Cooperative Agreement 690-A-00-00091-00

CHIANGA PROPLANALTO

Revitalization of Agriculture Investigation and Development in the Central Highlands of Angola

FINAL EVALUATION REPORT

Date of Evaluation 18 November 2005 to 03 December 2005

> Marc Lacharme & Adriano Muiocoto André

> > January 2006

The report has been financed by USAID and Chevron and produced at the request of World Vision.

The comments contained reflect the opinions of the consultants only

Table of Contents

	Page
Acknowledgements	
List of abbreviations	4
EXECUTIVE SUMMARY	5
I. PROPLANALTO PROGRAM EVALUATION SCHEDULE	7
II. PROPLANALTO PROGRAM PRESENTATION	8
2.1 Huambo Agriculture Presentation (In 2002-2003) before PROPLANALTO implementation	8
2.2 Program Goal	8
2.3 Expected results	9
2.4 Program Area	9
2.5 Program partners and budget	9
2.6 Program Activities	10
2.6.1 Institutional support activities2.6.2 Economic development activities	10 11
III. METHODOLOGY OF THE EVALUATION	11
3.1 Objective of the evaluation	11
3.2 Methodology	11
3.2.1 "Institutional Support" component3.2.2 "Economic Development" component	12 12
IV. ANALYSIS OF PROGRAM RELEVANCE	13
V. PROPLANALTO IMPLEMENTATION DIFFICULTIES	15

VI. RESULTS OF THE CONSULTANCY FOR INSTITUTIONAL SUPPORT	15
6.1 Program Coordination	15
6.2 Supply of equipment for partners	15
6.3 On station and on farm trials	16
6.4 Additional Training activities	18
6.5 Equipment of the laboratories	18
6.6 Extension Support	19
6.7 "Conversa na Lavra" Radio program	20
6.8 General Conclusion on Institutional Support	20
VII. RESULTS OF THE CONSULTANCY FOR ECONOMIC DEVELOPMENT	22
7.1 Promotion of the Associations	22
7.2 Rural Microfinance	23
7.3 Economically Fair Trading Program	24
7.4 Results on farmers' livelihood improvement	25
7.5 Expressed needs of the association members	26
7.6 Gender issue	26
7.7 Conclusion on Economic Development component	27
VIII. GENERAL CONCLUSION AND RECOMMENDATIONS	28
Annex 1: List of persons interviewed and site visited	29
Annex 2: Map of Program Area	31
Annex 3: Program chart (WV staff)	32
Annex 4: On-station and On-farm Program extent	33
Annex 5: Summary of fertilizer Credit-In-Kind FY04 and FY05	34
Annex 6: Associations interviews with focus groups.	35

Acknowledgements

The Consultants want to thank everyone they met during the evaluation and in particular World Vision staff.

Special thanks should be addressed to: Jonathan White, Chris Asanzi, Paula Alves, Imacula Conceiçao and Deodato Guilherme.

List of Abbreviations

BPC Bank of Savings and Credit (Banco de Poupança e Crédito)

CDRA Consortium for Development Relief in Angola

EDA Station for Agrarian Development: Municipal representation of IDA

FCA Faculty of Agricultural Sciences, University Agostinho Neto

IDA Institute for Agrarian Development

IIA Institute for Agronomic Investigation

IDP Internally Displaced Person

GoA Government of Angola

MINADER Ministry of Agriculture and Rural Development

NGO Non Governmental Organization

SRP Seed Recovery Program

WV World Vision

Executive Summary

The evaluation of the "Chianga PROPLANALTO Program - Revitalization of Agriculture Investigation and Development in the Central Highlands of Angola" was carried out from November 18 to December 03, 2005. The consultants were Mr. Marc Lacharme (marc.lacharme@wanadoo.fr) and Mr. Adriano Muiocoto André (kulandoc@yahoo.com.br).

The consultants analyzed the project cycle in a participative and learning manner (planning, implementation methodologies, results and impacts) in terms of relevance, impact, efficiency, effectiveness and sustainability.

The PROPLANALTO program is composed of two principal components: Institutional Support and Economic Development. The methodologies followed for the analysis of each component were different.

For the Institutional Support component, the consultants, after a review of the program documentation, conducted interviews with all the partners that were involved to gain an understanding of the role of each institution and relationship, coordination, evaluation of direct outputs in terms of scientific quality of the research, contents of rural radio program and improvement of extension delivery services. The consultants focused their analysis on capacity building within the partner institutions.

For the Economic Development component, the methodology consisted of collecting information from focus groups, from World Vision and partners' staff and visits to the rural areas.

The PROPLANALTO program was identified and started in 2003. Smallholder communities at that time were still in a phase of resettlement. The Program was defined with an objective of capacity building within National Institutions; the Institute for Agronomic Investigation (IIA), the Institute for Agrarian Development (IDA) and the Faculty of Agricultural Science, University Agostinho Neto (FCA) using an "on-the-job" training methodology. A large Onstation and On-farm trials program was defined with priority on soil fertilizer response and variety yield potential. Improving smallholders' livelihood was based on cash crop production and trading, on strengthening smallholders' associations and on access to credit for fertilizer.

The program was relevant in this context. It defined development objectives and it proved that, even in a situation of physical isolation and widespread poverty, rural development can be based on a real economic framework. The transition from emergency to development was successful.

The Institutional Support component of the program had a great impact in terms of capacity building of partners' institutions and in implementing a close coordination between IIA, FCA and IDA. Indisputably, extension services were shown to be more efficient in the PROPLANALTO program areas.

The impact of the Economic Development component is also visible in the rural communities. Mature associations which benefited since the beginning of the credit and trade support from PROPLANALTO have progressed rapidly with their recapitalization. The result is remarkable

as evidenced by the restocking with cattle for animal traction. Rural communities appeared both enthusiastic and involved in the program.

With a relatively limited team and a reasonable budget, the PROPLANALTO Program achieved most of its objectives. It obtained very valuable research results, improved capacities and capabilities of partner institutions, provided coordination mechanisms, implemented with the Bank of Savings and Credit (BPC) a credit scheme for smallholder farmers, supported commercialization of cash crops and improved the technical and commercial skills of smallholder farmers.

Each action led by the program had multiple objectives. A typical example was the field trials program which produced valuable scientific results and was also used as a tool for onthe-job training of technicians and for rural extension activities.

All planned activities were implemented. As an example, the number of trials implemented match with the number that was planned. The same took place with most other activities. The PROPLANALTO Program did not require a modification to the methodology or a reduction in stated objectives.

The sustainability of the Institutional Support will depend on a strong commitment by the National Institutions to cooperate and to decentralize. Institutional support might have fully succeeded if local institutions benefited from (i) an autonomous budget, (ii) adequate staff, (iii) secure means of working, (iv) independence to take initiatives, and, (v) a real will to cooperate with partners. The main difficulties might have resulted from an inadequate participation of partners, especially IIA.

For the Economic Development component, PROPLANALTO managed its activities with the aim of sustainability. As an example, it succeeded in involving a commercial Bank in micro credit. Because of the nascent commercial private sector, very young and poorly structured associations and very low education rates, the objective of sustainability for the smallholder associations remains distant. Continuation of support will be essential during the next years but should move towards autonomy and more direct connection between partners (Farmers Associations, banks, input suppliers and potato traders).

The PROPLANALTO program succeeded in implementing a development strategy. The donor community should move away from emergency to tackle development goals. Positive relationships between NGOs and national institutions are possible at the provincial level with benefits to all partners. However, it would have been more beneficial to involve the partners more closely in the program supervision and management.

World Vision as the leader for Institutional Support was performing a role that is not normal for a NGO. National Institutions should reform their accounting and management procedures to give more initiatives and facilities to decentralized departments and turn themselves into efficient rural development leaders.

I. PROPLANALTO PROGRAM EVALUATION SCHEDULE

The evaluation lasted from November 18 to December 03, 2005.

