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ANNUAL REPORT 2003

ADAR RWANDA AGRIBUSINESS DEVELOPMENT ASSISTANCE

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ADAR RWANDA AGRIBUSINESS DEVELOPMENT ASSISTANCE

A Task Order under the RAISE IQC Rural and Agricultural Incomes with a Sustainable Environment

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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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1. INTRODUCTION

1.1. Background

The Agribusiness Development Assistance to Rwanda (ADAR) Project is a three year, \$5.7 million activity financed by USAID, under the RAISE Indefinite Quantity Contract (IQC). This document constitutes the third annual report covering the period of January 1, through December 31, 2003.

The project's mandate, as materialized in its Scope of Work (SOW) is to "revitalize agribusiness in Rwanda and recreate links between the rural sector and private sector traders and processors" through a targeted menu of technical assistance and training for Rwandan agribusiness entrepreneurs and cooperatives. The project focuses on processing and marketing activities targeting small and medium agribusiness firms but has expanded its involvement in horticultural production to address key sectoral constraints. The three Project Intermediate Results (PIR) expected from ADAR are: enhanced performance of project-assisted firms; improved product quality; increased access to finance.

Project staff comprises of three expatriate technical assistants, three national consultants and fifteen support personnel.

ADAR activities focus on coffee processing, horticultural production (passion fruit, physalis, apple banana) for export and business development services. The project is also active in developing processing options (pyrethrum, Bird's Eye Chilli Peppers, dried tropical fruits), flower production for export and tea.

The original project completion date was November 13, 2003. USAID/Rwanda has extended the project through November of 2006 and provided an additional budget of \$4.5 million for the extension phase.

1.2. Highlights

During its third year of operation, ADAR made significant strides towards achieving the project's intermediary results. Substantial and tangible progress was made in virtually all areas of project activity. Because of results achieved, the project is widely considered to be a reference for private sector-led agribusiness development in Rwanda.

Highlights of the year include:

- The production of 147 tons of fully-washed coffee, much of it specialty grade;
- The sale of specialty and premium grade coffee to American and European importers;
- The introduction of the Small Grants Cost-Sharing Program which allocated over \$100,000 in financial support to five ADAR clients;
- The establishment of improved systems of passion fruit production capable of producing commercial volumes of export-quality fruit;
- The elaboration of a restructuring plan for Highland Flowers which was used as the key decision-making tool in the sale of the company to a Rwandan investor;
- The launching of ADAR's Quarterly Newsletter to inform clients and partners of project activities;
- The three year extension awarded to the project by USAID/Rwanda.

1.3. Organization of the Report

The report is organized around commodity sectors. There are sections on coffee, tea, horticulture, floriculture, food processing and pyrethrum. There is a further section which treats crosscutting issues such as business development, the small grants program, environment, monitoring and evaluation and administration and finance.

Each section provides an overview of ADAR's strategic objectives within the sector, details activities undertaken during 2003, draws conclusions based on results obtained and

1.4. Execution of Programmed Activities

During the course of 2003, ADAR executed the overwhelming majority of the 37 discrete activities programmed in the annual work plan. Divergence from the program of work was generally due to factors beyond the manageable interests of the project and was related to either imperatives of the agricultural calendar, flagging interest on the part of concerned clients for a particular activity, or the absence of the conditions precedent required to execute the programmed initiative.

In the coffee sector, ADAR anticipated providing a marketing consultant to promote the 2003 fully-washed crop. This proved to be unnecessary, as OCIR-CAFÉ hired one U.S. based consultant to market coffee to American specialty buyers. Marketing in Europe was undertaken by John Schluter, a coffee broker with close ties to Rwanda.

In the horticulture sector, the programmed activity concerning the training of agronomists employed by private sector operators did not materialize as there was insufficient interest on the part of agro-entrepreneurs to invest in agricultural production for export. In a similar manner, operators who expressed interest in organic certification during 2002 did not complete certification applications so the activity was not executed. Remedial technical assistance which was programmed for Highland Flowers was delayed due to a change of ownership.

With respect to business development activities, the elaboration of a training module on equipment leasing by financial institutions did not materialize as the underpinning legislation by the Rwandan Parliament was not passed during the year.

Training in ISO norms and health and safety issues for the local pyrethrum factory was rescheduled for 2004, pending the availability of appropriate trainers.

All other programmed activities were executed according to the 2003 work plan.

2. COFFEE SECTOR

2003 represented an important milestone for ADAR and its coffee clients. One hundred and forty seven tons of fully-washed coffee were produced by four ADAR-assisted coffee washing stations, a considerable portion of which was considered to be specialty-grade coffee. As of this writing, the marketing campaign has shown mixed results, with only the Masaka washing station attracting the interest of international specialty coffee buyers.

Although sales to date have not been as robust as desired, the overall success of this first year of operation has been incontrovertible. Rwandan private sector operators have demonstrated that they are capable of managing the technical, organizational and financial challenges presented by the production of fully-washed Arabica coffee and have shown themselves capable of producing specialty-grade coffee.

Experience gained during the 2003 season will allow ADAR's clients, both those who produced during the last season and those who will begin operation in 2004, to address and correct problems during the coming season. Clearly, the most pressing problem is inconsistent cupping quality. Extensive cupping by importers revealed that many of the sampled lots from ADAR, as well as PEARL and ACIDI-VOCA sponsored stations, contained severely defective cups which compromised the marketability of the coffees offered for sale. The future of Rwanda as a new specialty coffee origin will depend on reducing to a minimum defective cups through rigorous selection of coffee cherries, effective quality separation during pulping, exacting hand sorting of beans during drying, efficient deparching and grading and attentive final sorting prior to export.

In the following sections, the report will address the different inputs provided by ADAR, the evolution of the production and marketing campaigns, the implementation of quality control measures and the lessons learned from 2003.

2.1. Project Inputs

ADAR provided an extensive menu of technical assistance and training to its coffee sector clients during the past year. Assistance was extended to clients in all aspects of CWS establishment, including feasibility studies, design, construction supervision, equipment selection and installation. Technical training was given to the staffs of the cws by the five Kenyan master trainers recruited by the project. Three Rwandan civil engineers received additional instruction in washing station design. Coffee washing station accountants and managers were trained in financial management. OCIR CAFÉ cupping capabilities were reinforced through training in Addis Ababa and coffee producers supplying coffee washing stations were trained in improved cherry production, harvesting and sorting techniques.

2.1.1. Technical Assistance in CWS Establishment

During the first quarter of the year, ADAR provided assistance to four clients to complete preparations for the 2003 season. Two ADAR consultants supervised final construction and fine tuning at the Masaka, Ndera, Migongo and Sake washing stations. Specific activities entailed:

- Installation, testing and adjustment of pulping equipment;
- Installation, testing and adjustment of water re-circulation units;
- Redesign of fermentation and soaking tanks;
- Design and construction supervision of drying tables;
- Construction of ventilated storage bins and warehouses.

This technical assistance allowed all four washing stations to be operational at or near the outset of the 2003 production season.

