 – Training of leaders on management and basic accounting**



Source: ADFP

#### IR 4 - Market linkages improved and strengthened

ProAgro expected that by the end of year six, the program would promote commercial linkages between producer organizations and as many as ten agribusiness firms, comprised of input suppliers (4) and buyers of coffee and other products (6), and that these would be engaged in trading with existing cooperatives. At least two local banks would be supporting those agribusiness operations with loans for input and output sales at an estimated amount of \$1,500,000. There would be, at least, five processing and marketing facilities with proper equipment for hulling and the capacity to perform quality control, weighing and packing coffee and beans for sale. Staff estimated that 20 percent of assisted farmers would have invested in drying mats to dry their coffee off the ground, reducing post-harvest losses and improving quality of coffee; 50 percent of assisted farmers would be marketing their coffee through their cooperatives. Agribusiness Fairs would be organized at the regional level to create an environment for interactions among growers, input suppliers and coffee buyers.

However, these expected outcomes were to be achieved with the cooperative service centers in full operation. Since the centers were completed at the end of the project, these outcomes have not yet been accomplished; but the potential for much of this list to be accomplished exists in the co-op union, CESACOOA. By March, 2012, CESACOOA had already facilitated the commercialization of a first load of coffee from its cooperatives, resulting in 39 tons of coffee sold.

#### *Preparation of coffee samples for export*

As part of the Farmers Field Schools, in June and July of this year, different groups sampled two types of crops: the first was traditional harvesting, or collection of local coffee, and the second used a selective harvesting approach, as described above. The harvested coffee was subjected to a drying test on different surfaces: on high tables with a netting surface; on mats; and on the ground.

Once the coffee was dried, ProAgro staff collected a total of 42 coffee samples. At the same time, Mr. Michael Opitz, chairman of the Neumann Coffee Foundation and president of EDE Consulting, was contacted in order to seek his support in submitting the samples for testing and evaluation in order to prove which harvesting method is more effective in improving coffee quality.

Through Mr. Opitz, the program and the cooperatives entered into contact with InterAmerican Coffee GmbH and Bernhard Rothfors, two companies in the Neumann Kaffee Group that are dedicated to the specialty coffee market. These two organizations are interested in supporting coffee producers' efforts to improve quality, while they themselves are interested in learning more about the coffee produced in Angola. In addition, the preparation of the coffee samples was a good opportunity to clarify information related to the conversion factor of coffee from cherry to green, which turned out to be 1.85 for local coffee, compared to an international average of between 2 and 3.

During the period, efforts were made to obtain the documentation that allows the co-ops to send samples to Hamburg; the following documents were processed:

- Certificate of origin issued by INCA
- Health certificate issued by the Ministry of Agriculture

However, these samples only got to Germany at the end of ProAgro; results of the tests are not yet known.

#### *Negotiation of a contract with SIRIUS*

In the operation of the CESACOOPA center, the program facilitated the establishment of a contract between CESACOOPA and the agricultural input supplier SIRIUS, in which SIRIUS pays rent to the cooperative for space in its facility to display its products and carry out training activities. An effort was made to support Sirius in the process of registering a branch in Gabela.

#### *Summary of accomplishments related to coffee*

1. Approximately 4,700 producers are using improved coffee production practices as a result of the partnership among INCA, CLUSA and the Neumann Foundation/EDE.
2. The farmer field schools, demonstration plots and training of trainers programs appear to be working effectively.
3. Because of the large number of producers using improved practices, INCA, ProAgro and Neumann anticipate major increases in production in 2013, 2014 and 2015.
4. Six cooperative service centers were completed by September 2012.
5. CESACOOPA has been registered as a secondary cooperative and its service center is already operational. It has made its first coffee sale: 39 tons were sold to Kotomar, which, in turn, is exporting the coffee to South Korea.

## **HORTICULTURE VALUE CHAIN PERFORMANCE/ACHIEVEMENTS**

Vegetables were initially considered in the program’s design but the technical assistance component related to this sector actually came on-stream in the middle of the second and into the third year of the project. This subsector was found to be the most complex, even though it had potential in all project areas of Bengo, Benguela and Kwanza Sul. Vegetables have a strategic role, however, in maintaining incomes in the short term, and thus supplement investment strategies for longer-cycle crops such as bananas and or coffee, especially for small, capital-poor producers.

In Bengo, ProAgro worked toward normalizing the irrigation situation at Kangombe and on changing patterns of water use and the management of this shared resource, as well establishing, at least, one processing and marketing center.

ProAgro also promoted linkages between Kangombe cooperative and financial institutions, as well as with suppliers and buyers of agricultural commodities. The installation of one demonstration plot for horticultural production was supported, and additional assistance was provided by a private company, which trained some 100 small-scale farmers in the region (Mabuia, Honga Zanga and Dungo) belonging to the area’s three cooperatives and one women’s association.



ProAgro’s main activity in Bengo, in addition to technical support related to the crops—plantain banana and fresh vegetables—produced there, was advocacy and facilitation aimed at repairing the mistakes made by various agencies in the conceptualization and installation of unsuitable and costly pumping equipment. ProAgro also worked hard to extend the supply of electricity to this area; in the process, the farmers’ association and the cooperatives in the area have developed effective relationships of their own with IDA, MINADERP, and various providers of agricultural goods and services. In particular, the Tuende Women’s Association, whose president is shown nearby, has shown vision and cohesiveness in the formulation and achievement of their goals.



*Mabuia/Kangombe:* Before NCBA/CLUSA, mud huts were the norm.



After NCBA/CLUSA, most community members have cement-block homes.

The unused pumping capacity in the Kangombe cooperative’s area has afforded an opportunity in relation to expanding access to improved water supplies for both agricultural use and household consumption. Kangombe has had for some time two raised water tanks that stand between a large reservoir and their demo plot. Water is brought up a long hill from the river, at some distance in the bottom of the valley, to the tanks. For several years, this water has been used for irrigating the adjacent demo plot, and it has also been accessed by the people living nearby.

In ProAgro’s final stage, two small, supplemental pumps were installed (one as a backup or reserve) so that water can be pumped across the 450 meters separating the water tanks to the service center. At the center, new water tanks were installed by the cooperative; these will separate water supplies for agricultural purposes from that used for consumption, and make water available to the people whose homes surround the center.



The Kangombe cooperative has a one-hectare demonstration plot for vegetable production, around which smallholders can be trained in best practices for off-season, high-value crops like tomatoes, green peppers and cabbage. ProAgro assisted Kangombe by contracting a local private company – SIRIUS – to provide the necessary training and TA.

*Overall Horticulture performance/achievements table*

The table below provides summary statistics on the work in Mabuia/Bengo. It should be noted that approximately 100 of the producers listed here, or just over 30%, are women, members of the Tuende Women’s Association.

<b>Measure</b>	<b>Target</b>	<b>Performance</b>
Producers	--	616
Cooperatives	--	4
Cooperative service centers	1	1
Loans	--	\$.5 million
Market transactions	--	\$.15 million

**IR 3 - Access to financial and business services strengthened**

ProAgro continued during the life of the project to look for alternative ways of funding cooperative investment projects focused on bananas and vegetables in Bengo and Benguela provinces. Coca-Cola Fund (CCPF) in Bengo was engaged and made firm commitments to include ProAgro-assisted clients in their funding targets starting in 2010/11. In addition, discussions were resumed with the Angolan Development Bank (Banco de Desenvolvimento de Angola - BDA) to include bananas and vegetables as value chains to be supported with the public funding made available by the Governmental of Angola.



Finishing touches being applied to the Kangombe Service Center (Sr. Arão Manuel, Co-op president, in the foreground)

*Coca-Cola Fund* - Signed a partnership agreement with CLUSA seeking help to disseminate its lending package that included two products: *Investe I* and *Investe II*. Under *Investe I* an initial amount of US\$20 Million was allocated, to be made available to operating banks in order to fund individual project proposals up to \$1,000,000 for new capital investment and/or working capital. Under this facility, the Coca-Cola Fund would secure up to 50% of principal and subsidize the annual interest rate fixed by the operating bank at 5% in Kwanzas or 3% if the loan were in dollars. The grace period could be as much as 18 months, while the repayment term could extend as far as 7 years, depending on the life cycle of the investment proposal.