Nov 18	International consultant arrival in Luanda – First contact with WORLD VISION Program Officer							
Nov 18-20	Luanda preparation and review of program documents							
Nov 21	Luanda – meeting with WORLD VISION and USAID							
Nov 22	Huambo – Entry conference with PROPLANALTO partners at Chianga, meet with IIA							
Nov 23	Meet with Government representatives, PROPLANALTO partners, visit EDA Caala							
Nov 24	Meet with IIA/FCA/IDA and BPC visit of Chianga,							
Nov 25	Visit Caala/PROPLANALTO mature clients associations (Cassupi, Capinâla, Cabuemba, and new clients Cosito, Calongo, Mama, Cassoco)							
Nov 26	Visit Huambo Association, Mr Loth							
Nov 27	Review of the program documents and report writing							
Nov 28	PROPLANALTO Partners FCA and Visit Caala PROPLANALTO clients Kapunje							
Nov 29	Visit Ekunha PROPLANALTO new clients associations, meeting with potato private trader							
Nov 30	Exit conference with PROPLANALTO partners and report writing							
Dec 01	Travel to Luanda and preparation of PowerPoint presentation							
Dec 02	Presentation of findings to USAID and writing draft report							
Dec 03	Presentation of draft report and exit							

II. PROPLANALTO Program Presentation

2.1 Huambo Agriculture Situation (in 2002-2003) before PROPLANALTO implementation

The central highlands of Angola, especially Huambo province, used to be the breadbasket of Angola during the colonial era. The agro-climatic conditions of Huambo and the central highlands of Angola have very high potential for the production of staple crops of maize, bean and potatoes. However, following almost three decades of civilian strife, Huambo has become food insecure and maize has lost its historical status of being a cash crop. The major constraints which brought about this reduced crop productivity and low crop production are listed below:

- Destruction of basic infrastructure (i.e., roads, communication, etc.);
- Destruction of agriculture infrastructure (grain storage, irrigation systems, inputs supply system, etc.);
- Limited availability and high cost of fertilizer and improved quality seeds, and lack of a commercial network for inputs and outputs;
- Lack of farming implements including oxen and animal traction equipment;
- Low purchasing power of small scale farmers;
- A weakened almost non functioning extension service and applied research services
- Limited access to rural credit:
- Serious limitations in the availability of genetic material and seed quality.

The PROPLANALTO program was conceptualized and started its implementation while the rural situation was still on the dividing line between emergency, reconstruction and development. The donor community was still focused on food distribution and support for the resettlement of IDPs, refugees and ex-combatants.

In accordance with all diagnosis and agricultural review, public service delivery to smallholders was insignificant and inappropriate. MINADER's local administration was characterized by very low human resources and local technicians were working without adequate resources, work plan or effective financial support. There was mistrust between (international) NGOs and the local administration and relationships were generally limited to data transmission.

2.2 Program Goal

The program goal was defined in the PROPLANALTO Program Description:

"Strengthen the institutional capability of the Faculty of Agricultural Sciences (FCA), Institute for Agronomic Investigation (IIA) and the Institute for Agrarian Development (IDA) to respond to the locally expressed demand to improve the food security, incomes and quality of life for smallholder farmers in the central highland of Angola."

2.3 Expected Results

Three main expected results were defined as:

- (1) Strengthened capability of the Faculty of Agricultural Sciences and Institute for Agronomic Investigation based at Chianga to conduct applied research, technical services and agricultural training programs.
- (2) Strengthened capacity of the Institute for Agrarian Development to partner with NGOs to provide technical assistance for increased crop yields using participative field evaluation methodologies
- (3) Increased capacity for Farmers Association to respond to market opportunities.

2.4 Program Area

PROPLANALTO was focused on FCA, which is based at the Chianga station, and the decentralized services of IIA (Research Station of Chianga) and IDA in Huambo Province.

Extension activities were implemented in all of Londuimbali and Bailundo municipalities and in part of Caála and Huambo municipalities.

PROPLANALTO activities to increase the capacity of farmers associations' capacity (Economic Development) were focused near Caála and Huambo.

However, PROPLANALTO was considered as an <u>experimental program</u> with a national impact in terms of methodology and relationship between institutions (International NGOs and National Institutes).

2.5 Program Partners and Budget

The PROPLANALTO Program was funded by USAID (US\$ 1,204,294), CHEVRON (US\$ 1,203,024) and World Vision (US\$ 309,752). The program duration was two years and the total budget was US\$ 2,715,069. World Vision Angola was in charge of the overall coordination of the PROPLANALTO Program. Executive agencies were FCA, IIA, IDA and WV. World Vision had specific staff for the implementation of the program.

The Consultants attempted to distribute the locally used budget between Institutions and main areas of activity as shown in the following table (some minor expenditures are not allocated < 3%):

US\$	IIA	FCA	IDA	WV Trials	WV	Other	Total
				Implementation	Economic	Operation	
					Development	support	
Capital							
investment	120,500	48,000	90,600	47,250	50,250		356,600
Consultancy	48,000						48,000
Operational							
costs	29,200	10,800	87,600	113,200	13,200	257,640	511,640
Staff	93,600	144, 000	108,000	144, 000	276, 000	247, 200	1,012,800
Travel		40,000					40,000
Guarantee							
fund					120,000		120,000
TOTAL	291,300	242,800	286,200	304,450	459,450	504,840	2,089,040

[&]quot;Other operation support" takes into account the overall supervision of PROPLANALTO by World Vision, technical assistance, financial services, etc.

The PROPLANALTO Program was above all a <u>technical assistance program</u>. For that reason staff costs are very important. They represent almost half of the expenditures.

Sharing out the budget between "Institutional Support" and "Economic Development" ("other operation support" was divided into two equal parts) the cost of Institutional Support was around US\$ 1.4 million whereas the cost of Eonomic Development was only around US\$ 0.72. The cost of "Institutional Support" was twice that of "Economic Development".

In the budget, PROPLANALTO accounted for considerable expenditure which normally should be found in the national budget. Subsistence and per diem for IIA, FCA and IDA staff were high and PROPLANALTO funded most of operational costs for all planned activities.

2.6 Program Activities

The PROPLANALTO program was made up of two main components:

- 1. Institutional Support
- 2. Economic Development

Institutional support was a collaborative action of FCA, IIA, IDA and WV staff. All activities were conducted around a large field trials program and based on "on-the-job" training methodology.

Economic development was implemented by specific World Vision staff.

World Vision was in charge of overall supervision and technical assistance of PROPLANALTO.

2.6.1 Institutional Support Activities

For the evaluation, seven different activities were identified for the institutional support component:

- 1. Coordination between partners.
- 2. Supply of equipment.

- 3. Bilateral cooperation between FCA and American universities.
- 4. On station and on farm trials program.
- 5. Training activities.
- 6. Support to soil and phytopathology laboratories.
- 7. Support to extension services (IDA) with new methodologies and technical assistance.
- 8. Rural radio program "Conversa na lavra".

The following indicators were chosen for the evaluation:

- (i) Quality of the work done;
- (ii) Achieved results;
- (iii) Improvements of partners' institutional and individual capacities;
- (iv) Participation and interest of the partners in the program; and,
- (v) Continuity of activities after the end of the program.

2.6.2 Economic Development Activities

Economic Development was a combination of three activities:

- 1. Organization of Farmer's Associations;
- 2. Access to credit for smallholders;
- 3. Support for cash crop commercialization.

The following indicators were chosen for the evaluation:

- (i) Quality of the work done;
- (ii) Achieved results in term of credit and commercialization;
- (iii) Strengthening of the Association and receptiveness of the communities to the program;
- (iv) Sustainability; and,
- (v) Impact on the improvement of the livelihood of the communities.

III. METHODOLOGY OF THE EVALUATION

3.1 Objective of the Evaluation

The consultants made an independent and structured evaluation of the PROPLANALTO program. They analyzed the project cycle (identification, definition and implementation) in terms of relevance, impact, efficiency, effectiveness and sustainability. The consultants drew conclusions and made recommendations to inform future project planning and implementation.

3.2 Methodology

As the program encompasses two main components, with different objectives and different indicators, the methodologies of evaluation were different for each component.