The project actively assisted six new investors in preparations for the 2004 season. Topographical and hydrological analyses were conducted in the context of feasibility study implementation. Three of the six new stations have, or are in the process of completing the civil engineering works. The three remaining sites will begin construction in the coming weeks. It is anticipated that pulping capacity will increase from 900 tons to 1,700 tons. It should be noted that the limiting factor in terms of production capacity in 2003 was available space on the drying tables rather than pulping capacity. This may again prove true for the new entrants during the coming season.

Of the six new stations previewed for 2004, two are in Gitarama Province, one in Kibuye, one in Cyangugu, one in Butare and one in Kigali-Ngali. The 2004 season will significantly expand the geographic distribution of project-assisted CWS and will require close supervision of field activities by the ADAR technical staff.

2.1.2. Technical Training of CWS Personnel

A key component to the success of the 2003 season was the provision of five Kenyan master trainers to the four washing stations. At the outset of the season, the CWS staff that was recruited by ADAR clients had virtually no experience in coffee processing or CWS management. The success of the season depended on training Rwandans in CWS organization and the technical and financial aspects of coffee processing.

The following master trainers were assigned to the four washing stations:

Coffee Station	Kenyan Master Trainer	Arrival Date	Departure Date
Masaka	1. John Oluouch Wasambila	28/02/03	09/07/03
	2. Eugenius Warui Kinuthia	16/05/03	23/07/03
Ndera	3. Johnson Kanyi	11/04/03	23/07/03
Sake	4. Gerard Njoroge Mwangi	28/02/03	09/07/03

The master trainers were mandated to organize the CWS workforce, assign individual tasks from cherry reception through processing and warehousing to competent personnel, provide instruction in cherry sorting, washing, fermenting and drying, establish a lot identification scheme to trace product from processing through warehousing and assure fine tuning and adequate maintenance of pulping equipment.

A Kenyan master trainer was based at each of the four CWS. A fifth trainer joined the team in mid-May and circulated among the four washing stations to provide additional hands-on training as needed.

They assisted in the supervision of activities listed above and began training and organizational activities with local personnel. Project staff met weekly with the trainers, either at the ADAR office or on-site to assure that they were well integrated and that preparations were going according to schedule. ADAR developed a bi-weekly reporting format, which was completed by the Kenyans to allow for a comprehensive monitoring of activities, problems and solutions at each station.

ADAR staff worked closely with CWS owners and the master trainers to insure that efficient management systems were established at each station. Among the four CWS, thirty section chiefs were trained in the aforementioned aspects of coffee processing. These section chiefs in turn trained workers within their sections. In total, 165 workers received training in coffee processing.

In elaborating the terms of reference of the master trainers, ADAR placed emphasis on transferring knowledge to the duly appointed CWS manager, rather than insisting on a direct management role for the Kenyan expert. This approach was taken in order to insure the development and sustainability of local coffee processing capacity.

The effectiveness of this training method depended on several factors: the personality of the Kenyan master trainer, the active involvement of the CWS owner to identify and fully support an enthusiastic and bright CWS manager and the ability of the manager to assign tasks and enforce directives.

Undeniably, the CWS managers have made enormous progress in understanding coffee processing during the first production season. They began the season with no experience in coffee purchasing and processing and little experience in the supervision of a large labor force; by the time the production season concluded, their was a firm understanding of the sequence of events involved in producing fully washed premium coffee and their staffs were able to correctly execute most tasks.

Several key production tasks, however, have yet to be sufficiently mastered and competencies must be reinforced during the next production season. CWS managers

have not yet mastered correct assessment of the fermentation process. It is critical to know when fermentation should be halted and washing and grading begun as over-fermentation imparts a bitter taste to the final product which is easily identifiable in the cup. There is no fixed amount of time required to ferment coffee. The speed of fermentation depends on several factors, most notably the ambient temperature during fermentation. Recognition of when fermentation is complete is a tactile skill which is gained through experience.



CWS managers and their staffs have not yet mastered the separation of Grades A and B in the washing channels. This resulted in insufficient grading of qualities. It is anticipated that during the coming season, these key areas will be reinforced. It is essential that this happen as the volumes of cherries entering the washing stations are certain to increase from the 18% operating capacity registered during the 2003 season. With these increased volumes, the need for efficient through put and correct processing techniques will become paramount.

2.1.3. Training of Rwandan Civil Engineers

The development of correctly designed and constructed coffee washing station infrastructure in Rwanda requires a cadre of civil engineers who have a comprehensive understanding of coffee processing and design parameters. When ADAR began operation in 2001, Rwandan civil engineers had no knowledge or experience in CWS design. To address this need, ADAR sponsored a training course in CWS design fundamentals and the use of computer-assisted design software. Eight Rwandan engineers attended this three week program which was held in Nairobi and Kigali during the third quarter of 2002.

As a follow-up to this program, ADAR provided additional training to two engineers in coffee processing and station design during the first quarter of 2003. The training focused on the impact of CWS design on final coffee quality.

Two of the engineers have now thoroughly mastered design techniques, using CAD software. The services of these professionals are now cost-shared on a regular basis between ADAR and its newest coffee clients. The project has paid the consulting fees of the engineers while ADAR clients have paid for the topographic and hydrological studies, as well as, funding the production of construction plans. This arrangement has proved very satisfactory. ADAR has been able to provide financial support to investors in this key area while, at the same time, evaluating the commitment of investors through their willingness to assume approximately 50% of the cost of construction design.

2.1.4. Reinforcing OCIR-CAFÉ's Cupping Competencies

Creating cupping competence among wet millers, dry millers and cognizant GOR authorities is a fundamental pillar in the establishment of a specialty coffee industry in Rwanda. The ability to evaluate one's production in order to detect defects and take corrective action is essential. Developing cupping competence is a long-term process achieved only after extensive experience, generally three years or more.

In order to reinforce OCIR-CAFÉ's ability to cup and subsequently train ADAR clients, the project sponsored a two-week training course for OCIR's Chief Liquorer at the Ethiopian Coffee and Tea Quality Control and Liquoring Center in Addis Ababa. The trainee improved his cupping skills and gained valuable insight into readapting the OCIR quality classification system to better meet market requirements. The new classification system will be based on bean size, bean density and percent of allowable defects, according to grade.

2.1.5. Financial Management Training

An essential element in the development of the agribusiness sector in Rwanda is the adoption of accounting conventions which track costs and revenues and permit the elaboration of budget projections and financing requirements. Without a solid understanding of cost and revenue streams, it is impossible to efficiently reduce the cost of production or effectively project operating expenses. The vast majority of private sector operators have not recognized the importance of accounting as a monitoring and programming tool and their businesses suffer because of this.

Prior to the construction of the washing stations begun in 2002, ADAR recognized the importance of developing a cost accounting system specifically adapted to the needs of a coffee washing station. To this end, the project commissioned the elaboration of a cost accounting module and hired a local consulting accountant to develop a product and provide training and follow-up to CWS accountants and managers. The module was developed in 2002 and was extended to ADAR clients, OCIR-CAFÉ agents and nine representatives from producer organizations during the first six months of 2003.

This tool allowed CWS management to closely monitor activities at the station and determine costs of production by major expenditure categories. A first seminar was held at the project office prior to the commencement of the production season for the CWS managers from Masaka, Mpanga, Sake and Ndera, which detailed daily management tasks at a station in operation. This seminar was followed-up with on-site practical application of the seminar's contents at all four stations during the second quarter.