The *Investe II* lending product was designed to fund project proposals with a maximum budget of \$150,000 for agribusiness activities and other rural enterprises in Bengo province. Loans under this second facility were guaranteed by the Coca-Cola Fund up to 85% and the annual interest rate established by the operating bank was subsidized up to 10%.

*BP Angola* – ProAgro submitted the Kangombe project to BP Angola and asked for a guarantee on the loan. BP earlier had donated funds to Kangombe for purchasing irrigation equipment.

*Banco Totta/Programa Zimbo* – The Kangombe business plan was also submitted to Total Petroleum’s Program known as Zimbo, which works through Banco Totta. The Kangombe Cooperative received a loan of \$30,000 to improve its irrigation system and the money was fully reimbursed in 18 months.

*Banco Sol* – ProAgro continued conversations about potential projects. In addition to working with Banco Sol’s micro-credit department for agricultural finance, staff worked with their investment loan department on financing for the Kangombe irrigation project.

*Novo Banco* – ProAgro met with Novo Banco to discuss the last draft of the partnership agreement; as of project close, the agreement had not been finalized.

IDA submitted to ProAgro staff a training plan for their extension agents and requested support in its implementation. ProAgro drafted a concept paper for a new project proposal to obtain donor resources for a nationwide training system for IDA and UNACA extension agents regarding cooperative development, credit access, and market linkages.

#### *Cooperative 5-Year Strategic Planning Exercise*

ProAgro identified nine projects in Bengo for financing; these were the outcome of a strategic planning exercise. In order to strengthen four cooperatives in Bengo province, during January-March 2010, ProAgro hired Svetla Novoselska, a consultant who facilitated cooperative strategic planning exercises. ProAgro staff organized 13 one-day sessions focused on the cooperatives’ 5-year strategic planning process for 2010-2014. The team led each cooperative through an analysis exercise where a number of members discussed their strengths, weaknesses, and key problems, and the opportunities and threats existing in their environment. The cooperatives used the information from this self-analysis to generate strategies and projects that build on their strengths, reduce their weaknesses, take advantage of opportunities, and counter threats. As a result of this process, 75 economic development and 16 community development projects were identified that could benefit some 400 co-op members and other members of their communities.

These projects were then ordered by priority and further developed into detailed annual action plans. The cooperatives intended to implement these action plans themselves with support from ProAgro, interested NGOs, government institutions, banks, donors, and certain other partners identified by the cooperatives in the process.

**Table 29 – Strategic Planning Exercise**

Svetla Novoselska, a consultant facilitating cooperative strategic planning



Source: ADFP

#### IR 4 - Market linkages improved and strengthened

ProAgro took advantage of a preliminary visit to Angola by Dole Foods, a US multinational company specializing in production and export of fruits, to explore opportunities for expanding its intervention to areas of Bengo (Bom Jesus, Caxito and Ambriz), Kwanza Sul (Sumbe) and Benguela (Canjala) following advice from MINADER counterparts. As a result, discussions were undertaken with four medium and large-sized banana growers, in the above mentioned areas, to evaluate potential for growth and their willingness to produce banana for export. Unfortunately this opening did not materialize, and the project staff were not advised as to why Dole declined to pursue the business.

#### **POTATO VALUE CHAIN PERFORMANCE**

ProAgro, as a program, grew out of an earlier, food security program that ended in 2005. During that earlier program, CLUSA had been very active in the province of Huila, working with potato farmers and producers growing rain-fed maize, beans and peanuts, to develop a revolving loan scheme for animal traction. Upon finalizing the subsector study and economic analysis of the potato value chain in December 2007, ProAgro determined that the best approach for increasing production and the consistent supply of locally produced potato was to focus on facilitating producers' access to seed and finance while developing marketing techniques to increase profits. ProAgro proposed establishing a field presence in two provinces: Huila and Kwanza Sul. This was to have been in partnership with two local service providers, Agromarket, a local NGO founded by former CLUSA extension agents in Huila and the CHOFA Cooperative in Amboim, Kwanza Sul province.

Questions were raised by donors concerning the many constraints in the potato value chain and whether they could be overcome with ProAgro limited human and financial resources. ProAgro was asked to consider whether it would be better to focus its time and resources on two value chains instead of three and exit potatoes all together. Later ProAgro did, indeed, drop the potato value chain, despite its historic association with producers of that crop, having decided it agreed with donors' concerns.

## Some ProAgro Highlights

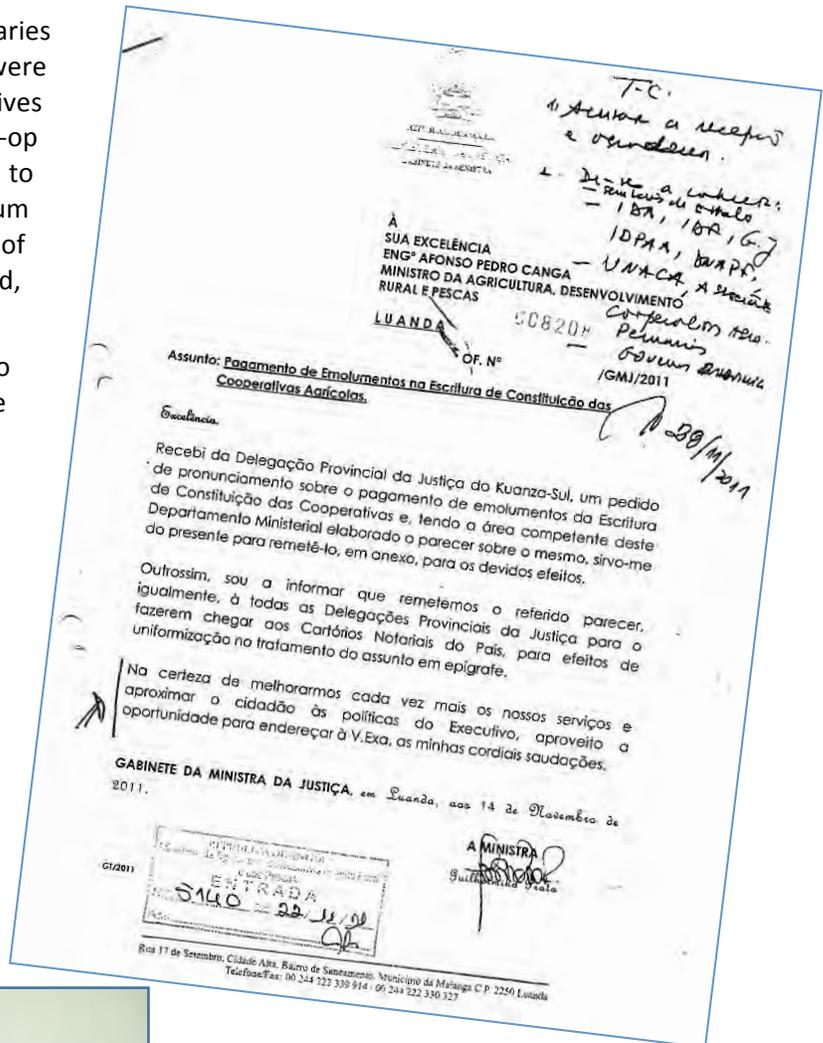
### Exemption from fees for registering cooperatives

The Regulation for Agricultural Cooperatives of December 18, 1967, says, in section III, Art. 16: "... the formation of agricultural cooperatives, as well as their changes and respective registrations in the Commercial Registry, and the publication, by extract of by-laws, in the Official Gazette (Diário da República), are exempt from any and all charges, taxes or fees ...."

This exemption is in the hands of the Notaries Public throughout Angola, yet these Notaries were for many years routinely charging cooperatives who sought to register as legal entities. A co-op might be asked to pay as much as equivalent to US\$9,000 in fees, taxes and bribes—a major sum for a rural cooperative—for a number of processes related to the registration that should, by law, be free.