3.2.1 "Institutional Support" Component

In this particular component, two goals were pursued:

- To implement applied research to define a technical package for extension recommendations;
- To improve the capacities of institutions to be able to continue with applied research activities and technology transfer to smallholder farmers.

To achieve the evaluation goal, the consultants used the following methodology:

- 1. Review of the program documents that included quarterly reports, scientific reports, "Conversa na Lavra" radio program technical contents, etc.
- 2. Critical analyses of the PROPLANALTO architecture: role of each institution and relationship.
- 3. Evaluation of inputs: equipment provided and training.
- 4. Evaluation of the activity of WV technical assistance and specifically the coordination with stakeholders.
- 5. Evaluation of the direct output: scientific quality of the research, contents of radio programs, improvement of technician's skills.
- 6. Visit to the field trials, laboratory, WV offices, partners' facilities etc.
- 7. Evaluation of the real participation of stakeholders in the program.

Interviews were conducted with all stakeholders:

- WV staff
- IIA, FCA and IDA staff involved in the program (senior staff, technicians and students)
- People involved in the production of the radio programs

3.2.2 "Economic Development" Component

In this particular component, three goals were pursued:

- To support the creation and/or organization of farmers associations
- To implement a micro credit system to make inputs available to organized farmers
- To support farmers associations for the commercialization of their produce.

In this component some critical issue were identified:

- (i) Improvement of livelihoods of the rural population;
- (ii) Sustainability of associations;
- (iii) Credit mechanism and commercialization scheme sustainability; and,
- (iv) Potential for disengagement of WV.

To achieve the evaluation goal, the consultants used the following methodology:

1. Review of the program documents that included quarterly reports, credit documents etc.

- 2. Conversation with WV technicians on the reason for activities, methodology used, leaders of associations and future improvements.
- 3. Discussion with BPC staff and a potato trader.
- 4. Discussion with focus groups (Association board and members). The meetings were conducted as follows:

The President of the Association presented the association members. The consultants asked questions about the following matters:

- History and support received;
- Legal status and internal organization (board, General assembly);
- Number of members and women members;
- Activities (principal, diversification, non economic activities);
- Trust inside the association:
- Capital (building, equipment and funds);
- Debt with BPC and/or WV;
- Impact of association and WV activity in the village (animals, motorbikes, bicycle, etc);
- Relationship with other institutions or associations;
- Expressed needs;
- Opinions on the project for the future.

Using this information, the consultant tried to identify the strength of the associations.

IV. ANALYSIS OF PROGRAM RELEVANCE

PROPLANALTO was conceptualized at the beginning of 2003 and began implementation at the end of 2003. PROPLANALTO identification and design was presented as a result of collective brain storming with USAID, CHEVRON (CTSDC), World Vision and the participation of national institutions (IIA, IDA and FCA).

As already explained, in 2003 rural communities were just emerging from an emergency situation and public institutions were incapacitated by poor human resources in term of capability and expertise, lack of equipment and under investment. FCA was just opening after 12 years of total shutdown.

USAID Agriculture Strategy Assessment team laid out a comprehensive way ahead for improving the food security, incomes and quality of life for rural Angolans by increasing their agricultural productivity and competitiveness in domestic, regional and international markets.

The PROPLANALTO program was based on the following observations:

- 1. Need for "grass roots level" capacity building of the National Institutions through a "on-the-job" training methodology.
- 2. Soil fertility and the yield potential of crop varieties are the main limiting factors for agriculture in the central highlands.
- 3. Need for extension methodology and improved monitoring in IDA.

- 4. Importance of cash crops to increase smallholders' incomes and improve rural population livelihood.
- 5. Need to improve access to micro credit and to markets for smallholders organized in associations.

In 2003, most of the donor community's interventions were focused on emergency. They were supporting the IDP and refugees resettlement by distributing food aid and seeds and tools kits. Such interventions had no long term objective of sustainability but focused on the goal of improving rural food security. The PROPLANALTO strategy focused on LRRD (Linking Relief, Reconstruction and Development). World Vision itself was part of CDRA and was implementing relief activities (DRP) and a seed multiplication program (OFDA Seed Recovery).

The PROPLANALTO Program was a step ahead of the relief programs because it was already based on a framework of sustainability, economic profitability and technical capacity building in the national institutions. Based on the consultants' experience in Angola, PROPLANALTO was one of the first development programs to be initiated in this context.

For "Institutional Support", the idea of implementing a vast field trials program as the basis of this component was very appropriate. Firstly, the lack of suitable data on crop yield, economic profitability, response to fertilizer and variety yield potential under farm conditions was a main constraint for planning sustainable rural development. Secondly, IDA and IIA technicians were de-motivated and needed close supervision. Trial implementation allowed a profitable "on-the-job" training and "on-the-ground" activities to enable this to happen.

The trials program, therefore, had multiple-uses:

- 1. To generate valuable field trials data:
- 2. To serve for on-the-job training;
- 3. To serve as a practical exercise for training courses;
- 4. To demonstrate improved technology for extension activities.

The results of PROPLANALTO show that the field trials program achieved most of its objectives and was very useful in building a close collaboration between IIA, FCA, IDA and WV.

The results of the field trials and the in-kind micro credit highlight the problem of soil fertility in the Central Plateau. The short-term duration of the PROPLANALTO program placed limits on the trial program. The defined technical priorities for soil fertility and crop variety potential were adequate. It allowed the generation of valuable results in a short period of time. For a longer duration, the consultants would expect a more comprehensive methodology to be used, such as farming system analysis.

As a conclusion, and taking into account the short-term duration of the PROPLANALTO program, the consultants agree with the analysis and diagnosis of technical needs which formed the basis of the PROPLANALTO program.

V. PROPLANALTO IMPLEMENTATION DIFFICULTIES

PROPLANALTO implementation was not easy because of the difficulties encountered trying to recruit qualified staff either in Angola or international staff to come to Angola. It was planned to hire a technical expert as program manager for the duration of the program. Dr D. Sperling only assumed responsibilities as program manager at the end of 2004 and left six months later. As a result, permanent WV staff, Jonathan White and Dr Chris Asanzi, took responsibility for program supervision and, according to all partners and WV local staff, they did well. Other difficulties with staffing were overcome by hiring a deputy manager, substituting the program trial supervisor.

World Vision pro-actively responded to resolve all these problems without decreasing any objectives or increasing the program costs.

VI. RESULTS OF THE EVALUATION OF THE "INSTITUTIONAL SUPPORT" COMPONENT

6.1 Program Coordination

The objective of this sub component, which was not specifically identified as such during Program identification, was to gather together the different Institutions involved in rural development, including FCA, IIA and IDA so that they could learn to work together as a team. It is a fact that many institutions in Angola are used to working alone with very little communication or collaboration with other institutions.

For PROPLANALTO implementation, a common annual work program was defined through a collaborative methodology. Monthly meeting at the Chianga Field Station were carried out to check the progress of activities and to share and correct the problems encountered. Each partner Institution drafted their own quarterly report and WV was in charge of gathering all reports together in a common PROPLANALTO quarterly report.

All interviewed partners highlighted that such coordination was a great opportunity to work as a team with other partners and consider this new form of relationship as the principal success of the PROPLANALTO program. The FCA deputy director said; "People in the institutions have a wish to collaborate but administrative structures can make it difficult. PROPLANALTO acted as a catalyst for collaboration between the different institutions."

According to WV staff, the National Institutions needed strong capacity building in reporting capabilities.

The Consultants were surprised that a damaged building was pointed out by IIA as being the originally planned Proplanalto offices at the Chianga Experimental Station. The much-needed rehabilitation of infrastructure delayed the permanent presence of WV staff at Chianga, close to the other Institutions.

6.2 Supply of Equipment for Partners

Direct support to partner institutions was made through support for operational costs and the supply of equipment as follows:

Equipment	IIA	FCA	IDA
4x4 Vehicle	1	1	1
Motorbike	3	0	6
Computers	6	6	6

As a result of the GoA's previous lack of investment in provincial institutions, the supply of equipment was crucial for the partners participating in the program. The 4x4 vehicles and motorcycles gave the required mobility to the IIA and IDA technicians.