Globally, the financial accounting module was well accepted and effectively implemented at the four washing stations. There were occasional problems in assembling pertinent information and there remains a certain reticence on the part of CWS management to share cost of production information. It is hoped that with an additional year of experience, owners will better understand the significance of an analytic cost accounting system to the success of the enterprise.

ADAR also co-sponsored a seminar along with the PEARL Project and ACIDI-VOCA which was held at project offices on the use of an Excel-based accounting program for coffee washing stations. This accounting package, developed by an IESC consultant under the auspices of the PEARL Project, compliments ADAR's cost accounting module in that it is a more macro-oriented tool which does not monitor individual cost component line items but does track general costs, revenues and cash flow. The seminar held during the first quarter targeted trained accountants with basic knowledge of spreadsheet software. This module, along with the ADAR cost accounting module and the analytical tool to estimate CWS profitability provide coffee investors and operators with critical tools to make correct investment and management decisions.

2.1.6. Producer Extension Activities

The production of premium or specialty grade fully washed coffee requires a radical change in cherry selection criteria by CWS suppliers. Historically, coffee producers processed their own coffee on-farm and sold it to exporters at a fixed price thus cherry quality was never a concern to Rwandan coffee producers. With the introduction of fully-washed processing, cherry quality (degree of maturity, bean density, post-harvest handling) becomes of paramount importance to the quality of the final product.

During the second quarter, ADAR, in conjunction with OCIR-CAFÉ, implemented two training sessions at the Masaka and Migongo washing stations for the benefit of 82 farmers from Bicumbi and Rukira Districts and Kibungo Ville who supply the two units.

Emphasis was placed on describing and identifying cherry quality characteristics required to produce specialty-grade coffee. The farmers were given comprehensive tours of the washing stations and the different processing steps were explained. These farmers will diffuse improved cherry selection techniques among their neighbors. The expected impact of these two training sessions will be an improvement in the quality of cherries entering the washing stations during the coming season.

The production of specialty coffee begins in the field. Proper crop husbandry practices such as mulching and pruning, combined with a program of integrated pest management (IPM), substantially increases yields while, at the same time, decreasing insect and fungal attacks which severely compromise quality in the cup. Final cup quality can never surpass the inherent attributes of the raw material.

ADAR's client focus is squarely on agribusiness operators. It is through creating increased demand for agricultural products that rural families' household incomes are raised. The project is based in Kigali and doesn't have an established presence in the regions thus its ability to successfully undertake coffee extension activities is limited. During the 2004 season, ADAR will look to OCIR CAFÉ and the STABEX and IFAD projects to provide the crucial extension services needed to insure that coffee washing stations are supplied with high quality cherry coffee.

2.1.7. Coffee Sector Studies

The advent of fully washed production brings the question of dry milling of parchment coffee, the final step prior to exporting, to the forefront. All fully-washed producers, be they ADAR clients or not, seek to export their own product rather than selling to one of the established semi-washed exporters for dry milling and sale to international importers. There is, at present, substantial excess dry milling capacity among the six dry miller/exporters with a theoretical capacity to dry mill over 50,000 tons of parchment coffee, more than twice Rwanda's annual production. There are, however, important issues which require satisfactory resolution in terms of price, transparency, timeliness and quality.

A fundamental question facing CWS investors is whether to utilize the services of existing dry millers or to invest in one's own dry milling facilities. In order to select the best option, fully-washed investors need to know the cost of investing in deparching units of different capacities, the estimated dry milling cost per kilogram of parchment coffee using different types of equipment, the technical and managerial advantages and limitations of using existing dry milling capacity and the milling charges proposed by existing mill owners.

To provide clarity to this issue, ADAR implemented an analysis of dry milling options, conducted by a dry milling technologist and a financial analyst. The analysts inventoried existing dry milling capacity, both from a qualitative and quantitative standpoint. They examined the reasons behind the relatively high percent of losses during deparching (average losses were 23% compared to industry norms in the sub-region of 18%) which is attributable to poor maintenance of deparching equipment and obtained information regarding proposed milling fees offered by existing dry millers.

The consultants examined investment and operating costs of different sized mills (50 T, 200T and 600T) and concluded that milling costs for a purpose-built 50 ton deparching unit would be excessively high (103 FRW per kg. compared to the average proposed fee of 66 FRW by established millers). Estimated milling costs for the larger units, varying from 27 FRW to 42 FRW per kilo, all compared favorably with proposed fees of existing mills. The consultants highlighted the fact that larger mills needed to be used at full capacity to maintain attractive per kilo milling costs.

The analysis concluded that fully washed producers should refrain from making an investment decision for the first three years of operation, in order to gain a better idea of realistic annual production estimates, as these are determining factors in the profitability of dry milling investment options. During this time, CWS owners should use the existing service providers.

At the conclusion of this period, owners should evaluate the quality and cost of services rendered and, based on that assessment, determine whether investment in larger deparching units, whether individually or as part of a consortium of washing stations, is necessary.

2.2. Coffee Marketing Activities

ADAR provided significant assistance in the organization of the U.S. coffee buyers' visit which occurred at the end of June. The project financed the airfare of one of the buyers and helped elaborate the program of visits. ADAR staff elaborated fact sheets ([Annex](#)) for the ten washing stations in operation and drafted an illustrated overview of Rwanda's coffee sector for the visitors.



Cupping test at the OCIR Café laboratory, by the representatives of Intelligentsia Coffee, BD Import and Thanksgiving coffee, the three potential buyers of Specialty coffee visiting Rwanda.

During the quarter, OCIR-CAFÉ recruited a U.S. based coffee marketing consultant who visited Rwanda in June. ADAR's point person for coffee accompanied the consultant on field visits to project clients' CWS and toured production areas which supplied the washing stations.

The project also elaborated a promotional leaflet for specialty coffee on behalf of OCIR-CAFÉ. The material, designed by ADAR's consulting graphic artist, will be available for distribution during the first quarter of 2004.

ADAR sponsored the participation of the President of the Rwanda Chapter of EAFCA to the Specialty Coffee Association's bi-annual meeting in Boston. Rwandan coffees which were presented at the meeting were received very favorably by conference attendees.

ADAR's Deputy Chief of Party attended a major coffee and tea trade fair held in Rome between June 15th and 17th. The East African Fine Coffee Association (EAFCA), of which Rwanda is a member, sponsored a large booth at the exhibit at which members' coffees were offered for cupping. Rwandan coffee was considered to be superior to coffees presented by Uganda, Burundi, Tanzania and Kenya and was surpassed only by Ethiopia. The ADAR representative also made contact with several influential importers and roasters who participated in the trade fair.

2.3. Results

2.3.1. Evolution of the Coffee Campaign

The four CWS assisted by ADAR began production at different times, in function of the physical location of the station and the existence of irrigation for the industrial plantations owned by the CWS. Migongo Estate in eastern Rwanda began processing cherries from the irrigated industrial block as early as mid-January. Masaka and Ndera stations began pulping during the second week of April and Ndera began activities a week after. Migongo and Sake estates completed pulping during the second week of June. Ndera Estate terminated during the third week of the month while Masaka pulped until the first week of July. The month of May proved to be the time of greatest CWS activity when approximately 50% of all coffee was processed.