ProAgro staff was asked by IDA/MINADERP to assist in preparing a memorandum to the Ministry of Justice on the issuance of a directive to notaries, requiring them to implement the 1967 cooperative law until such time as a new general cooperative law should be enacted. In addition, ProAgro, in partnership with MINADERP, ADRA and UNACA, had worked to revise the draft of the General Cooperative Law, which was submitted to the GoA for further discussion and approval

As a result of a combined effort assisted by CLUSA/ProAgro, on November 14, 2011, the Justice Ministry issued an order to all notary services in the country, directing that agricultural cooperatives were to be



A notary officer presiding the registration process in the field.

exempted from payment of any fees for their registration at public notaries.

Shortly after this successful result, two CLUSA-assisted cooperatives, Primeiro de Maio and Palmeirinhas, both located in Benguela province, were able to register, and they did so free of charge (photo at left).

## Mr. João Caires Marques – A Lead Farmer in the Banana Value Chain

João Caires was, at the time, a 24 year-old farmer in Dombe Grande, Benguela Province. He belongs to a farming family that has produced bananas for many years on a 50 ha plot, among of cash crops, using a flood irrigation system and local plants. After visiting some banana fields with improved technology including micro sprinkler irrigation and tissue culture banana plants, Mr. Caires became interested in modernizing his family banana plantation. He approached ProAgro to learn more about the costs and benefits of managing a banana plantation using modern production techniques.



*João Caires Marques, owner*



*Antonio M. Figueiredo Junior, his brother*

João was not encouraged by his father and older brothers to embark on this new kind of farming. Nevertheless, he decided to set aside an area of 5 ha, planting it with imported meristem plants and installing micro sprinkler irrigation system. He invested \$75,000 of his own funds in the project.

Faced with the difficulty of getting suitable plant material locally, ProAgro helped him make overseas contacts and then to import 10,000 meristem plants, supplied by GALILTEC, a nursery company in Honduras. The irrigation equipment was purchased locally at Flotec Company, based in Lobito.

The 10,000 plants arrived from Honduras via DHL but ran into problems right away. There was a delay in the pre-shipment inspection, and information on the date of the plants' arrival at Catumbela airport came after the plants had actually arrived; the longer-than-planned stay in the airport customs shed resulted in some plant losses.



*Meristem plants imported from Honduras (as released from customs, and as planted in nursery with ProAgro assistance)*

ProAgro technical advisors got involved and helped Joao get his plants out of the airport and into the nursery he had prepared for them. They were planted some time later and have begun producing high-quality fruit.

## Mr. Tomas Miguel Rosa Flor

*Willingness, dedication, hard work and CLUSA's technical assistance helped this banana producer in Benguela to install twenty hectares of banana plantation using local plants and flood irrigation system.*



Interview with Mr. Tomás Miguel Rosa Flor in the CLUSA ProAgro office.



Rosa Flor banana plantation in Dombe Grande in the middle of production cycle

Mr. Miguel Tomás Rosa Flor, locally known as Rosa Flor, is a producer of 54 years of age, with farms in the commune of Dombe Grande and a residence in Benguela, a city about 60 kilometers distant from Dombe Grande.

Rosa Flor has over 36 hectares available for expansion. He has worked in agriculture since childhood; his parents and grandparents were also farmers. He started farming on his own in 1992, when he acquired a farm which had belonged to “Açucar Angola”, the region’s main landowner in colonial times.

In the beginning he dedicated himself to vegetable production, marketing his products mainly in Luanda, the capital of Angola, more than 600 km distant. In 2011, Rosa Flor already had a nursery for banana plants and was planning to begin large scale production. He sought the services of CLUSA-ProAgro, from whom he obtained assistance in installing a 4-hectares trial plot on which he began using new techniques and improved practices.

Using his own resources, with technical assistance from ProAgro, and without bank financing, Mr. Rosa Flor built up to 20 hectares, which he planted to bananas and fresh vegetables. From his first four hectares, Rosa Flor harvests about 30 tons of bananas per month. The other 16 hectares came on stream during early 2012, though drought conditions reduced the per-hectare yield.

In early 2012, Mr. Rosa Flor requested ProAgro to assist him with the preparation of a feasibility study and, ultimately, with a business plan he would use to get financing for an expansion project; he wants to install a micro-sprinkler irrigation system, to optimize use of scarce water resources, on 10 hectares of land. This would bring to 30 the number of hectares on which Rosa Flor is using the most current “best practices” for banana growing.

### **Mr. Fernando Marques**

*A model farmer who took an investment loan from Banco de Fomento de Angola (BFA) and repaid on time*

Facing a number of constraints, including a lack of enough water to irrigate a planned 18-hectare banana plantation, Fernando Marques successfully managed to survive as an independent farmer by reducing to 10 hectares the size of the plantation and diversifying production to combine fruits, such as mango and banana, with animal husbandry and vegetable production.

Now his income is derived only from farming and he has been able to honor, on time, his credit commitments with BFA; his loan, for US\$80,000, was backed by a USAID/DCA guarantee and facilitated by CLUSA under ProAgro.



**Mr. Fernando Marques in his mango field**



**Mr. Fernando Marques in his banana plantation**

Mr. Marques belongs to a large family of 8 brothers and many cousins, many of them well-known farmers in Benguela province. His nickname is “Nando” and he owns and manages about 18 hectares of land in the littoral of Benguela province, Cavaco valley, and over 100 hectares in the Cubal municipality, located at approximately 150 kilometers from the city of Benguela.

This 43 year-old lead farmer, like his brothers and cousins, has been farming since childhood, combining elementary school with assisting his parents in managing crops. Taking advantage of a ProAgro partnership agreement signed in 2007 with BFA, and backed by the USAID/DCA guarantee program, in 2008, Mr. Marques was granted a loan of US\$80,000 to purchase a tractor and irrigation equipment with which he could install about 18 hectares of banana in the Cavaco valley. ProAgro staff assisted him with the business plan, loan application and negotiations with BFA officers. In view of water limitations in the Cavaco valley, Marques decided to reduce his banana field to 10 hectares, creating in the process a well-managed plantation using best practices transmitted to him by ProAgro’s production adviser, Armando Romeu. To compensate for the smaller banana field, Mr. Marques decided to plant 16 hectares of mango, which need less water than banana. By doing this, he could earn enough income both to improve his living conditions and pay back the loans he contracted with BFA. By maintaining proper financial discipline, he was able to keep his repayment schedule.

Farmers like Mr. Marques encourage commercial banks to expand their lending for agriculture and other rural agribusiness-related activities; at the same time the farmers increase their own access to future loans. Asked about his future plans, Mr. Marques said he will capitalize on his achievements with the existing plantations of banana, mango and associated vegetables, to further diversify production by including maize and beans, as well as install a grinding mill to produce maize flour. He also expects to explore raising more cattle and goats on his lands in the Cubal municipality.

## Winner of the Project Incubator Award 2012: CESACOOPA, Angola

On the 18<sup>th</sup> of June, 2012 in the Netherlands, during the Africa Finance and Investment Forum (AFIF2012), Mr. Anastácio Roque Gonçalves, who used to work for ProAgro Angola first under ECI-Africa and was subsequently employed directly by CLUSA, presented a project proposal on behalf of CESACOOPA that was announced as the winner of the Project Incubator Award 2012. Mr. Roque Gonçalves had presented a paper on behalf of CESACOOPA and received a standing ovation by the 250 attendees at the International Business Forum.

*"It's a great honor to be named a winner! Presenting my organization and its vision for development to AFIF 2012, was an exciting opportunity; and winning was an honor for me and for everyone involved in the project in Angola. It was a day I will not forget, thanks the EMRC and its partners (HIVOS/VC4Africa)." Roque Gonçalves*

*"The presentation of Mr. Roque Gonçalves on CESACOOPA was clear, precise and forward thinking. That's exactly what we were looking for. The Decision of EMRC, Hivos and VC4Africa was unanimous and EMRC congratulates all those who submitted their projects." Idit Miller, Executive Director of EMRC International.*

The main objective of the CESACOOPA project is to improve quality standards for coffee products that can be competitive in the export market while contributing to sustainable community development, generating employment and reducing the impact of negative environmental effects. This project will directly benefit some 6,000 families.

The Project Incubator Award was sponsored this year by the Humanist Institute for Development Cooperation (Hivos), a leading Dutch organization with a global presence, in partnership with Venture Capital for Africa (VC4A), a global platform that makes connections between entrepreneurs and investors across Africa. The winner won 15.000 US\$ to be invested in the Project. The forum, titled "*Financial inclusion through PME & Cooperatives*", was organized by EMRC with support and partnership of the Dutch bank Rabobank and took place at the branch in the Netherlands, between 17<sup>th</sup> and 19<sup>th</sup> June, 2012.