According to the partners, the equipment supplied was insufficient to cover all the needs. However, the initial budget did not allow for the purchase of more equipment and expenditures were spent in accordance with what had been planned.

These comments reflect a clear difference of perception between the Government Institutions which tend to want more; and WV and donors who are used to expenditures following defined work plans and budgets. Available equipment must be adapted for use in accordance with the planned activities.

The sustainability of "Institutional Support" depends closely on the GoA capacity to meet the accounting needs of its own services. Cooperation may help in solving difficulties but the GoA is responsible in the medium to long term.

The "Institutional Support" provided by PROPLANALTO did not increase any recurrent costs for the GoA. All investments match with minimum requirements for the Institutions to be functional.

6.3 On-station and On-farm trials

On-station and On-farm trials were the main tool for the implementation of the "on-the-job" training methodology. They represented the basis of the Institutional Support component.

The field trials were conducted according to the following objectives:

- 1. To get valuable data on fertilizer response and crop variety productivity;
- 2. To initiate with partners a very applied research approach;
- 3. To serve for on the job training for IIA and IDA technicians and for FCA students;
- 4. To serve as practical demonstrations of technical advice to the smallholder farmers.

The On-station and On-farm trials program were very ambitious:

During the 2003/2004 rainy and dry season, 49 On-station trials and 240 On-farm trials were implemented.

During the 2004/2005 rainy and dry season, 56 On-station trials and 254 On-farm trials were implemented.

All trials protocols and implementation followed the required scientific standards in collaboration with IIA. The results obtained have unquestionable scientific validity.

Without entering into the detail of each trial, the main qualitative results can be summarized as follows:

- ➤ Planalto soils are mainly characterized with a very low nitrogen level and a very low phosphate level. Both elements are limiting to agricultural production.
- ➤ Planalto soils are generally well provided with potassium. Fertilization with potassium has little profitability on most soils. Use of fertilizers without potassium will be more economic. In the current situation with the high price of fertilizer, this result should allow substantial savings for smallholder farmers if input traders diversify the range of fertilizer available on the Angolan market.
- ➤ The preferred maize, potato, wheat and bean varieties were identified over a number of agricultural seasons and farming system of smallholder farmers.
- ➤ The use of fertilizer on OPV maize varieties has no profitability with current costs of fertilizer and the level of technical skills of smallholder farmers. Only the use of hybrid varieties allow a margin of profitability.
- Fertilization of Irish potato is highly profitable even with some of the local unimproved varieties.
- > Improved potato varieties are a very critical issue to reach the commercial quality standards of the market.

The field trials results are very important:

- They have a real scientific value and the data may be used as a starting point for any further applied research and rural development activities in the Central Highlands.
- They are already useful in helping to define an adapted technological package for the maize, potato, bean and wheat crops. Even though two years of trials results do not normally provide a sufficient data-base.
- The methodology used, which combines On-station and On-farm trials, is suitable in providing for the definition of recommendations for other agronomic issues such as sowing dates, plant population and crop diversification etc.

The field trials program also enabled further contribution to the capacity building of the PROPLANALTO program. IDA and IIA stated that their technicians acquired new technical knowledge on trial implementation and crop management. FCA used On-farm trials for applied courses at the University and some students participated in data collection in the field.

IDA also used the On-farm trials for farmer field days (more than 300 farmers field days were organized with more than 25,000 farmers present). During the field trip, the Consultants noticed that the farmers are aware of the technical advice (use of fertilizer, improved crop varieties, sowing dates and plant populations) provided by the extension services. On-farm trials fulfilled their role in field demonstrations in support of the extension services.

As a conclusion, the results of the On-station and On-farm trials show that they achieved the defined objectives in terms of generating valuable agronomic data, providing on-the-job training and supporting technical knowledge and practical field recommendations. The use of the results should be improved. The Irish potato and maize technical pamphlet, edited in November, would gain from being simplified with a separate pamphlet for each crop.

6.4 Additional Training Activities

The training program was focused on the identified needs to achieve the trials programs and to improve extension skills. The subjects of additional training were generally very technical as summarized below:

Type of Training/Workshop	Professors	Technicians	NGOs and
			Others
Site specific soil nutrients management	1	1	1
Soil sampling and analysis using soil test kit		17	6
Trials setting techniques and maintenance		12	14
Site specific soil nutrients management	5	26	21
Data trials analysis	8	4	11
NuMaSS & PDSS software	9	8	13
Community development and strengthening of		16	
Farmer Associations			
Trials' data collection		9	15
Rational use of fertilizers		24	
TOTAL	23	117	79

Additional trainings were generally appreciated by the "clients". Quality of teachers/consultants was reported as good.

However, non-homogeneous capacities of the clients did not facilitate adequate training for all. Some technicians also claimed that they never used the new acquired knowledge; IIA technicians were trained in data trials analysis but didn't participate in the analysis. This remark is both a result of segmentation of roles between the institution partners and of insufficient initiative on the part of some individuals.

6.5 Equipment for the Laboratories

Following discussions with the program partners, it became apparent that working on the soil and the phytopathology laboratories was not an initial priority goal for the PROPLANALTO program. However, IIA insisted, during the PROPLANALTO planning phase, that the laboratories be included in the program.

The field trials program was focused on soil fertility and the evaluation of fertilizer needs. An operational soil laboratory would have been very beneficial. Everybody agrees that an operational soil laboratory is an essential tool for the development of Angolan agriculture.

Neither the work of a number of experienced external consultants, nor the provision of equipment and reagents supplied by PROPLANALTO, were sufficient for the soil laboratory

to be in working order. Soil samples were sent to the USA for analysis. The phytopathology laboratory is also not working as it should.

It appears, first of all, that the planned budget for both laboratories was inadequate. But, above all, the staff provided by IIA to run the laboratory are not adequately qualified. In his report, the external consultant, Dr Rob Harrison, stated his strong doubts on the management capacities of those responsible for the soil laboratory. However, the IIA Director did not accept these conclusions and maintained the soil laboratory staff as they were. More surprising was the inability of the IIA deputy director and laboratory director to explain what still needs to be done for the laboratories to be in working order. There seems to be nobody with overall responsibility for it.

The consultants observed that no research program was conducted in the two laboratories. No senior researcher is forecasting any research or soil analysis. It seems clear that the utility of the soil and phytopathology laboratories are not a priority for the national research institutions. IIA has not given any commitment to run the laboratories in the short term.

Lastly, the laboratories have no budget provided for by IIA. The soil laboratory manager has no means to purchase any required basic tools. For example, Dr Rob Harrison was surprised that there were no scissors in March 2005 and no budget to buy them. This is still the case now.

6.6 Extension Support

The former IDA provincial director appeared enthusiastic about PROPLANALTO and highlighted the following points:

- > Capacity building for IDA technicians;
- ➤ Mobility of IDA staff;
- > Training in-situ through implementing and managing the On-farm trials;
- Facilities provided for IDA like computers, vehicle and operational costs.

He commented: "World Vision senior staff are very demanding but teach. IDA learned a lot collaborating with World Vision."

IDA reports show an important improvement in technicians' activities; as an example, more than 300 farmers' field days were organized for more than 25,000 participating farmers. Such an extension activity was not reported in other areas of the country. Improvements were provided in the extension methodology following the Farmer Field School (FFS) initiative. The EDA extensionists' activities were previously scheduled and monitored. IDA and EDA were presenting regular reports to WV.

EDA and WV extension agents were working in close partnership in the target areas. According to an EDA Caála technician: "Trials had a very good impact; before local farmers were using 500 to 600 kg of fertilizer per ha but now they are using only 300 kg following the technical advice. During the "field days" in front of the trials, there was a lot of participation. With PROPLANALTO we had a good experience".

The objective of strengthened capacity of the Institute for Agrarian Development to partner with NGOs to provide technical assistance was reached. Cooperation and coordination between IDA and WV represent an example of future relationship to build between National Institutions and NGOs.

Unfortunately, with PROPLANALTO ending, and with a complete lack of funding for provincial extension services, the continuity of the PROPLANALTO extension program is doubtful.