Three of the four stations assisted by the project have industrial plantations of varying sizes (Masaka: 7ha; Sake: 18 ha; Migongo: 48 ha) which are only beginning to produce cherry coffee.

During this past season, approximately 1% of the cherries which Masaka and Sake processed came from their own plantations whereas 64% of the cherries pulped by Migongo came from its industrial block. It is expected that during the 2004 season, Masaka will produce 5% of its cherries and Sake should produce 22%. Migongo will provide three quarters of the cherries from its irrigated plantation.

Energy was supplied on a regular basis and was rarely a constraint to processing. Regular water supply, however, was more problematic. Sake Coffee Estate only processed 62 tons of cherries during the month of May, compared to 140 tons in Migongo and 116 tons in Masaka because their water pump was broken for most of the month. Water supply was also a problem for Masaka at the beginning of the season. The station depended on the municipal water supply to meet its needs and there was an inadequate supply to process the cherries. This situation will be rectified during the 2004 season with the completion of a deep water well, partially financed through the project's cost-sharing fund.

2.3.2. Production Achieved

The following table provides a synthetic presentation of production results for the 2003 season.

Production Figures and Ratios for the 2003 Season

CWS	Coffee Cherries (T)	Ratio Cherries/ Parchment coffee (T)	Parch-ment coffee (T)	Parch- ment coffee (A + B) (T)	A		B		C	
					(T)	%	(T)	%	(T)	%
Masaka	292	5.3	55	42	36	65	6	11	13	24
Ndera	181	5.1	35	26	20	57	6	17	9	26
Sake	88	5.2	17	12	9	53	3	18	5	29
Migongo	236	5.9	40	38	31	77	7	18	2	5
Total	797	—	147	118	96		22		29	

By way of explanation, the ratio of coffee cherry to parchment provides a good idea of the quality of the cherry. The lower the ratio, the better the intrinsic quality of the raw material. By way of example, the conversion ratio of cherry to beans on industrial plantations in Kenya is about 4.25 to one kilo of parchment coffee, reflecting good plant nutrition, adequate phytosanitary protection and sufficient irrigation. Under smallholder circumstances, a good ratio is generally five to one. Column 4 of the table notes the total tonnage of parchment coffee produced among the three grades, A, B, and C. The fifth column notes the amount of export grade coffee (A&B) produced by the station. The final three columns provide the tonnage according to grade.

The four CWS have a pulping capacity of 800 tons yet operated at only 18.6% capacity. There are several major explanatory factors.

In many heavy production zones, intermediaries were providing cash advances to farmers for semi-washed coffee in order to assure the purchase of desired quantities of product. It appears that many farmers sold their coffee to these intermediaries prior to harvest and thus did not supply the washing stations.

CWS owners sometimes elected not to purchase cherry coffee on certain days because there was not enough available space on the drying tables to accommodate additional coffee. All four ADAR clients had an inadequate number of drying tables relative to their pulping capacity. In all cases, the clients elected to allocate available cash for operating expenses, chiefly cherry purchases, rather than investing scarce resources in more drying tables. ADAR clients intend to build more drying tables with the proceeds from the 2003 season which will increase their operating capacity.

Certain washing stations experienced significant water supply or energy problems and thus were not able to purchase cherries until these problems were resolved. At Sake, the local district's water supply was interrupted during three weeks at peak production time and no water was supplied to the washing station so cherry purchases had to be dramatically scaled back in consequence. Energy supply problems also affected the Masaka station, resulting in the interruption of coffee processing during some days.

The coffee harvest was mediocre compared to other seasons. Although the production season cannot be considered poor, it was somewhat below average and, as such, there was less cherry available for purchase.

A second major conclusion concerns the very high cherry to parchment ratio which varied between 5.2 and 5.9 kg of cherry for one kilo of parchment which is considerably higher than the standard ration of 5:1. Some reasons for this are listed below.

Much of the coffee processed by ADAR's clients is grown in areas with low rainfall compared to production in the western part of the country. Low rainfall caused moisture stress and, as a consequence, beans were smaller and lighter than might be expected.

Lack of inputs, notably fertilizers and phytosanitary products had a negative impact on bean density and size. In order to improve the ratio, thus increasing the quality of the raw material, efforts need to be made to augment farmer access to inputs.

One of ADAR's clients produced significant quantities of cherry coffee from his industrial block which is planted with the catuai variety. Catuai produces a smaller bean relative to cherry size and thus traditionally has a higher conversion ration which was, in this case, 5.9.

A final conclusion is that there was a very high percentage of Grade B and Grade C coffee produced. This, again, is attributable to moisture stress which produces light beans which are not accepted as Grade A coffee.

One constant during the production season was the late delivery of cherries to the washing station. Cherries would regularly be delivered at midnight and CWS staff was obliged to work throughout the night. Given that the stations only operated at 18% capacity, the processing of late deliveries was manageable, though wearing on the workers. During the coming season there will be substantially increased volumes of cherry entering the processing facilities and continued late deliveries will create processing bottlenecks, resulting in substantial cherry spoilage through premature fermentation and bad quality coffee. In order to insure production of a quality product, it is essential that coffee be delivered in the late afternoon or early evening so that coffee can be pulped under the best conditions.

Two engineering design problems were evident over the course of the production season. ADAR's clients' washing stations should have been equipped with flotation tanks; in certain stations, the slope of the washing canal was either too steep or too gentle to effectively separate coffee qualities.

The CWS design used by ADAR's clients is based on the current, standard Kenyan model. Most Kenyan stations are estate-owned and are supplied by their own industrial plantations which benefit from adequate input applications and irrigation and cherries are better quality and less prone to insect and fungal infestation. The Kenyan CWS model typically does not include flotation tanks to separate poor quality light cherries from the heavy high quality cherries prior to processing.

Rwandan CWS are supplied by smallholders and the quality of the coffee cherry delivered to stations is very heterogeneous. Flotation tanks were not included in the design and their absence had a negative impact on final product quality.

In a similar manner, the slope of certain washing canals was incorrect. This impeded separation of qualities prior to drying.

2.3.3. Cost of Production Estimates

The application of the aforementioned cost accounting module permits a detailed estimate of the cost of production for the different stations.

The estimated cost of production figures for green coffee among the four washing stations varied from \$0.50 to \$0.60 per pound, including the cost of dry milling (\$0.04/lb) by a service provider.

The significant variation in the cost of production is due to two main factors: differences in prices paid among CWS for cherries; differences in the transport costs from collection centers to the CWS. The prices paid to producers varied from 40 FRW the kilo to 60 FRW the kilo, depending on the station. Certain washing stations had to transport cherries much greater distances from collection centers to the processing facilities. This was reflected in higher transport costs.

Most coffee sales from Rwanda are based on a FOB Dar Es Salaam or Mombassa price. Thus, typically, the sale price includes the cost of transport and insurance to either of the aforementioned ports. It was estimated that the breakeven price for the sale of coffee FOB Mombassa or Dar Salaam varied from \$0.56/lb to \$0.68/lb. This figure includes delivery and insurance costs to the port of \$0.08 per pound. These estimates do not include financial costs which increase according to the repayment period.