*Roque Gonçalves, receiving a standing ovation on behalf of CESACOOPA*

## Celestino Capingala

### *Coffee producer increases his income by adopting new techniques*

This story concerns 53 year-old Celestino Capingala, born in the locality of Maria Ganza, Amboim municipality, in Kwanza Sul province. He possesses a one hectare plantation on which he grows Robusta coffee. He belongs to an agricultural cooperative named “Soba Sabonete”, the name of a local traditional chief who is also a founding member of the cooperative. This co-op is one of 14 coffee producer co-ops that were assisted by ProAgro under its partnership with the National Coffee Institute of Angola (INCA).

Mr. Capingala has distinguished himself through his rapid adoption of the best practices transmitted to him and his peers by INCA agronomists, assisted by ProAgro. The goal of the program is to increase coffee yield and quality with the aim of encouraging smallholders to pay more and better attention to their tiny coffee plantations. As a result of his dedication to his coffee trees, Mr. Capingala was able to raise his family income from about \$800 in 2007, when ProAgro started its work in Kwanza Sul, to \$1,500 in the 2011 harvest season from coffee and other associated crops that include banana, pineapple, maize and beans.

Mr. Capingala’s example has encouraged a number of neighboring coffee smallholders, who have also been instructed in the better production and post-harvesting techniques shared by INCA, ProAgro, and the consultants who have come to this region under CLUSA’s agreement with EDE/Neumann Foundation of Germany, to devote more time and resources to their coffee plantations.

When Mr. Capingala was asked why other farmers have not, so far, reached his level of coffee yields, he answered that many of his neighbors prefer to cultivate short-cycle food and cash crops rather than longer-term coffee. Financing is also an issue: the longer-term nature of coffee can require loans with repayment terms of 5 years or more, and these are not yet available to many coffee farmers who rely on commercial bank loans.

Despite those constraints, Mr. Capingala is happy with his choice to combine long-cycle, well-managed coffee with a short-cycle, diversified range of food and cash crops suitable to the cool, rainy climate of Gabela. “I have to have money for the children, when they need school supplies, so I can’t just grow coffee. But the coffee is like savings, and will help my family in the years ahead.”



*Mr. Celestino inspecting his high-yield Robusta coffee trees in the Gabela region*

## Lessons Learned

Several lessons can be learned from the 6 year history of ProAgro.

1. More integration and teamwork to draw lessons and maintain strategic focus. These meetings should not be limited to the preparation of annual plans. This could contribute, along with other measures, to increased ownership of the value chain approach by a team whose mission is to encourage and support organized farmers to feel and act as partners in the process of negotiating, signing and honoring contract terms with banks and agribusiness companies. Information sharing and coordination among value chain actors are key to the success of the value chain process.
2. Even though the shift in emphasis was somewhat disruptive, it appears that the focus on two major crops – coffee and bananas – in two regions – Kwanza Sul and Benguela – was an effective way to concentrate resources and generate better results. These results, at the end of the six-year intervention by CLUSA, included the existence of a dozen new, legalized cooperatives, together with their umbrella secondary organizations; the founding and, in most cases, the bringing on line of a network of multipurpose service centers and making alliances with banks and agribusiness companies in order to increase access to critical resources for production, processing and marketing of agricultural products.
3. The "value chain" design of ProAgro—combining technical assistance aimed at increasing production and productivity with cooperative development, financing and business entrepreneurship, as well as the expansion of market linkages—is an excellent strategy for promoting and supporting the agribusiness industry with the full participation of small and medium-sized farmers. However, in Kwanza Sul, ProAgro played only an indirect role in providing production-related services until 2010, at which time it contracted with Neumann Foundation/EDE Consulting to provide these services, a partnership that proved to be greatly appreciated by participating farmers and extension agents. As a result of the long development period required for coffee, however, CLUSA's late involvement in improving productivity created a break in the value chain. Therefore, much of the increased production of coffee will not occur until 2013/14.
4. An important lesson in relation to the design and implementation of a project M&E system is that indicators should be specific (e.g., the number of farmers accessing training in best practices, differentiated by men, women and youth; number of service centers running, etc.), and the indicators should be simple to measure and evaluate by all interested project partners, including the donors. A sophisticated database system that is manageable only by specialist makes it difficult for progress to be identified and controlled by other project participants including farmers.
5. A key part of ProAgro's exit strategy has been promotion and support (organizational, technical and financial) for the creation of secondary umbrella organizations like the union of coffee smallholder cooperatives in the municipality of Amboim, Kwanza Sul province (CESACOOKA) and the Federation of Agricultural and Livestock Cooperatives of Benguela province, as well as a network of 12 multipurpose service centers funded by donors in the second half of this six-year program. Considered by all partners as an important project component, a better strategy would have been to construct the centers earlier during the project implementation, so that ProAgro staff would have had more time and appropriate human resources to provide managerial training and advice to elected boards and managers, which would better prepare them to operate their centers in a businesslike manner. Mainly for that reason, further technical assistance to those cooperative organizations owning multipurpose service centers is critical to complete and continue the work done under ProAgro. This further assistance would promote sustainability and self-governance in truly cooperative agribusiness entities, which could become a show-case in Angola and elsewhere; farmer cooperatives too frequently are not seen as important players in the process of providing tangible commercial agribusiness services to their members, including input delivery, output marketing and even financial intermediation.
6. Securing local in-kind and financial participation for cooperative-led activities requires that cooperative development agents have a deep understanding of members' economic, social and cultural conditions. It is crucial, for instance, that those agents speak local languages, and that they have sufficient time and intervention methods so they can listen and observe all the various aspects of local working and living

conditions. Such observation can help all the stakeholders determine what, when and how fast a new activity can be started and completed. For instance, in many rural communities, the death of one person per week during several weeks can, by local tradition, delay a planned construction activity for months. When combined with external factors like the weather, the timing of planting, the crops' different harvesting periods and periodic electoral campaigns, expectations for the timeframe in which new activities can be completed regularly prove to be impractical or even unrealistic. Therefore, project-led timelines, particularly under pressure from donors with their own agendas, may not coincide with local perceptions of urgency or priority.

7. In the future, donors and implementers of similar programs should systematically explore the complementarities with other organizations and institutions (whether working on cross-cutting themes, and especially if they work with the same target groups). Greater coordination of efforts could, for example, create synergies with other organizations who are working to facilitate setting in place essential, basic conditions that serve all stakeholders, such as access to Identification Cards and to land titles; to foster awareness of gender issues and environmental protection; and promotion of water and sanitation, and HIV/health care. Elected cooperative boards should have more community development training and guidance to identify and negotiate partnership agreements with public entities, local and international NGOs, all of which are seeking complementary resources for the well-being of cooperative members and their respective local communities as a whole. This is in line with the universal cooperative principle of community engagement.
8. In the future devote greater attention to the links with relevant political institutions, and at levels within these institutions that are appropriate to the scope of the project. Relationships established in these quarters usually have important effects on the other, lower levels of the respective ministries.
9. Provide technical assistance and/or establish alliances with local governmental authorities and civil society organizations to facilitate the emergence of local economic development services, with special focus on supporting the agricultural and agribusiness sector and related infrastructure such as roads, bridges, irrigation canals and dams to increase the profitability in exploring local resources.

## Conclusions

The analysis of quantitative data and qualitative observations presented in the preceding section of this report indicates that ProAgro has achieved most of its objectives.

### *Shifts in Project Emphasis*

As the information presented above indicates, the achievement of these objectives has not always been easy or straightforward. The project has had several shifts in emphasis. Some major shifts include:

- ProAgro narrowed its focus to coffee and bananas beginning in year three, dropping potatoes and substantially reducing the role of horticulture. The purpose of this shift was to create greater focus for the project in order to learn from pilot activities in a value chain strategy that was centered on two crops with higher potential for export.
- The project has had conflicting priorities regarding, on one hand, working with smallholders under an initial food security intervention strategy and, on the other, supporting medium and large farmers in order to promote growth in high-quality products for export. The project appears to have been pushed and pulled by different demands from different donor representatives at different times. For instance, USAID replaced its economic/agriculture department heads every two years. Each time, the project was faced anew with questions about why ProAgro was working with one and not some other target group.