6.7 "Conversa na Lavra" Radio Program

The idea was to use local radio broadcast to spread technical and social messages for the listening farmers. About 50 technical themes were identified for radio during the PROPLANALTO duration. Radio programs were transmitted twice a week in Umbundu and once a week in Portuguese.

The evaluation of the technical content of the radio programs was very positive. Interviewed farmers declared that they enjoyed the program, acquired new agriculture and social knowledge but claimed that transmission time wasn't adequate. At 05:30, a lot of them are already in their fields.

About 50 recorded technical themes is a valuable gain. Local radio transmitters could use the already registered technical themes to give continuity to this operation. Recording new technical themes should be possible without additional donor intervention.

6.8 General Conclusion on Institutional Support

The activities implemented by PROPLANALTO have already shown good results and World Vision staff involved have shown great competence and interest in this component. In terms of impact, effectiveness and efficiency, valuable scientific results are now available. The IIA and IDA technicians involved in the program acquired good skills in field trials implementation. The cost of the component (around US\$1.4 million) was very reasonable in relation to the numerous outputs.

Major deficiencies resulted from an inadequate participation of partners in the program. IIA should have played its role as counterpart of WV. That means that IIA should have engaged senior staff with high qualifications and working fulltime at the Chianga station. Equipment provided by the program should have been used only for the planned activities. The IIA vehicle was used for other purposes and the IIA technician's were de-motivated and unable to manage the On-farm trials.

The sustainability of PROPLANALTO activities in "Institutional Support" closely depends on the institutional capacities to replace World Vision supervision and in the GoA to fund its own services.

PROPLANALTO highlighted the fact that MINADER institutions need strong institutional reforms in both organization and accountability. MINADER should move away from its centralized organization and give more responsibility and initiatives to the decentralized services.

For IIA, the research station and/or research teams would benefit from autonomy in management and accountability. Current centralized organization prevents the research station from doing valuable work.

IDA's Provincial Department has no budget and no financial autonomy. Working under these conditions, IDA staff have limited opportunities to take any initiative or to plan any activity by themselves.

A future critical issue for any international cooperation is to support an effective decentralization of national administration. A criticism of paternalism may be made on initial PROPLANALTO budgeting and WV supervision. To make the local partners take more responsibility, the annual budget should have been defined based on a working program and these budgets should have been made known to all the partners. The partners should have collaborated more closely in making the expenditures.

To achieve this, future programs should give priority to local management and accounting capacity building, and in giving more responsibility to the local institution. The PROPLANALTO budget did not clearly define the resources for each partner. It would have been more efficient to distribute expenditures between activities and implementing partners.

The consultants understand the difficulty for an implementing agency like World Vision to combine the objectives of research for effective and valuable results on the one hand with the delegation of management responsibilities to very weak partners on the other hand. This is the dilemma of any "Institutional Support" program.

Insufficient participation, on the part of IIA and FCA, meant that they did not fully benefit from the trial program. The consultants consider that the trials provided a great opportunity for some researcher doing their masters or doctorate.

IIA must take the right decisions for the laboratories to work. It makes little sense to continue asking for additional soil laboratory support without defining clearly what support is required and without making decisions regarding changes in its staff and management.

Both IIA and FCA should collaborate in sharing their facilities. Current separation of IIA and FCA at Chianga Experimental Station will result in further duplication and waste of resources. FCA senior staff should have free access to IIA laboratories for their research programs and for the students. FCA investments in developing its own Station 30 km away from Chianga makes little sense, either economically or operationally. Chianga Experimental Station is very extensive and should be used by both IIA and FCA.

Lastly, from the point of view of the Consultants, separating trial responsibilities between the different institutions was not the most effective way of managing it. The different institutions had the following responsibilities: defining the protocols and overall supervision (World Vision/IIA), On-station trials implementation (IIA), On-farm trials implementation (IDA), trials data collection and analysis (FCA). Even if the technicians involved had full opportunity to contribute to other parts of the trials for which they were not directly responsible, they never took this initiative. The consultants think it would have been more effective to build

multi-institution teams, in charge of supervising trials throughout the whole process, from the protocol elaboration up to the statistical analysis.

VII. RESULTS OF THE EVALUATION OF THE "ECONOMIC DEVELOPMENT" COMPONENT

The Economic Development component of the PROPLANALTO program was a combination of the promotion of Farmer Associations, access to managed micro-credit and support for commercialization. Economic Development was based on agricultural income-generating activities. Priority was given to cash crops and above all, the Irish potato crop. The "Economic Development" staff focused their intervention near Caála.

7.1 Strengthening of Farmer Associations

The promotion of associations consisted of;

- Participative rural appraisal to raise smallholders awareness about association and production potential;
- Training for association organization;
- Involvement of women and their role in the associations;
- Support for legalization of the Associations as legal entities;
- Regular monitoring of distant markets and support to access them.

Before WV staff operated in the focus area, ADRA national had already done some work in promoting associations. WV initiated its activities with six Associations that were already legalized. In total, thirty new associations were created and/or legalized with support of WV staff.

To give continuity to the activities, a critical issue will be the sustainability of the associations and their capability to undertake activities without external support.

The following indicators can be used to assess the sustainability of Associations:

- Existence of a legal status: regular meetings of the Board and General Assembly and regular election of the Board;
- Internal organization: transparency in the decision making process and accountability;
- Human resource: Capacities of management, accountability etc;
- Number of members and women members: mutual respect, trust in the association and in the other members, respect for status;
- Activities (principal, diversification, profitability, non economic activities);
- Capital (building, equipment, funds, contributions, member debts);
- Debt with BPC or other Banks;
- Relationship with other institutions or associations.

WV staff defined three different stages for its strategy in relation to the capacity building of Farmer Associations:

FORMATIVE STRATEGY: Communities with weak productive capacity and little commercial capacity. Associations are not legally registered.

CONSOLIDATION STRATEGY: Communities with productive capacity and some commercial capacity.

AUTONOMY STRATEGY: structured communities with productive, commercial and competitive capacity

Following individual and focus group interviews, the Consultants consider that none of the Associations had reached the full stage of autonomy. Generally, an association is considered by its members to be a practical way to get access to credit. Associations have very limited resources. Individual members do not trust other members. No Association implemented an activity which was not promoted by World Vision.

The duration of the PROPLANALTO program was too short to reach valuable results in term of sustainability. However, despite this, real progress was made. The consultants were impressed by the maturity of the communities in relation to a development program. Nobody asked for donations. Association members seemed to accept their duties in relation to their association. Association boards are generally following the right spacing for board and General Assembly meetings.

Supported associations focused their effort on economical activities that is a valuable strategy. Associations in Africa are often weakened by mixing social and economical components. For any follow on programs, support to these existing associations is still essential. Support should also be given towards accounting and management capacity building. More autonomy and sustainability in relation to the program should be stated as a priority.

7.2 Rural Microfinance

Non-repayment of loans became widespread following emergency programs and access to fertilizer is problematic so PROPLANALTO based its microfinance component on in-kind credit with fertilizer. Lack of fertilizer is the major factor limiting the production of crops and specifically high value, non-perishable crops. Access to inputs is problematic and the price of fertilizer is exaggerated. Credit was problematic or inexistent and farmers' liquid assets are insignificant.

The PROPLANALTO program tried to meet microcredit in kind (fertilizer) needs. The operation started in 2004 and was extended to new associations in 2005. Details on "Fertilizer Credit-In-Kind" are attached in Annex 5.

Even with only two years of experience, some observations can be made regarding this component:

- Loans increased from US\$ 140,340 in FY04 to US\$ 663,224 in FY05.
- The Consultants noticed a large demand for in-kind credit in the communities.
- The rate of reimbursement (>95%) is for the moment very satisfactory but is due to a close administration by WV staff.
- Accountability of credit is made by WV staff.
- WV succeeded in collaborating with BPC to make available a micro credit line. (guarantee fund of 1:10).