Given that the prevailing international market price for standard grade Arabicas is approximately \$0.63 per pound, these figures illustrate that Rwanda must produce a superior quality coffee which can command a premium price if this nascent industry is to earn a profit from coffee processing.

2.3.4. Coffee Quality Assessment

The coffee produced by ADAR's clients was extensively cupped by potential importers and independent laboratories in the United States and Europe over the course of the year. The results of these cuppings indicate that Rwandan has excellent potential as a new specialty coffee origin, if it can substantially reduce quality inconsistencies.

Rwandan coffees achieved many high marks, often in the mid-80s, thus qualifying for the specialty market. These results, however, were compromised by several bad cups which carried off-color tastes due to insect damage to cherries or over-fermentation during processing. Of the 150 lots sampled by BD Imports and Intelligentsia Coffee of the U.S., ten lots were disqualified because of the presence of severe taste defects. Other lots evaluations were downgraded because of inconsistency in quality among the several cups tasted from the same lot.

2.3.5. Quality Control

The quality of a cup of coffee is determined by a multitude of factors from field through dry milling and the cupping characteristics clearly reveal much about how a coffee was grown and processed to an experienced taster. The cupping quality represents the end result of a number of discrete tasks carried out by farmer and CWS personnel. Excellent results are achieved when each and every task is completed correctly. If one task is not properly executed, this will be reflected in the cup.

During this first season of operation, CWS managers and staff were learning the rudimentary aspects of their jobs and some key tasks which are determinant in cupping quality were not performed correctly. Moreover, the absence of certain CWS infrastructure and an inability to assess cupping characteristics by CWS staff compromised consistency of quality.

As such, rigorous quality control measures were not implemented. During the coming season, it is imperative that the discrete steps involved in processing specialty-grade coffee be scrupulously respected if Rwanda is to gain and maintain a foothold in the specialty market.

The main logistics/processing tasks which contributed to inconsistent quality were late delivery of cherries, insufficient separation of heavy and light beans, inadequate hand sorting of diseased beans during the pre-drying phase, poor execution of product manipulation during drying and non-maintenance of lot integrity.

As mentioned earlier, cherries were regularly delivered to the CWS very late in the evening. The production of premium-quality coffee requires that cherries are pulped within eight hours of harvest. When this limit is exceeded, fermentation may begin in transit which imparts an off-flavor to the coffee. Over the course of the season, many deliveries were late and fermentation had already begun. It is imperative that this be corrected in 2004.

There was insufficient separation of heavy and light beans (floaters) prior to pulping and during product washing. Beans which have not matured correctly, whether due to poor plant nutrition, insect damage or fungal disease are less dense than healthy beans. Typically, the heavier the fully ripe bean, the better intrinsic quality of the coffee cherry. Because the "ADAR" CWS were not equipped with flotation tanks to separate floaters from heavy beans, a key opportunity to segregate quality was missed. In addition, in certain CWS, the slope in the washing canal was incorrect and effective densimetric sorting could not be carried out at that stage of processing. CWS owners have been strongly advised to construct flotation tanks and correct defective washing canal slopes prior to the start of the new season.

When coffee beans are taken from the soaking tanks and put on the pre-drying tables, the beans are wet and defects are apparent to the naked eye. It is at this point that underripe, green beans (which do not float as they are denser than water) can be detected. Underripe beans impart a grassy flavor to the cup which constitutes a severe defect. Beans which have sustained insect damage can also be detected at this stage as they often exhibit black “zebra” marks on their surface. The opportunity to detect these defects is limited as once the coffee begins to dry, visual evidence of problems disappears.

CWS did not do an adequate job of visual sorting at this crucial processing stage. This was due to two main reasons. Personnel assigned to this key task did not work fast enough and the telltale signs of defective beans disappeared during the drying process. There is approximately a three hour window of opportunity to visually detect defective beans so adequate resources must be mobilized to complete this task in a timely manner.

In addition, CWS managers sometimes did not allocate sufficient personnel to this task and did not adequately control the sorting which was being performed. It is essential that adequate resources be allocated and closely supervised during this next year.

Pre-drying tables were not shaded but should be. Shaded drying tables serve three functions: the rate of drying is slowed, providing more time to identify defective beans; gradual drying has a positive impact on final quality; the presence of shade allows for sorting when it rains, thereby avoiding potential through-put bottlenecks. During the coming season, shading should be established on pre-drying tables to facilitate sorting, assure adequate through-put and regulate the rate at which the product dries.

Another key area for improvement is product manipulation during drying. It is very important that beans are regularly turned over on the drying tables to assure that beans dry at an equal rate and are not overly exposed to direct sunlight. During this first year of operation, this task was not performed with adequate rigor and drying was sometimes uneven and cracking appeared on beans which spent too long in direct sunlight. This fact was noted in the evaluation conducted by an independent quality-control laboratory in the U.S. Improved drying techniques must be employed in 2004 to address this issue.

A critical area for improvement is the maintenance of lot integrity. Specialty coffee buyers purchase by lot, after extensive cuppings and lots must be preserved during wet milling. It is essential to install a system which permits the identification of individual lots from cherry reception through warehousing of green coffee. During the season, a lot identification scheme was established at each CWS. Unfortunately, lot integrity was not maintained throughout processing. In one case, tags identifying the lot number were removed from individual sacks by workers who did not understand the importance of lot identification. In another case, coffee was prematurely deparched (against the advice of ADAR) and lot integrity was not maintained. This negatively impacted product marketing. BD Imports, the U.S. specialty coffee buyer, had no interest in sampling coffee which did not maintain lot integrity so most of the production by Migongo and Sake was not cupped. At Ndera, an order was placed for 12 sacks of coffee from a specific lot but once the lots were mixed, the buyer lost interest in conducting a transaction and the coffee order was cancelled.

A final area of improvement at the CWS is the establishment of a capacity to regularly cup coffee by the CWS owners and their staffs. This will require extensive training in coffee tasting and an investment in basic equipment to roast and brew coffee.

2.3.6. Marketing Performance

As of the end of December 2003, 127 tons of coffee, out of the 143 tons of export grades A1 and A2 produced by ADAR's five clients had been ordered by six importers/roasters, three based in the U.S., and three based in Europe. Of these ordered quantities, 52% (66 tons) were exported by December 2003. The best agreed price was \$1.26/lb (for grade A1) FOB Mombassa/Dar Es Salaam for the 12 tons sold to a U.S. importer and the lowest price was \$0.81/lb FOB Mombassa for the 19 tons sold to a Swiss-based importer. All the purchasing orders were made by November/December. The coffee has, however, been tasted by over 80 individual importers and roasters from July.



Sorting for the Specialty market before export

Why this delay in selling ADAR clients' coffee in 2003 ?

Reasons for the slow pace of sales are related to inconsistent product quality and a marketing campaign which was perhaps too narrowly focused on a select group of specialty buyers.