ProAgro staff argued that involving medium- and large-scale producers was likely to yield, in the short run, results in adopting new technologies aimed at increasing productivity and improving the quality of selected crops for export and/or import substitution. At the same time, program resources could be invested, in ProAgro's view, in supporting a larger number of smallholders, who would be organized into a network of solidarity groups, farmer associations and cooperatives, especially in the coffee subsector.

Combining support for both target groups proved to be challenging, as adoption by smallholders of changes to their habitual methods required more time, demonstration and experience sharing. Intervention strategies like the farmer field schools, introduced in the last two years of ProAgro's implementation, proved helpful.

On the other hand, medium and large-sized farmers usually do not perceive themselves as likely beneficiaries of training courses on cooperative principles and democratic governance, making it difficult to strengthen organizations that must rely on their participation, together with smallholders, in primary and secondary cooperative organizations.

Among the cooperatives most closely associated with ProAgro, for instance, CAPIAD brings together some highly successful farmers, with large landholdings and local workers, with other farmers who have barely one hectare. This cooperative is working through the issues of shared responsibility and proportional benefit that are logically associated with the different roles each member, and each type of member, play in the evolution of the whole.

- ProAgro increased its role in improving coffee productivity in 2010, primarily through a subcontract with the Neumann Foundation/EDE. This shift in emphasis occurred late in the project, especially considering that coffee requires a 4 to 5 year period of growth before it begins significant production.
- The renovation of a roadway in the Catumbela area in 2008 resulted in the closure of a major irrigation canal. The loss of this source of water effectively put the farmer-members of two cooperatives that ProAgro had developed out of business compromising the program's expected result, assisting 400 banana growers in the littoral of Benguela. As a coping strategy, ProAgro expanded its intervention areas to the Cajala area, which is located about 100 kms from Benguela, and to Dombe Grande, some 70 kms from Benguela. This move in the third year of program implementation created new opportunities for success but represented a substantial increase in operating expenses.
- The completion of construction and rehabilitation of CESACOOPA's service center, as well as eleven other cooperative service centers, did not occur until September 2012. A major consequence of this fact is the very short time period during which ProAgro staff was able to work with CESACOOPA and the cooperative boards on the development and implementation of the business plans and the accounting and financial systems to operate the centers sustainably.

#### *Recommendation/Suggestions for future consideration*

In summary, ProAgro has been largely successful in carrying out a value chain project that has benefited over 6,000 farmers in Kwanza Sul, Benguela and Bengo provinces. The project set the stage for future increases in production and marketing through the development of 25 cooperatives, 12 co-op service centers, CESACOOPA, and the newly founded Cooperative Federation in Benguela. But the job is not done. With additional technical assistance over the next three years, the likelihood of long-term agricultural and economic benefits will be greatly enhanced. Below are some suggestions for the future consideration.

- *Provide technical assistance to help transition CESACOOPA, the recently formed Cooperative Federation in Benguela, and the horticultural cooperatives in Bengo/Luanda, Benguela and Kwanza Sul, to make the transition to providing essential agribusiness services to their producer members.* The co-ops' biggest need during the next three years will be to make a transition from recently created organizations that have virtually no business experience, to successful businesses that generate a profit for the organizations themselves and for their members. This transition is more likely to occur if there are professional technical assistance providers working closely with them during a three-year transition period. Thus, the primary recommendation of this report is that funds be made available to pay for a technical assistance team to work with the elected cooperative boards and their managers so they build the capacity to run their service centers.

The technical assistance teams would assist CESACOOPA, the Federation and their member cooperatives and farmers in the same four service activities in which ProAgro was involved – production assistance, cooperative development, assistance with loans and business plans, and marketing assistance. By the end of three years, the goal would be for both CESACOOPA and the Federation to have their own professional management and service staff and to be operating as profitable businesses.

- At the level of the producers, the improved production skills and, in some cases, the acquisition of irrigation and other equipment, will continue to benefit them after ProAgro. Many of them also have ready markets for their coffee and bananas, and, therefore, their market access, at least in the short term, will also not be negatively affected by ProAgro's conclusion. However, if they lack access to future agricultural training, to assistance in accessing loans, and, as their production increases, to a coordinated approach to commercial marketing, their future production and agricultural revenue is likely to level off or decline.
- CESACOOPA, the recently formed Cooperative Federation in Benguela, agricultural producers and other actors in the agricultural value chains in Kwanza Sul and Benguela should oversee the preparation of an analysis of future agricultural production options. One way to carry out such a strategic analysis would be to select a representative group of farmers, co-op directors, other market chain representatives, as well as selected government staff, to serve on an Agricultural Development Council in each region. Each committee would oversee the preparation of an agricultural report and a set of recommendations for future agricultural development activity in their region.
- The biggest threat to future gains after ProAgro is the lack of business experience of the cooperatives, CESACOOPA and the recently formed Cooperative Federation in Benguela. Thus, the preparation of good business and action plans for these organizations and ongoing technical assistance over the next three years should be the first priority if funds are available for continued assistance. ProAgro donors—USAID, Chevron and ICCO—were aware of that risk and a workable solution may be found. In effect, a project proposal was submitted to USAID to fund further investment and training to support CESACOOPA and its affiliated cooperatives for a three-year period. A complementary proposal to finance technical assistance was also submitted to ICCO; the proposal envisions enabling technicians who had worked for CLUSA/ProAgro to continue to provide their services to cooperatives and producers. Chevron is still studying whether and how it might continue to support ProAgro-led initiatives after the program's termination.
- Strengthening access to financial services is the most important component in the development of both banana and coffee value chains. In order to achieve success, the federation and the union should have a team dedicated to facilitating access to bank loans, preparing feasibility studies, selecting bankable producers and giving proper emphasis to loan repayment; the culture of paying back loans, especially when these are perceived to be backed by the government or NGOs, is very low among all farmers. Introducing a savings component into the cooperative system, and offering center facilities as collateral, could have the desired effects in this area.

## Partnerships

Continuous effort was made to maintain contacts and relations with key implementing partners; these included the following organizations:

**IDA** (the Institute for Agrarian Development), which promotes and coordinates assistance to farmers and small holders in terms of extension, access to inputs, micro finance and markets. CLUSA/ProAgro signed a memorandum of understanding with IDA as a pre-condition to operating in Angola, in accordance with GOA policy for the development of agriculture;

**INCA** (the National Institute of Coffee) provides agronomic assistance for the rehabilitation and development of coffee plantations while defining and coordinating policies for the national development of the coffee sector; in Kwanza Sul province, INCA was ProAgro's main Angolan partner.

**UNACA** (the National Confederation of Farmer Associations and Agricultural Cooperatives), an umbrella organization for most government-supported farmer associations and agricultural cooperative organizations;

**Provincial directorates of agriculture (DPA) and of energy and water (DPEA):** Workable relationships were established at provincial level of both DPA for agricultural-related activities and with DPEA to explore synergies regarding cooperative members' access to clean water supply for consumption. The DPA, particularly in Benguela province, had been an enthusiastic partner for ProAgro Angola and served as liaison with other relevant provincial and municipal agencies.

Other partners included local private banks (BFA, BancBic, Banc/Fundo Soba), as well as state-owned banks (BDA and BPC), among other financial institutions that intervene in the agricultural sector in Angola. The intent underlying such efforts is to obtain future loans for smallholders engaged in the banana, coffee and vegetable value chains.

Finally, ProAgro continued to work with a number of agri-business firms to facilitate access by farmer clients to the means of production and to output markets.