- BPC recently hired and trained specific staff to follow its micro credit loans.
- The experience of WV and other NGOs with micro credit have demonstrated their effectiveness and, as a result, the GoA plan to open a US\$ 10 million micro credit line through BPC and "Banco Sol".

An economy of scale can be achieved through the group purchase of fertilizer, as the major production input. In order to achieve broad based impact, the client requirements need to be common and laid out in a generic business plan.

Rural microfinance is already proving very successful. However, economic sustainability is only high because the current price of potato is high. More diversified income generating activities should be promoted.

This first experience needs to be strengthened with a larger involvement of partners (banks and private sector input supplier) and with a transfer of more accounting responsibility to the Farmer Associations. World Vision should move away from its current role of "micro-credit manager" to a new role of organizer and facilitator.

7.3 Economic Fair Trading Program

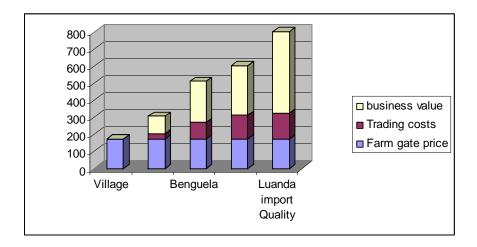
The Economic Fair Trading Program was developed as a support to smallholder producers, organized in associations, to trade high value, non-perishable crops at distant markets. The high value crops that were identified were Potatoes, Onions, Garlic, Carrots and Maize/Potato Seed Production.

WV staff were involved in the organization of a chain from production planning, access to in kind credit, access to comprehensive market information, organization of collective transport and negotiation for formal/informal distant markets in Benguela, Luanda and Huambo. At the same time, PROPLANALTO promoted the establishment of Trading Posts for Collective Sales. Target clients of this activity were 3,053 smallholder producers organized in 32 Associations (22 of which were legally registered).

The following Table and graph (Village, Huambo, Benguela, Luanda and Luanda Premium quality levels) highlight the high profitability of potato trading. However, transportation and selling potatoes is a risky activity because costs of transportation are high, roads are in poor condition and urban markets are disorganized.

IMPACT OF APEX POTATO TRADING

Item	Huambo US\$/MT	Benguela US\$/MT	Luanda US\$/MT	Luanda Export Quality US\$/MT
Gross Sales Price	306	510	600	800
Net Sales Price (Deducting Trading Costs)	276	415	463	648
Business Services Added Value (Compared to a "Farm Gate" US\$ 174/MT)	102	241	289	474



Current results of the trading program can be evaluated as follows:

- Commercialization of potatoes in 2005 until November reached 600 MT and total sales until December 31 are estimated at 1,000 MT. A total of 1,000 MT X US\$241(added value in Benguela) = US\$ 241,000 added value. This can be compared to the total WV Economic Development expenditure which was evaluated at about US\$ 230,000 per year including the micro-credit guarantee fund. This demonstrates a good return on investment without taking into account increased crop yields.
- Farmers appear aware of the quality requirements of the urban market demand.
- Production of high value crops (Irish Potato, onion, carrot, garlic) have already increased in quality and quantity in the target areas.
- Some wholesalers have started to be interested in vertical integration with local potato production.

7.4 Results of Farmers' Livelihood Improvement

The Consultants launched an inquiry to get quantitative impact data of the PROPLANALTO program through IDA, however the results from this exercise are not yet available. However, through focus group discussion, a first evaluation of qualitative impact can be made.

Results of Focus Group Discussions with five Farmer Associations

	Cassu	pi	Capin	âla	Cabue	emba	Kapui	nje	Caricu	mano
	Unit	%	Unit	%	Unit	%	Unit	%	Unit	%
Nº of members	19	90	7	1	7	9	19	90	14	6
Nº of oxen	80	42 %	50	70 %	40	50 %	80	42 %	16	11 %
Number of carts	4	/	3	/	?	/	?	/	?	/
Number of motorbikes	11	/	5	/	1	/	22	/	2	/
Houses covered with zing sheeting	?		9		5		50		?	

Cassupi, Capinâla, Cabuemba and Kapunje associations are considered to be mature associations. They benefited from various micro-credit operations, one in 2004 and all of the

2005 operations. Caricumano is a recent association which benefited from its first micro credit in September. Farmers have not yet harvested or sold any potatoes following this micro credit operation. The differences of wealth between the associations are significant.

Smallholder farmers, interviewed by the consultants, explained that nobody owned animal traction in 2002. Restocking with oxen is impressive in all of the above villages which has a mature association. With a pair of oxen a smallholder family is able to prepare 4 to 5 hectares a year in comparison with about 1.5 hectares by hand. Restocking with animal traction is a very critical issue for the Planalto rural economy and incomes generated by potato production and trading speeded up the restocking process.

7.5 Expressed Needs of the Association Members

In the Focus Group discussions, association members were asked to express their needs. The most common responses were:

- Improved varieties of potato;
- A regular market;
- Vehicle for product transportation;
- More fertilizer for potato production;
- Credit to purchase oxen;
- Credit for vehicle or tractor;
- Build a warehouse:
- A store to barter merchandise for products;
- Buy a maize mill for the community;
- Open more irrigation channels.

The consultants were impressed by the high consciousness of smallholder farmer communities about economic issues.

7.6 Gender Issues

In Planalto rural society, women have an essential role to play, both in agriculture and in running their household. The consultants noted that the gender issue was tackled by all PROPLANALTO program components and women were not victims of exclusion for access to credit or for any other activities. However, the women are still often inhibited by social habits and attitudes, for example, that women should respect and obey their husbands. As a result, women's participation was low because they preferred to be represented by their husbands. In the associations or during the focus group interviews, the more active women were widows because they are socially considered as heads of the household. However, the widows were presented as a group which had difficulties in reimbursing the micro credit.

In some associations, women preferred to create their own association and tried to collaborate with World Vision staff as organized groups with their own specific needs and interests.

Women used to turn towards trading and declared that they were interested in micro credit for funding trading activities. Diversification of micro credit should take into account the specific needs of rural women.

Key World Vision staff in contact with rural communities were women; Imacula Conceiçao and Paula Alves. The result of this was that farmers and their representatives in the associations dealt everyday with women for very critical issues (credit, fertilizer, technical advice, association etc.).

7.7 Conclusion on the Economic Development Component

The consultants made the following conclusions regarding the economic development component of the PROPLANALTO program:

- 1. The impact on the improvement of smallholder livelihoods is clearly visible and without any doubt. Recapitalization of smallholders was rapid, specifically in restocking animal traction and improving their livelihood.
- 2. Sustainability of smallholders associations entails a continuation of the support received from WV. Effort should be made in the area of capacity building for management and accountability. Support strategies should look towards future autonomy of the Associations.
- 3. A direct contact between Association, Bank and input supplier should be studied. World Vision's strategy of closely managing the micro credit was essential during this initial start-up phase but a more sustainable system should be put in place with a progressive disengagement of World Vision staff. A voucher system may be a way to maintain managed credit.
- 4. There is an urgent need to improve the quality of potatoes by making improved variety seeds available. It is a condition that is needed to meet urban market standards and to secure potato profitability.
- 5. Trading production is a critical but very complicated issue. The continuity and expansion of commercial support services is essential to strengthen the nascent commercial networks. The consultants recommend continuing to look for professional traders and a more structured trade organization.
- 6. Cash crop diversification should be sought. With increasing potato production, prices are almost certain to decrease.
- 7. Access to other credit is a critical issue for smallholder development: credit for seeds, for animal traction, for tractors, for mills and other local agricultural products processing machinery. Following the PROPLANALTO intervention, smallholder communities appear ready for other kinds of credit to be made available.

VIII. GENERAL CONCLUSION AND RECOMMENDATIONS

The Consultants were favorably impressed by the quality and dynamism of the WV PROPLANALTO team. Results were obtained under very difficult conditions. The results were valuable and closely corresponded with what had been scheduled. Institutional partners and rural communities declared themselves delighted with the support of PROPLANALTO and asked for a continuation of the program.

PROPLANALTO proved that, even in a situation of isolation, rural development can be based on a real economic framework. Significant progress may be reached without donations or subsidies.