Rwandan coffees did indeed receive many high marks during tasting sessions from Coffee Labs International in the U.S.A. and from the extensive cupping done by BD Imports, Intelligentsia Coffee and Thanksgiving Coffee. Unfortunately, the more the coffees were sampled, the greater the incidences of defective cups. Evaluations of different lots from the same CWS frequently yielded widely differing appreciations. Masaka Lot 39 was considered to be "supple, velvety mouthfeel, good depth, pretty clean, sweet, lots of chocolate", whereas a lot from the same station, pulped one week prior was considered as "somewhat inconsistent/dirty". In many cases, there were significant quality variations among the three cups tasted from each lot, as in Masaka Lot 31, "Third cup severely vegetal, other two good (84)".

These prevalent cupping inconsistencies had an extremely negative impact on purchasing decisions. At the time of the American importer visit at the end of June, importer enthusiasm for the product was at a high mark and the buyers verbally discussed the purchase of at least three containers of coffee. With subsequent tastings, the order was reduced to 1.5 containers, denoting a clear apprehension regarding quality inconsistencies among and within different lots. BD Imports even affirmed during a telephone conversation that their decision to purchase the coffee was predicated on accessing GDA funding to offset marketing costs incurred. Without the possibility of accessing these funds, they said that they would have decided to wait an additional year to re-evaluate the coffee.

In an oversupplied market (although less so in the specialty coffee segment), where consistently good quality coffee is available from specialty origins, buyers are extremely reticent to purchase a product which shows great variations in product quality. They assume a risk which they do not have to take. Moreover, Rwanda, Burundi and Congo have the reputation for producing coffee which can contain the *potato taste*, an off-color flavor arising from insect damage, thus an additional disincentive to purchase.

During the coming season, if quality control measures are adopted and rigorously implemented, quality inconsistencies should be substantially reduced and a chief obstacle to greater sales will be largely overcome.

Another primary reason for slow sales concerns the inordinate amount of time the U.S. buyers took to make a final purchasing decision. Five months have passed since their visit and producers only received a firm offer in mid-November. During this time, coffee could not be effectively marketed to other buyers as the purchase decisions of BD Imports were not yet made. Because of this delay, efforts to market the coffee in Europe were not vigorously undertaken until the month of October.

With hindsight, ADAR recognizes that additional buyers' visits should have been conducted in order to increase exposure to both the country and the product and introduce increased competition for the coffee.

A final explanatory factor for slow sales was a narrow marketing focus on specialty coffee. OCIR-CAFE hired a coffee marketing consultant to introduce Rwandan fully washed coffee to specialty buyers. Almost no marketing effort was directed at the premium quality market whose quality requirements are less exacting than the specialty market. In the future, marketing efforts should also include product introduction to importers who specialize in the middle segment of the fully washed coffee market.

2.4. Lessons Learned

The success of ADAR's activities in the coffee sector depend, in large measure, on elements over which we have limited or no influence. The project cannot and should not play a management role in CWS operations. It can only provide expert advice, training and limited financial assistance.

This section contains lessons learned from elements over which the project exercises some degree of control. It does not discuss aspects, such as the necessity of timely input delivery by OCIR-CAFÉ nor the importance of recruiting an enthusiastic, hardworking and quick-learning CWS manager by the station owner. These subjects are covered in the narrative portion of the coffee section. The following paragraphs cover those lessons learned which can be effectively acted upon during the coming season.

2.4.1. Needed Improvements in Infrastructure:

The results of the 2003 season demonstrate the critical importance of seizing every opportunity to impact final cupping quality by separating and isolating diseased and insect-damaged beans. The construction of flotation tanks to isolate light beans prior to pulping should be strongly encouraged by the project. Co-financing tank construction through the Cost sharing Program should be strongly considered by project management given that the potential for significant quality improvement with only a minor investment is substantial. The estimated cost for the construction of flotation tanks is \$3,000, clearly a worthwhile investment of cost-sharing funds.

Another infrastructural improvement which should be strongly supported by ADAR is the construction of shading for the pre-drying tables. Slow curing of coffee beans is an essential ingredient in final quality. It allows for visual identification of bad beans when they are still in a translucent stage and prevents cracking of the mesocarp which can impart a bitter taste in the cup. The project must impress on investors the cost-effectiveness of undertaking these two measures.

2.4.2. Sensitizing CWS Personnel to Results from the 2003 Season

The quality of parchment coffee produced at the CWS will ultimately depend on the understanding and engagement of the CWS staff who conduct the repetitive and thankless tasks necessary to produce specialty coffee. It is essential that they understand who their potential buyers are, what they expect in terms of product characteristics and the impact of each individual task in the washing station on the quality of the final product. Only by obtaining the understanding and engagement of the workforce can CWS owners hope to reduce the quality inconsistencies which marked the 2003 season.

Project management should consider, in association with CWS owners, sponsoring debriefing meetings for station personnel to explain the marketing circuits for different segments of the fully-washed Arabica industry, the impressions of the importers and roasters who cupped the 2003 production and the impact of each discrete CWS task on final quality.

2.4.3. Timely Organization of CWS Labor Force

During the first season of operation, CWS personnel were hired just before the beginning of pulping operations and did not have an opportunity to understand their exact roles and the precise sequence of processing events involved in the production of specialty coffee. This resulted in considerable confusion regarding the roles and responsibilities of the individual workers. The Kenyan master trainers were not able to provide specialized training to the staff before the start of operations and this had a negative impact on the quality of coffee produced during the first part of the season.

The project, in conjunction with CWS ownership, should make certain that all key CWS personnel (station managers, section chiefs and accountants) have been identified, corresponding terms of reference elaborated and training conducted prior to the start of processing. This should not pose a problem for the four CWS which operated in 2003. The six new anticipated stations, however, must recruit personnel and organize their workforces early in order to avoid problems which manifested themselves this past year.

2.4.4. Improve Communications with Kenyan Master Trainers

During the past season; the project met at least twice per month with the Kenyan master trainers assigned to the individual stations to discuss progress. These sessions proved to be very beneficial in understanding the operational problems and identifying solutions. Often, however, there was a certain reticence on the part of the Kenyans to discuss difficulties related to the non-application of technical advice proffered by the Kenyan technical assistants. Obviously, if ADAR staff is unaware of specific problems, it cannot bring these problems to the attention of CWS management. It is therefore essential that open and frank communication be maintained between the master trainers and ADAR. This will be even more important during the coming year as the number of trainers will increase from four to ten.

2.4.5. Implement Regular Technical and Managerial Audits of All Stations

Even though ADAR has a continual presence in the CWS, through the Kenyan master trainers, it is critical that ADAR management have an in-depth understanding of operational problems throughout the season. During the first season, project staff spent a considerable amount of time in the stations. It is strongly recommended that ADAR reinforce its field presence and conduct periodic technical and managerial audits of all ADAR-assisted stations to make sure that problems are addressed in a timely manner.

2.4.6. Promote Total Quality Management (TQM)

The success of Rwanda's foray into the production of specialty and premium coffees will be determined by the industry's ability to radically reduce the amount of quality inconsistencies in the cup. In order for this to be accomplished, a major, overriding emphasis on total quality management must be enthusiastically supported by ADAR and all other coffee sector actors.