## Indicator Data Table 2007-2012

INDICATORS	CUMULATIVE OCT 2006-SEP 2007	CUMULATIVE OCT 2007-SEP 2008	CUMULATIVE OCT 2008 - SEP 2009	CUMULATIVE OCT 2009 - SEP 2010	CUMULATIVE OCT 2010 - SEP 2011	CUMULATIVE OCT 2011 - SEP 2012	CUMULATIVE OCT 2006 - SEP 2012
<b>1. Number of Agribusiness Related Firms Assisted by ProAgro</b>							
<b>1.1 Agribusiness Enterprises</b>							
1.1.1 Input suppliers	1	22	18	34	50	8	50
1.1.2 Retailers	-	-	-	-	-	-	-
1.1.3 Wholesalers	3	11	16	35	25	14	35
<b>Sub-Total</b>	<b>4</b>	<b>33</b>	<b>34</b>	<b>69</b>	<b>75</b>	<b>22</b>	<b>85</b>
<b>1.2 Producer Enterprises (individuals)</b>							
1.2.1 Small Producers	-	14	-	20	NA	41	41
1.2.2 Medium Producers	-	7	-	27	32	6	32
1.2.3 Large Producers	-	4	-	4	13	6	13
<b>Sub-Total</b>	<b>23</b>	<b>25</b>	<b>39</b>	<b>51</b>	<b>45</b>	<b>53</b>	<b>86</b>
<b>1.3 Producer Organizations</b>							
1.3.1 Associations	79	101	101	103	104	105	105
1.3.2 Cooperatives	3	21	24	25	24	20	25
1.3.3 Cooperative Union	-	-	2	1	1	1	1
1.3.4 Cooperative Federation	-	-	-	-	-	1	1
<b>Sub-Total</b>	<b>82</b>	<b>122</b>	<b>127</b>	<b>129</b>	<b>129</b>	<b>127</b>	<b>132</b>
<b>Grand Total</b>	<b>109</b>	<b>180</b>	<b>200</b>	<b>249</b>	<b>249</b>	<b>202</b>	<b>303</b>
<b>2. Number of Agribusinesses related firms receiving ProAgro supported assistance to access bank loans</b>							
<b>2.1 Agribusiness Enterprises</b>							
2.1.1 Input Suppliers	NA	NA	NA	NA	NA	NA	NA
2.1.2 Retailers	NA	NA	NA	NA	NA	NA	NA
2.1.3 Wholesalers	NA	NA	NA	NA	NA	NA	NA
<b>Sub-Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2.2.1. Individual Producers	27	25	39	39	29	3	39
<b>Sub-Total</b>	<b>27</b>	<b>25</b>	<b>39</b>	<b>39</b>	<b>29</b>	<b>3</b>	<b>39</b>
2.3.1 Associations	79	96	96	101	104	12	104
2.3.2 Cooperatives	3	20	20	25	23	10	25
2.3.3 Union of Cooperatives	-	-	-	1	1	-	1
<b>Sub-Total</b>	<b>82</b>	<b>116</b>	<b>116</b>	<b>127</b>	<b>128</b>	<b>22</b>	<b>130</b>
<b>Grand Total</b>	<b>109</b>	<b>141</b>	<b>155</b>	<b>166</b>	<b>157</b>	<b>25</b>	<b>169</b>

<b>3. Volume of Loans distributed in USD</b>							
3.1 Benguela	27,000	383,812	256,700	891,234	321,193	-	1,879,939
3.2 Kwanza Sul	1,076,711	1,274,739	-	-	-	-	2,351,450
3.3 Bengo	299,000	53,773	-	122,000	-	-	474,773
<b>Total</b>	<b>1,402,711</b>	<b>1,712,325</b>	<b>256,700</b>	<b>1,013,234</b>	<b>321,193</b>	<b>0</b>	<b>4,706,163</b>
<b>4. Beneficiaries Accessing Project Services</b>							
<b>4.1 Male</b>							
4.1.1 Small	1,920	3697	-	4507	4,531	4,144	4,531
4.1.2 Medium	-	8	-	26	35	5	35
4.1.3 Large	-	4	-	10	13	6	13
<b>Sub-Total</b>	<b>1,920</b>	<b>3,709</b>	<b>4,207</b>	<b>4,543</b>	<b>4,579</b>	<b>4,155</b>	<b>4,579</b>
<b>4.2 Female</b>							
4.2.1 Small	462	1493	-	1,712	1,746	1,459	1,746
4.2.2 Medium	-	-	-	6	6	1	6
4.2.3 Large	-	-	-	-	-	-	-
<b>Sub-Total</b>	<b>462</b>	<b>1,493</b>	<b>1,423</b>	<b>1,718</b>	<b>1,752</b>	<b>1,460</b>	<b>1,752</b>
<b>Grand Total</b>	<b>2,382</b>	<b>5,202</b>	<b>5,630</b>	<b>6,261</b>	<b>6,331</b>	<b>5,615</b>	<b>6,331</b>
<b>4. Beneficiaries Accessing Project Services</b>							
<b>4.1 Male</b>							
4.1.1 Small	1,920	3697	-	4507	4,531	4,144	4,531
4.1.2 Medium	-	8	-	26	35	5	35
4.1.3 Large	-	4	-	10	13	6	13
<b>Sub-Total</b>	<b>1,920</b>	<b>3,709</b>	<b>4,207</b>	<b>4,543</b>	<b>4,579</b>	<b>4,155</b>	<b>4,579</b>
<b>4.2 Female</b>							
4.2.1 Small	462	1493	-	1,712	1,746	1,459	1,746
4.2.2 Medium	-	-	-	6	6	1	6
4.2.3 Large	-	-	-	-	-	-	-
<b>Sub-Total</b>	<b>462</b>	<b>1,493</b>	<b>1,423</b>	<b>1,718</b>	<b>1,752</b>	<b>1,460</b>	<b>1,752</b>
<b>Grand Total</b>	<b>2,382</b>	<b>5,202</b>	<b>5,630</b>	<b>6,261</b>	<b>6,331</b>	<b>5,615</b>	<b>6,331</b>

5. Number of Commercial Links (sales transactions) Between Farmers and Input Suppliers, Distributors and Retailers (USD)							
<b>5.1 Number of Producers with Established Contracts with</b>							
5.1.1 Buyers	-	200	223	19	32	5	479
5.1.2 Input suppliers	-	10	6	11	4	-	31
5.1.3 Other	-	-	-	-	-	-	-
<b>Sub-Total</b>	<b>2,272</b>	<b>210</b>	<b>229</b>	<b>30</b>	<b>36</b>	<b>5</b>	<b>2,782</b>
<b>5.2 Value of Producer Transactions with</b>							
5.2.1 Buyers	1,604,993	5,920,931	8,349,191	361,949	6,999,246	11,951	23,248,261
5.2.2 Input Suppliers	478,848	400,691	138,141	386,856.66	148,879	-	1,553,416
5.2.3 Other	4,950,266	1,271,052	142,750	-	-	-	6,364,068
<b>Sub-Total</b>	<b>7,034,107</b>	<b>7,592,673</b>	<b>8,630,082</b>	<b>748,805</b>	<b>7,148,125</b>	<b>11,951</b>	<b>31,165,744</b>
<b>6. # persons trained on safer use pesticides methodologies and access to water and sanitation</b>							
6.1 Male						1,799	1,799
6.2 Female						631	631
<b>Sub-Total</b>	-	-	-	-	-	<b>2,430</b>	<b>2,430</b>

### Explanations of indicators

- Number of Agribusiness-related Firms Assisted by ProAgro:** A total of 51 agribusiness firms were assisted during the quarter ending on June 30<sup>th</sup>, 2012, divided as shown below. Note that in this quarter ProAgro focused its activities mainly on the consolidation of organizations, construction of service centers and the figures explained in the text below do not include the cumulative ones:
  - 5 banana-related Input suppliers;
  - 2 coffee-related Input suppliers;
  - 1 horticulture-related Input suppliers;
  - 5 individual banana growers;
  - 24 farmer organizations (12 coffee-related associations, 1 Union of Cooperatives coffee-related and 11 cooperatives—6 in Kwanza Sul, 4 in Benguela and 1 in Bengo).
- Number of Agribusiness-related Firms Receiving ProAgro Supported Assistance to Access Bank Loans:** During the quarter 25 agribusiness firms were assisted as follows: (Kwanza Sul: 12 associations, 6 cooperatives; Banana in Benguela: 4 cooperatives).
- Volume of Loans Distributed in US\$:** During the quarter no loans were disbursed.
- Beneficiaries Accessing Project Services:** during this quarter, a total of 3,979 beneficiaries were assisted, including 1,074 women.
- Number of Commercial Links:** although during this reporting period, ProAgro was focused on the business centers construction, we facilitated 4 linkages of banana and other crops sales resulting in US\$ 1,110.31.
- # Persons trained on “Safer Use” methodologies:** During the quarter 342 producers received management and safe use of pesticide manuals.
- Clean water and sanitation:** During the quarter we hired a consultant to do the research in order to document the baseline regarding this matter and have the report that would advise us the best approach method regarding the water and sanitation activities. We already started taking some immediate actions in order to fulfill our objectives; however these activities take some time and a lot of work before they can be best measured. This way we might not fill the indicators data table because we still do not have yet visible results to report.