PROPLANALTO was a combination of two components: "Institutional Support" and "Economic Development". World Vision took on an NGO role for Economic Development activities, but World Vision's lead role in "Institutional Support" is more doubtful. Practical experience, however, showed the current incapacity of IIA to lead such a collaborative work.

Institutional support at the provincial level means a strong commitment by the National Institution to decentralize. Sustainability of capacity building means that institutions need to obtain the conditions to ensure the pursuit of an efficient public service delivery. The following basic requirements will be essential at the provincial level:

- ➤ An autonomous and existing budget;
- ➤ Adequate staff;
- > Secured working means;
- > Capacity to take initiatives;
- The will to cooperate with partners (Public partners, NGOs and private sector).

For donors, funding "Institutional Support" should be determined on these basic requirements. GoA should understand that the centralized way of funding and managing extension, agronomic research and rural development is ineffective.

In just two years of activity, the Economic Development component of the PROPLANALTO program laid the basis for promising future results. A failure to continue with the program during this start up phase would be detrimental to the investment made to date. In addition, the rural population who support this program would find it difficult to understand such a premature end.

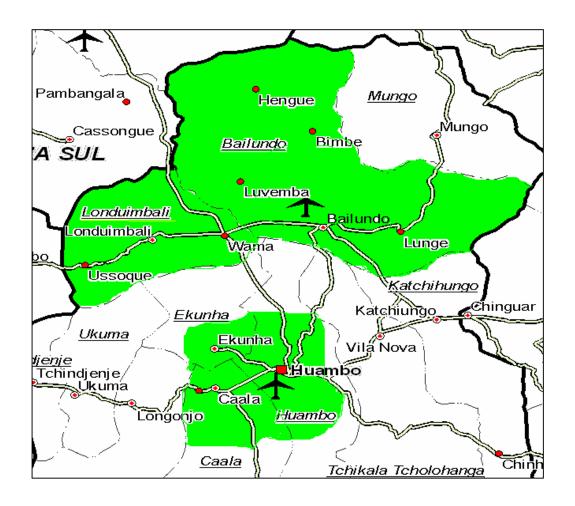
Annex 1: List of persons interviewed and sites visited

N°	Name	Institution	Position
1.	Dr Barbosa	Huambo Provincial	Vice Governor in charge of Economic Affairs
		Government	
2.		Huambo Provincial	Secretary of Vice Governor
		Government	
3.	Cathy Hamlin	USAID	Program Specialist
4.	Mamadou Blondin Beye	CHEVRON	Project Coordinator Angola Partnership
			Initiative
5.	John Yale	WV Luanda	WV national representative
6.	Jonathan White	WV Luanda	Program Director
7.	Chris Azanzi	WV Luanda	Deputy Program Director
8.	Deodato Guilherme	WV Huambo	Deputy manager of PROPLANALTO
9.	Imacula Conceiçao	WV Huambo	Coordinator of agronomic trials
10.	Paula Alvez	WV Huambo	Coordinator of Credit
11.	Oliveira Paulo	WV Huambo	Credit technician
12.	Carlos Valdemar	WV Huambo	Fair trading coordinator
13.	Alberto Sili Mateus	IIA	Deputy Director & PROPLANALTO
			Coordinator
14.	Flizardo Almeida	IIA	Cereal Technician (ingeneer)
15.	Bartolomeu Pequenino	IIA	Soil Laboratory Manager
16.	Helena da Conceiçao Mahiti	IIA	Medium Technician
17.	Monica Mbai Martin	IIA	Medium Technician
18.	Cesar Morais	IIA	Medium Technician
19.	Lucia Joaquina Baptista	IIA	Medium Technician
20.	Armando Valente	FCA	Director
21.	David Kiala Kilusinga	FCA	Deputy Director and PROPLANALTO
			coordinator
22.	Jose Pedro Joao	FCA	FCA professor
			Agronomist
23.	Rodrigues Major	FCA	FCA professor
			Phythopathologist
24.	Joao Massochi Honorio	FCA	Student
	Carlos		3 rd year
25.	Massango Manuel	FCA	Student
			2 nd year
26.	Maria Armanda Sucumula	FCA	Student
	Diogo		3 rd year
27.	Meterio Tiago	IDA	IDA Provincial Director
28.	Sanda Vicente De Paulo	IDA	Former IDA Provincial Director (for 10 years)
29.	Alfonso Pinto	IDA	EDA Caala Director
30.	Julio Silva	IDA	EDA Caala technician
31.	Felicia Maria Manuel Pedro	BPC Huambo	Huambo General Manager
32.	Victor Manuel	BPC Huambo	Huambo Deputy Manager
33.	Pedro Nobrega	Private company	trader

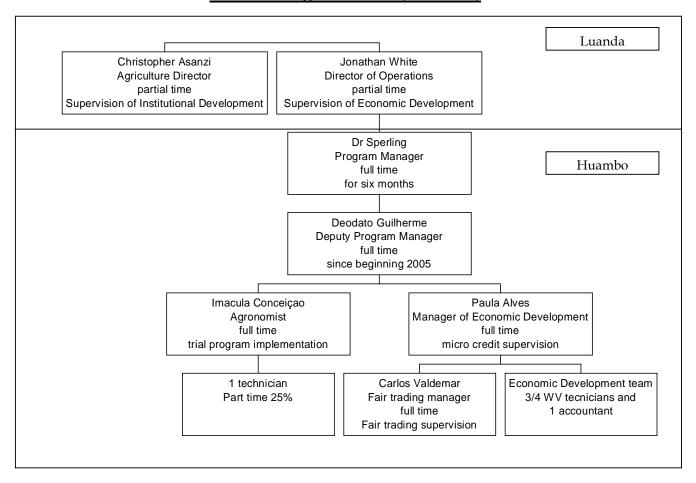
	(Focus Groups) Farmers and Association leaders							
34.	Etumbuluko Association	Kassupi 1	Etumbuluko Association President					
35.	Etumbuluko Association	Kassupi 1	Secretary					
36.	Etumbuluko Association	Kassupi 1	Accountant					
37.	Etumbuluko Association	Kassupi 1	Production Manager					
38.	Etumbuluko Association	Kassupi 1	About 30 members with 5 women					
39.	Elavouco Association	Capinâla	Etumbuluko Association President					
40.	Elavouco Association	Capinâla	Secretary					
41.	Elavouco Association	Capinâla	Accountant					

42.	Elavouco Association	Capinâla	Production Manager
43.	Elavouco Association	Capinâla	About 15 members with 3 women
44.	Kambembua Association	Kambembua	Etumbuluko Association President
45.	Kambembua Association	Kambembua	Secretary
46.	Kambembua Association	Kambembua	Accountant
47.	Kambembua Association	Kambembua	Production Manager
48.	Kambembua Association	Kambembua	About 30 members with 2 women
49.	Wendalongo Association	Kossito	Wendalongo Association President
50.	Ukwamako Association		Ukwamako Association President
51.	Ekwatiso Association	Mama	Ekwatiso Association President
52.	Vakuvila Association	Cambinda	Vakuvila Association President
53.	Vakuvila Association	Cambinda	About 60 members
54.	Sapuil Association	Sapuil	Sr Loth Association President
55.	Sapuil Association	Sapuil	Soba Domingos Jaba, member
56.	Sapuil Association	Sapuil	About 15 members
57.	Kapunje Association	Kapunje	Association President
58.	Kapunje Association	Kapunje	Deputy president
59.	Kapunje Association	Kapunje	About 70 members
60.		Kariamano	President
61.		Kariabinuo	President
62.	Various associations		About 60 participant in Ekunha area (7 women)

Annex 2: Program Area



Annex 3 Program Chart (WV staff)



Annex 4: On-station and On-farm Program extent

On-station Trials program extent

011 50001011	2 2 2 6 2 0 5	stam extem				
Number of trials	Rainy season	Dry season	2003/2004 total	Rainy season	Dry season	2004/2005 total
Maize	9	8	17	13	2	15
Irish Potato	9	5	14	12	10	22
wheat		2	2		2	2
bean	8	8	16	13	4	17
Annual total	26	23	49	38	18	56