Total quality management entails knowing what needs to be done to achieve quality objectives, clearly assigning responsibilities and accountability for the correct completion of different tasks, elaborating tools and procedures to help implement the program and providing the necessary level of supervision to insure that a TQM program is effectively enacted.

Prior to the beginning of the 2004 season, project management, in conjunction with CWS owners and Kenyan master trainers, should develop the tools required to facilitate TQM and develop a strategy which makes quality improvement the central focus of the season.

2.4.7. Increase the Number of Buyer Visits to Rwanda

The 2003 Work Plan programmed three separate visits from U.S. and European specialty coffee buyers but only one visit was implemented during the year. During the coming season, the project should organize at least three visits by different buyers. The visits should occur preferably during the later part of April and during the month of May to allow the buyers to see the CWS in full operation. Opportunities to identify interested buyers should be greatly enhanced with the planned participation of ADAR and its clients in international coffee trade fairs in Nairobi and Atlanta over the coming months.

3. TEA SECTOR

In 2001, the Government of Rwanda began a program to privatize ten government-owned tea factories. The privatization program has lagged behind schedule and it was only in 2003 that the factories of Funda and Mulindi were offered for sale. At present, bids are being examined by competent government authorities.

Until tea factories change ownership, there are few areas where ADAR can contribute to sectoral development. One such area is the implementation of valuation studies to examine existing equipment, determine required renovations and estimate the cost of present assets. Most of the factories will require significant renovation after purchase. The implementation of valuation studies, three of which were conducted by the project in 2002, will allow potential bidders a better understanding of required repairs to existing factories.

During the second quarter of the year, ADAR implemented a pre-feasibility study for a tea plantation and factory in Gatare district, Cyangugu province on behalf of a local investor. Given the large sum of money which will be required for the promoter to establish the plantation and factory, and the project's limited expertise in tea, he may be best advised to seek technical assistance from other organizations such as the EU STABEX program which has a full-time tea specialist, rather than solely relying on ADAR to help him realize this project.

Once privatization is fully operational, there will be several opportunities for ADAR to contribute to the successful relaunching of the tea estates.

4. HORTICULTURE

Activities in the horticultural sub-sector this past year have focused on improving all aspects of passion fruit production, implementing field trials of bird's eye chilies (BEC) in Butare and conducting an assessment of the potential to produce export-grade tamarillo. Excellent progress was achieved in passion fruit production techniques. Farmers in the Cyangugu Region enthusiastically adopted new techniques presented by the project's horticultural advisor and the quality and quantity of fruit resulting from the application of this technical assistance is very promising. Performance of the BEC trials was globally excellent and opportunities for tamarillo exports are far better understood.

Over the course of the year, the reticence of private sector operators to invest in horticultural exports became increasingly evident. During 2002, when the passion fruit pilot export scheme was launched, there was significant private sector interest in investing in this activity. Once the export shipments stopped, interest evaporated.

Despite significant outreach efforts undertaken by project staff, there are few operators who have exhibited serious interest in investment opportunities. There are several reasons for this reticence. Establishment of passion fruit plantations takes time, typically 18 months before the first harvest. This timeframe has proved to be a disincentive to potential investors. A successful export venture requires significant investor presence at the production site, as well as a sound knowledge of production and post-harvest handling practices.

Many investors have been put off by the amount of personal implication required to successfully launch horticultural exports. The non-sustainable nature of the recent passion fruit export effort (due to insufficient quantities of export-quality fruit) has also dampened interest.

Interest will undoubtedly increase with a successful and sustained re-launching of passion fruit exports during the coming year.

4.1. Passion Fruit Production

Over the course of the year, a comprehensive training program was implemented for farmers in Cyanguu who supply passion fruit to APROJUFUGI and SONAFRUIT, two passion fruit juice makers. The training courses focused on seed selection, nursery establishment, production techniques, integrated pest management and post-harvest handling.

In April, training courses on improved production and post harvest handling techniques, together with pest and disease management, were given to several producer cooperatives and groups in Cyanguu and Kigali Nord Provinces. In Cyanguu, one hundred producers affiliated with the APROJUFUGI Cooperative (Gashonga), 70 producers affiliated with SONAFRUIT (Cyimbogo) and 30 young farmers starting out in passion fruit production with assistance from Caritas (Cyimbogo and Mibilizi) received training. The same courses were also conducted in Kigali-Nord (Nyirangarama) for 100 producers who sell fruit to a local juice maker.

From the participants of the Gashonga and Cyimbogo training sessions, 30 were selected from each group to receive in-depth training on each step of fruit production and harvesting/post harvest handling. This “training of trainers” will help diffuse technical recommendations through master farmers who will train others in their region. The results of training sessions previously conducted indicated that passion fruit producers in Cyanguu are quick to adopt improved techniques which are in turn seen and picked up by neighboring producers who were not included in ADAR training. Thus, by concentrating efforts on these core groups of “master farmers”, it is anticipated that the training will be disseminated to a much larger audience than we could otherwise hope to reach.

Starting in May, two separate one-day modules on seed selection and extraction were given to the master farmer groups in Gashonga and Cyimbogo. Information on correct selection of seed is of particularly critical importance for Rwandan passion fruit producers, who have previously used seeds discarded from fruit processing factories.

As a result of their failure to practice any selection of seed, based on the parent plant material, seed-borne diseases such as *Septoria* have become endemic in most passion fruit production areas. With the knowledge producers are gaining from ADAR training, it is anticipated that this and other potentially devastating diseases will be reduced to a manageable level without producers trying to resort to pesticides (which are lacking in most areas, in any event).

In June, to coincide with the period when producers need to start preparing their seedling nurseries, another module on improved nursery practices was delivered to the Cyimbogo and Gashonga master farmers. Since the production of strong and healthy seedlings is key to the success of any fruit plantation, producers who benefit from this training (indirectly as well as directly) will be more capable of producing the quality and quantities of fruit needed to enter the export market.



Participants of the IPM training course learning how to distinguish between diseases, insects' pests and beneficial insects in a nursery

Training for 60 Master Farmers affiliated with either APROJUFUGI, SONAFRUIT or Caritas was conducted in October on field preparation and transplanting techniques, in conjunction with the start of rainy season A, traditionally the period when most passion fruit seedlings are put into the field. Project personnel took advantage of this opportunity to visit many of the farmers' nurseries, and were pleased to observe that they had employed the improved practices as per the training they underwent in June. Not only were seedlings free of disease, they were also of the size and vigor required for a successful field establishment.

4.2. Integrated Pest Management

Within the sub-region, passion fruit diseases, insect infestation and fungal problems are widespread. Pest management problems in neighboring countries such as Uganda and Kenya have had a severe negative impact on production. Passion Fruit Woodiness Virus has become prevalent in many parts of Rwanda. The viability of any new plantation in Rwanda depends on the application of a rigorous IPM program.



During this past year, ADAR implemented two IPM courses for producers in Kigali Ngali and nursery managers in Cyangugu. The first course was attended by 94 producers in Kigali Ngali and was conducted in February. Emphasis was placed on identification of disease and insect infestation and the implementation of measures to prevent problems from occurring.

ADAR-trained master farmer in Gashonga District with passion fruit seedlings for her own well as her neighbor's fields

The second course targeted nursery managers throughout the country who are working on a German DED project which supplies seedlings to farmers.