## Annexes

### ProAgro's Results Framework

**The goal of the Agricultural Development and Finance Program (ADFP) is to increase the growth of selected commodity value chains/industries while creating greater business opportunities and capabilities of small and medium scale farmers.**

**IR1 – Technical Assistance Expanded, Reinforced & Improved**

**IR2 – Access to Coop. Development Services Improved**

**IR3 – Access to Financial Services Strengthened**

**IR4 – Market Linkages Facilitated**

**IR5 – Access to Water and Sanitation Facilities improved**

**OP1.1 – Reinforced Agricultural Technique Best Practices**

**OP2.1 – Reinforced Assistance to consolidate primary cooperatives**

**OP3.1 – Financial education reached to all clients**

**OP4.1 – Discussed with stakeholders provision of price information**

**OP5.1 – Baseline survey in all assisted co-ops**

**OP1.2 – Provided Training for Small and Medium Producers for Processing Centers**

**OP2.2 – Support the creation of multipurpose service centers**

**OP3.2 – New funding institutions engaged in agribusiness**

**OP4.2 – Strengthened linkages with input suppliers, wholesalers & retailers through trade fairs & forward contracts**

**OP5.2 – Partnership linkages with stakeholders**

**OP1.3 – Technology transfer accomplished for banana and coffee production and post-harvest handling**

**OP2.3 – Assisted with advocacy for approval of co-op legislation**

**OP3.3 – Retrained staff and partners in preparing business plans and loan applications**

**OP4.3 – Included production and transaction cost and yields in the price information system**

**OP5.3 – Existing Water supply and sanitation facilities serving co-op members improved**

**OP2.4 – Plan for the continuation of support to cooperatives after ProAgro closeout**

**OP3.4 – Provided training and advice on accounting and finance to cooperative leaders and managers**

**OP5.4 – Public education system on sanitation and environmental protection through co-op service centers**

**OP3.5 – Supported creation of a**

## ProAgro's Logical Framework

Hierarchy	Design Summary	Indicators	Means of Verification	Assumptions
Goal	Established sustainable value chain of selected crops with increased business opportunities and more competitive farmers and agriculture-related firms	<ul style="list-style-type: none"> <li># of farmers and agriculture-related firms actively participating in the value chain</li> <li># farmers and agriculture-related firms that have adopted innovative accounting and management tools</li> <li>Average profit for value chain actors</li> </ul>	<ul style="list-style-type: none"> <li>Program evaluation</li> </ul>	
Objectives	1- Increase productivity and reduce post harvest losses	<ul style="list-style-type: none"> <li>% increase in yields per commodity</li> <li>% reduction of post-harvest losses</li> </ul>	<ul style="list-style-type: none"> <li>Program reports</li> <li>Internal project records</li> </ul>	Macroeconomic stability leading to greater production and commercialization and increased opportunities for agriculture-related firms
	2- Promote market opportunities for selected Angolan products at both domestic and international levels	<ul style="list-style-type: none"> <li># of brands of selected commodities created and being marketed</li> <li>Volume of sales from assisted farmers and agriculture-related firms</li> </ul>		
	3- Facilitate market linkages among value chain participants	<ul style="list-style-type: none"> <li># of new agribusinesses entering the value chain</li> <li># of active members enrolled and actively participating in the forums</li> </ul>		
	4- Expand access to credit and other financial services	<ul style="list-style-type: none"> <li># of agricultural-related firms receiving Program supported assistance to access bank loans</li> <li>Volume of loans disbursed</li> <li># of financial institutions working with the program</li> </ul>		
Result	1.1 Yields Increased	<ul style="list-style-type: none"> <li>MT per hectare produced</li> <li>% increased by hectare</li> </ul>	<ul style="list-style-type: none"> <li>Program reports</li> <li>Internal project records</li> </ul>	Producers and agriculture-related firms with increased production capabilities and bankable business plans
	1.2 Production costs per MT reduced	<ul style="list-style-type: none"> <li>% reduction in cost per MT produced by selected crop</li> </ul>		
	1.3 Post-harvest losses reduced	<ul style="list-style-type: none"> <li>MT of post harvest produce lost by commodity</li> <li>Volume of processed production that meets market standards</li> </ul>		
	2.1 Selected products promoted and well accepted in both national and international markets	<ul style="list-style-type: none"> <li># (and type) of commodities promoted (and with good market)</li> <li># of market information publications issued</li> </ul>		
	2.2 Sales of selected crops increased	<ul style="list-style-type: none"> <li>Volume of sales by commodity</li> <li>Value of sales by commodity</li> </ul>		
	3.1 Formal business linkages between value chain participants increased	<ul style="list-style-type: none"> <li># of formal contracts signed between farmers and agriculture-related firms</li> </ul>		
	3.2 Forums to promote and coordinate market linkages created	<ul style="list-style-type: none"> <li># forums with permanent members adhering to the same code of conduct</li> <li># of associations working in the promotion of market linkages</li> </ul>		
	4.1 Financial services and products adapted to local agribusiness	<ul style="list-style-type: none"> <li># of new bank products adapted for agriculture sector</li> </ul>	<ul style="list-style-type: none"> <li>Program reports</li> <li>Financial Institutions reports</li> </ul>	
	4.2 Agribusiness firms capacitated to meet bank requirements	<ul style="list-style-type: none"> <li># of Agribusinesses assisted in preparing business plans and loan applications</li> <li># of agriculture-related firms with bank accounts</li> </ul>		

	4.3 Access to financial services expanded	<ul style="list-style-type: none"> <li>• # of agriculture-related using the bank for business transactions</li> <li>• # of farmers and agriculture-related firms accessing credit</li> <li>• Volume of credit facilitated</li> </ul>		
Activities	1.1.1 Conduct on job training to introduce new planting techniques	# training sessions conducted		New techniques mastered by farmers and Agriculture-related firms recognize the importance of sustainable value-chain relationships
	3.2.1 Convene farmers and agribusiness in forums to discuss agriculture-related issues	# of forums created		
	4.1.1 Raise awareness of agriculture related firms on the need to open bank accounts	# of bank accounts open		

## ProAgro: Banana Subsector Logical Framework

Hierarchy	Design Summary	Indicators	Means of Verification	Assumptions
Goal	Increase banana production in the Benguela region in order to meet Luanda market demand and to develop a base for future export trade.	353 banana farmers in Catumbela and Vale do Cavaco 612 ha. of bananas can be upgraded or replanted	Program evaluation and ECIAfrica Report	Climatic and soil conditions are ideal for banana production. Year-round irrigation is possible. Exports can be shipped from nearby Lobito. Chiquita, a multinational company, has already shown interest in the project
Objectives	1. Introduce more intensive production practices	Yield increase on established plantations Quality improvement	Program evaluation	Production potential of current stands not being achieved. Improved production techniques will provide good returns
	2. Establish banana clone grow-out nursery and demonstration farm to support introduction of improved banana genetics	Yield potential with improved varieties is much higher than with existing plantings	Clone production and sale records	Growers can aim at 70 MT/ha. within 5 years after planting new clones
	3. Support investment in new elite clone plantations	Assist 60 farmers to apply for loans for new plantation installation	Program records	Establishment costs are \$7,000/ha., but returns on investment are high even over 5 yr. project life – stands can be productive well beyond that
	4. Improve Luanda market linkages and grower cooperation	Market information Packing and storage Transportation economies	Program evaluation	Farm gate prices of \$200/MT do not reflect the retail market levels in Luanda, which are well over \$1,000/MT.
Results	1. Yields increased on existing plantations (from present 16-20 MT/ha.)	30-40 tons/ha. Area assisted contracts as new plantings replace old	Program reports	Improved use of fertilization, chemicals, irrigation etc. raises yields
	2. New plantations established	Replacement of 244 ha. in old plantations planned within 5 yrs. Expansion into extra 100 ha. Yields by Year 2 on target to reach 70 MT/ha. in Year 5	34 and 49 MT/ha. average verified for Year 2 & 3 yields	The investment is projected to be highly profitable, with GM of \$9,000/ha./yr. obtained by Year 5
	3. Replanting banana sales	Supply 10,000 MT of additional bananas by Year 5 \$2 million/annum in extra sales	Cooperative records	Increased yields from existing plantations, but reduced by land removed for replanting
	4. Bank finance provided for growers who plan investment in new plantations	\$7,000/ha. in five-year loans required to cover cost of replanting with elite clones	Program reports	Many growers will need financial assistance to cover the loss of income while fields are being replanted – new stands produce high yields only from Year 3 onward