On-farm trials program extent

Number of trials	Rainy season	Dry season	2003/2004 total	Rainy season	Dry season	2004/2005 total
Maize	45	45	90	60	18	78
Irish Potato	45	30	75	60	16	76
Associated crops				40		40
bean	45	30	75	40	20	60
Annual total	135	105	240	200	54	254

Annex 5: Summary of fertilizer Credit-In-Kind FY04 and FY05

Pilot Experience with Loans of Fertilizer Credit-In-Kind FY 2004

Type of Client Credit-in- Kind	Number of Enterprises	Number of Associations	Average Loan Size US\$	Type and Quantity of Fertilizer MT	Value of Credit US \$	Source of Finance and Rate of Repayment
Maize Seed Producers	254	23	3,728	Urea 142.9	85,740	WV 98%
Potato Producers	139	7	416	Compound 78.0	57,876	WV 95%
Total FY 2004	393	32		220.9	140,340	

Summary of Fertilizer Credit-In-Kind FY 05

Type of Client Credit-in- Kind	Number of Enterprises	% Women	Number of Associations	Average Loan Size US\$	Type and Quantity of Fertilizer MT	Value of Credit US \$	Source of Finance and Rate of Repayment
Maize Seed Producers	254	30%	23	2,475	Urea 81.6 MT	56,924	WV Current
Potato Producers	10	0%	2	1,039	Compound 14.0 MT	10,388	WV 98%
Potato and Carrot Producers	281 (19 carrot)	29%	9	367	Compound 119.4 MT Urea 45.5 MT	103,283	WV Current
Potato Seed Multipliers	10	0%	5	1,127	Compound 10.0 MT	11,266	WV Current
Potato Producers	766	45%	10	168	Compound 185.8 MT	128,390	BPC Current
Potato Producers	2,753	45%	32	125	Compound 466.2 MT	342,973	BPC Current
Total FY05	4,074	-	32	-	922.5	653,224	-
Cumulative Total FY04/05	4,467		32		1,143.4	793,564	

ANNEX 6: Associations - Interviews with focus groups.

Indicators / N° interview	1	2	3
Village	Cassupi	Capinâla	Cabuemba
Name	Etumbuluco (revival)	Elavoco (Hope)	
Geographic area	Group of villages	1 village	1 village
Date of creation	2002	. 161	2000 (ADRA support)
Date of legalization	2003 (help of ADRA)		TI V
Number of board members	6 people (President, Vice president, secretary, accountant, production manager, adviser)		
Frequency of board meeting			
Frequency of General Assembly			
contribution and value	100 Kwanza/month	100 Kwanza/month	50 Kwanza mensal
Current association funds			200 USD
Number of members	190	71	79
Number (%) women	30: in association	11 widows	17 (5 widows)
Presence of a women organization	yes		
Number of families in the geographic area and %	250 / 76%		150 /
of members			
Number of members in 2002 or 2003	80 in 2002	?	
Expressed member duty	Attendance to the reunions	?	
	Reimburse credit		
	Pay contribution		
Principal activity	Potato (credit and commercialization)	Potato (credit and commercialization)	Potato (credit and commercialization)
Diversification	Yes: 40T onion, 60T cabbage and 38T carrots	Yes: 2004: credit for carrot production (urea) 55T	Yes: 7T of onion, 30T of carrots
Year of first credit	2004/15T of fertilizer	2004/15 T of fertilizer	2004
Total number of credit operation	4	4 (1 st 15T, 2 nd 8T urea, 3 rd 20T,	3
Quantities of potatoes commercialized	180 T	From july to november: /74T of potato, Prediction 2005: 120T	August to November: 90T
Past difficulties to reimburse	10 members (Widows) had difficulties	Yes, problem of truck accident on the road	
Collective commercialization	Yes but each one in charge of his product.	•	
Association Warehouse and jingo	Yes and yes	Yes and yes	Yes and no
Number of oxen in Association	40 pairs	25 pairs (only 2 cows)	20 pairs (60 goats)
Number of cart	4	3	•
Number of motorbikes	11	5	1
Number of houses covered with corrugated iron		9	5
Expressed needs	Local variety degeneration (credit for potato seeds)	Good seeds (credit for seed)	More fertilizer for potato
		Vegetable seed	Animals for traction
		Credit to purchase oxen	Canal of irrigation
		-	A store in Cacula to barter merchandise for products
Expressed project for future	Vehicle for product transportation		Opening irrigation canal
Expressed main constraints		Transportation	

Indicators / N° interview	4	5	6
Village	Cossito	Sapuil	Kapunje
Name	Wendalongo	Association Sapuil	•
Geographic area		Not geographic area: association declared opened for everybody	
Date of creation	10/03/2002 first reunion	1994	1977 and revival in 2000
Date of legalization		27/04/2003 (2005?)	2003
Number of board members		6-7 (president, deputy president, secretary,	4 = president + 3 but should be 6
		accountant, social affair responsible, members)	
Women in the board		Yes (2: Vice president and accountant)	
Frequency of board meeting		Not frequent,	1 per month
Frequency of General Assembly		Not frequent, the last in 2003	1 per 3 month
contribution and value		No contribution	100 kwanzas/month (80% is paying)
Current association funds		0	
Number of members	76	72	190
Number (%) women	12 (widows)	13 (1 is widow)	35 to 37
Presence of a women organization		no	Yes with 45 members (widows) who want to be independent
Number of families in the geographic area and % of members		Non geographic association	530
Number of members in 2003		24 in 2002	
Expressed member duty			Accept and respect the status
Principal activity	Potato (credit and commercialization)		
Diversification	Yes: onion	Seed multiplication (with SeedCo)	Onion, carrots, garlic and cabbage
Year of first credit	2005 (April)		2004
Total number of credit operation	3	3 (1 st 12T already reimbursed, 2 nd 6,7T urea, 3 rd 5T NPK)	4: 1 in 2004 (25,5T of fertilizer for 80 members) and 3 in 2005 (6T urea, ??)
Quantities of potatoes commercialized		,	November 2005: 44,5T
Past difficulties to reimburse			100% of reimburse
Collective commercialization			
Association Warehouse and iingo	No (use president warehouse) and yes	No and no (use of president facilities)	No but already made bricks and yes
Number of oxen in Association		A lot	About 80 animals
Number of cart			
Number of motorbikes		2 and 1 car	22 motorbikes
Number of houses covered with corrugated iron			50
Expressed needs	Lack of spray and chemicals	Improved varieties of potato Credit for vehicle or tractor	
Expressed project for future	Buying a tractor for association Association should have a collective field	Association should have a collective field to put money into bank account	Buying a tractor for association
Expressed constraints			Transportation

Indicators / N° interview	7	8	
Village	Cariamano	Cariabrinco	
Name	Kutiuka	Ossande Okwamako	
Geographic area	village	Village	
Date of creation	2004	_	
Date of legalization			
Number of board members	8		
Women in the board	2 (vice accountant and 1 other)	1 Vice president	
Frequency of board meeting			
Frequency of General Assembly			
contribution and value	100 kwanzas (50 kwanzas Ekunha Centre)		
Current association funds			
Number of members	146	235	
Number (%) women	20	100	
Presence of a women organization	No	No	
Number of families in the geographic area and % of	306	356	
members			
Number of members in 2003			
Expressed member duty			
Principal activity			
Diversification			
Year of first credit	2005 September	2005 September	
Total number of credit operation	2 not already reimbursed; first 12,5T NPK for 103 members and second 23,75T NPK for 156 members	2	
Quantities of potatoes commercialized	None through organization	None through organization	
Past difficulties to reimburse			
Collective commercialization			
Association Warehouse and jango	No and yes	No and yes	
Number of oxen in Association	8 pairs		
Number of cart			
Number of motorbikes	2		
Number of houses covered with corrugated iron			
Expressed needs	Improved varieties of potato A regular market Legalization of all associations		
Expressed project for future	Building a warehouse Buying a maize mill for the community		