## ProAgro: Coffee Subsector Logical Framework

Hierarchy	Design Summary	Indicators	Means of Verification	Assumptions
Goal	Contribute towards restoration of Angolan coffee to a prominent position in the global marketplace (pre-independence exports exceeded 200,000 MT/yr.)	<ul style="list-style-type: none"> <li>4,000 farmers who occupy land on which coffee trees survive will be encouraged to become involved</li> <li>The average farm is expected to include 2.5 ha. of coffee trees</li> </ul>	<ul style="list-style-type: none"> <li>Program evaluation of expansion in the volume of coffee marketed and on extent of participation</li> </ul>	The global coffee market is becoming increasingly differentiated. Angolan coffee has inherent quality advantages based on geography and genetics which justifies renewal of this resource.
Objectives	1. Establish market linkages with international buyers for the differentiated product	<ul style="list-style-type: none"> <li>Identify Portuguese and Spanish buyers</li> <li>Obtain organic certification</li> <li>Develop premium organic coffee contacts in US and EU</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of certification</li> <li>Proof of establishment of specific importer relationships</li> </ul>	Quality improvement in Angolan coffee at harvest and post-harvest stages can be synchronized with increasing evidence of global buyer interest
	2. Stimulate investment in coffee infrastructure	<ul style="list-style-type: none"> <li>Construction of processing and storage facilities</li> </ul>	<ul style="list-style-type: none"> <li>Data on locations and dimensions</li> </ul>	Access to investment capital by cooperatives or private investors
	3. Provide technical assistance for rehabilitation of abandoned coffee plantations	<ul style="list-style-type: none"> <li>10,000 ha. of coffee trees to be brought back into improved production through brush clearance and green manuring</li> </ul>	<ul style="list-style-type: none"> <li>Internal project records of participation</li> <li>Evidence of marketed volume gains</li> </ul>	Low-input rehabilitation systems will preserve the organic character of production, and attract prompt certification for specialty markets
	4. Organize grower groups	<ul style="list-style-type: none"> <li>Coordinated harvest, collection and drying of beans</li> </ul>	<ul style="list-style-type: none"> <li>Quality and volume records</li> </ul>	Collaboration will improve speed, quality and efficiency of bean processing, resulting in higher quality
	5. Support establishment of new plantations by assistance with business plans and loan applications	<ul style="list-style-type: none"> <li>10,000 ha. in new plantations</li> <li>200 farmers involved</li> </ul>	<ul style="list-style-type: none"> <li>Internal project records</li> <li>Bank loan data</li> </ul>	New plantations with improved seedlings will provide superior returns for labor when included in more intensive production systems

Hierarchy	Design Summary	Indicators	Means of Verification	Assumptions
Results	1. Yields increased from zero (when fully abandoned) or 250 kg./ha. (casual harvest of un-cleared groves)	• To 500 kg./ha. on cleared and green manured land	• Program reports	The optimum yields sought will depend on the number of abandoned trees accessible at each farm
	2. Sales of coffee increased	• 5,000 tons of coffee marketed from rehabilitated stands	• Sales records	Dependent on creation of demand in international markets
	3. International markets developed for specialty, improved quality Robusta Amboim coffee	• Amboim sold for price premium over commodity Robusta.	• Market price data	Ethiopia is the model for coffee product differentiation – with international NGO's showing the way
	4. Finance provided for 10,000 ha. in new plantation establishment, aimed at 1 ton/ha. Yields	• \$25 million value of bank loans made to innovative growers - establishment costs @ \$2,500/ha.	• Project records	Costs depend on government subsidy. Production from this activity will be small during the period, but will secure the longer term future for the industry

### ProAgro: Potato Subsector Logical Framework

Hierarchy	Design Summary	Indicators	Means of Verification	Assumptions
Goal	Facilitate the upgrading of the potato value chain in Bie, Huila and Kwanza Sul provinces to improve year-round supply of high quality potatoes to national urban markets	<ul style="list-style-type: none"> <li>• 1,300 farmers to upgrade potato production systems</li> <li>• 2,330 ha. of potato plantings brought into more intensive production practices</li> </ul>	<ul style="list-style-type: none"> <li>• Program evaluation of number of input recipients and volumes</li> </ul>	Commercial potato production has rebounded rapidly after the war, with the Luanda market accessible again but yields and quality of product need improving
Objectives	1. Increase gross margins per hectare for potato production through technical, marketing and bank loan support	<ul style="list-style-type: none"> <li>• Yield increase</li> <li>• Quality improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Program evaluation</li> </ul>	High fixed expenses (especially land preparation and weeding) can be covered by higher production/ha.
	2. Assist in seed potato production and distribution	<ul style="list-style-type: none"> <li>• 2 tons per ha. required for new technology adopters</li> </ul>	<ul style="list-style-type: none"> <li>• Seed potato production and sale records</li> </ul>	Growers must use improved, disease-free seed potato varieties to increase yield and quality potential
	3. Increase supply of potatoes during February-May period	<ul style="list-style-type: none"> <li>• Expansion of has. planted during the rains</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing cooperative records</li> <li>• Sales of seed potatoes by month</li> </ul>	Production declines during rains. Intensive production techniques can allow farmers to take advantage of higher prices during the period

	4. Provide technical assistance for quality control, storage and packaging improvement	<ul style="list-style-type: none"> <li>Supply supermarkets in Luanda</li> </ul>	<ul style="list-style-type: none"> <li>Retail market surveys</li> </ul>	Potato imports (15,000 MT in 2005) dominate the formal markets. Quality is mediocre, and domestic products are potentially competitive
	5. Organize grower groups	<ul style="list-style-type: none"> <li>Coordinated harvest, collection, classification, packaging and shipment of potatoes</li> </ul>	<ul style="list-style-type: none"> <li>Cooperative registration</li> <li>Transaction records</li> </ul>	The grower-share in retail price is relatively low at 45%. Cool storage, transport and market linkages can raise returns substantially
Results	1. Yields increased (from present 10-15 MT/ha.)	<ul style="list-style-type: none"> <li>25 tons/ha. per planting</li> </ul>	<ul style="list-style-type: none"> <li>Program reports</li> </ul>	Use of disease-free, higher yield potential varieties, plus improved fertilization etc. raises yields
	2. Sales of potatoes increased	<ul style="list-style-type: none"> <li>100,000 MT marketed</li> </ul>	<ul style="list-style-type: none"> <li>Sales records</li> </ul>	Overall demand for potatoes is increasing. Higher personal income leads to increased potato consumption at expense of corn, cassava etc.
	3. Average farm gate prices increase	<ul style="list-style-type: none"> <li>Capture 60% share of retail price</li> <li>Secure higher prices during rains</li> </ul>	<ul style="list-style-type: none"> <li>Cooperative records</li> <li>Market price surveys</li> </ul>	Marketing cooperative selling leverage, plus grading, packaging and expanded supply in rains
	4. Bank finance provided for growers who purchase inputs for seed potatoes and other inputs	<ul style="list-style-type: none"> <li>\$3,000/ha. in short-term loans required to cover additional input costs for intensive production systems</li> </ul>	<ul style="list-style-type: none"> <li>Program reports</li> </ul>	Many growers will need financial assistance to cover their increased input costs - mainly for seed potato and fertilizer