The two-day course, held at the SONAFRUITTS factory in Cyimbogo, used a “hands-on” approach wherein participants (34 in total) spent much time in nurseries and plantations, trying to identify the cause of disorders observed, ranging from insect pests and diseases to a biotic factors such as nutrient deficiency. They were instructed in the importance of diagnosing problems before applying treatments, and how to distinguish beneficial insects from crop pests, along with the value of creating conditions to favor the former in sustainable pest management. Emphasis was placed on prevention, rather than “cure” of pest and disease problems, and the drawbacks to the use of synthetic chemicals was discussed in detail. The group, which included Rwandans from all provinces, was eager to exchange information on problems encountered and keen on understanding the principles of integrated pest management. As a result of ADAR’s training in this critically important subject, we can expect to see a decline in both pest and disease problems at the nursery and field levels, as well as a reduction in the use of synthetic pesticides in fruit crops in Rwanda. This will further enhance the likelihood of production of export quality fruit, which do not run the risk of being contaminated with unacceptable pesticide residues.

4.3. Assistance to CARITAS for Plantation Establishment

Young adults working with Caritas have benefited from participation in ADAR training activities in Cyangugu, starting with the April course covering all aspects of passion fruit production and harvest/post harvest handling. During a November visit to the Parish of Mibilizi, ADAR found that the group had successfully produced seedlings and transplanted 3 ha of passion fruit, using the improved practices they’d learned over the past 7 months. The young plantation was healthy, and if rainfall over the next six months is sufficient, Caritas should be able to start harvesting high quality passion fruit within a year’s time. Although CARITAS had originally planned to plant 5 hectares, they soon realized that a plantation of this size in the first year would prove to be more than they could manage properly. As they become more experienced in passion fruit production, they will gradually expand their plantations and eventually hope to have 25 hectares under production.

4.4. ACDI Cooperation for Passion Fruit Production Grant

In August, ADAR prepared and submitted a proposal for funds in the amount of \$49,000 from ACDI/VOCA to help Gashonga passion fruit producers purchase materials they need to produce export quality fruit, and set up a mechanism for distribution of the funds/materials through DUTERIMBERE, a Rwandan NGO based in Cyangugu. While they were supportive of the proposal, ACDI/VOCA requested a significant amount of additional information and documentation before agreeing to forward the proposal to their Washington office. The revised proposal was thus submitted to ACDI/VOCA's office in late November, and a decision from their Washington office is expected some time in December.

4.5. Passion Fruit Transport and Shelf Life Trials

The main objective in providing an extensive menu of training to Rwandan passion fruit farmers is to improve their ability to produce sufficient quantities of export-quality fruit to assure a sustainable export program and, in so doing, significantly increase earnings from passion fruit production.

With that objective in mind, ADAR undertook shelf life trials for passion fruit produced by Cyangugu farmers. Transport and shelf life trials were conducted on six 2 kg. cartons of passion fruit. The fruit was selected and boxed in Cyangugu and was transported by truck to the ADAR offices in Kigali. Product was examined 30 hours after packaging with only minimal decrease in quality. Moreover, the fruit from the Cyangugu region was larger, better colored and more flavourful than passion fruit from other regions of the country. According to ADAR estimations, the additional price of transport from Cyangugu to the Kigali airport would not compromise the financial viability of exports from the region, providing that adequate logistical arrangements were put into place.

Simultaneously, the project identified a Kigali-based businesswoman from the Cyangugu region who is interested in exporting passion fruit. The operator has purchased land near the Kigali International Airport to construct a packhouse in anticipation of exporting product to Europe. She has also requested assistance from ADAR to elaborate a business plan for this activity. Export trials will begin once peak production season arrives in March.

4.6. Participation in Horticultural Exports Conference, Jinja, Uganda

In October, the ADAR Horticultural Specialist and two ADAR clients interested in horticultural exports attended a conference in Jinja, Uganda; the conference was ostensibly held to help producers of horticultural products located in COMESA countries learn about the possibilities for and regulations concerning exports of commodities into the USA through AGOA. The participants were comprised of horticultural exporters in Kenya, Madagascar, Uganda, and Zambia, together with American specialists in phytosanitary regulations and horticulture plus importers of horticultural commodities.

Since air freight costs from Rwanda are such that the country cannot hope to competitively export fresh products to the USA, the main purpose of ADAR's participation was for project clients to gain exposure to what is required to be a successful exporter of horticultural products.

Thanks to a great deal of dialogue with others attending the conference, together with informative presentations by horticultural products importers, they gained an appreciation of the importance of the quality and reliability of supply, and learned different ways of introducing their products to prospective importers.

4.7. Bird's Eye Chilies (BEC)

Over this past year, ADAR's horticultural advisor provided technical assistance for the implementation of field trials, in conjunction with the PEARL Project in Butare. Performance of the BEC crop planted in January continued to be excellent, although some producers, discouraged by the marketing arrangement, neglected or in some cases uprooted their plants. If the dispute between producers and the head of the cooperative charged with purchasing fruit can be ironed out, together with harvest/post harvest handling problems (described below), Rwanda should have large volumes of high quality dried BEC available for export in the early part of 2004.

Concerns that producers were not exercising sufficient care in harvesting and drying the chili crop were confirmed when a specialist in BEC processing and marketing visited Rwanda in November. While the ADAR horticultural specialist had tried to impress upon the producers the importance of harvesting only fully ripe fruit, conducting a preliminary grading in the field and spreading the fruit in a thin layer on tables to dry, producers had no incentive to do so as the cooperative in charge of purchasing the fruit did not impose strict regulations on harvesting and drying procedures. As a result, the quality of the fruit harvested up to this point was compromised, and the risk of aflatoxin contamination high due to the slow rate of drying. The BEC processing/marketing specialist recommended sending samples for analysis (microbial contamination as well as aflatoxin) before sending any of the product to prospective importers. He also suggested that drying barns, similar to what are used to cure tobacco, should ideally be constructed at all major BEC production sites to guarantee rapid drying of the fruit thereby minimizing the aflatoxin risk. In the interim, producers must firmly adhere to the recommended harvesting and drying procedures, an action that can only be enforced by rejection of all substandard fruit by the cooperative charged with BEC purchase and exportation.

4.8. Tamarillo

After finding no pesticide residues in tamarillo samples gathered from producers supplying ADAR's client who wishes to export this commodity, plans were drawn to prepare tamarillo samples for the December holiday market in the EU, when demand for exotic fruit is at its highest. A hail storm in October seriously damaged most of the fruit in the Kibuye area, which is the area of greatest production of high quality tamarillo. Since Gisenyi, another tamarillo producing area, was not hit with hail, it is hoped that sufficient quantities of high quality fruit will be procured from that region for the December market.

4.9. Organic Certification

During this past year, client interest in obtaining organic certification has waned. In 2002, three ADAR clients (a passion fruit, apple banana and physalis exporter) began procedures to host an inspection visit and the project agreed to cost-share the price of certification. During the year, however, the passion fruit exporter discontinued shipments to Europe and the banana and physalis operators deemed that the cost of certification outweighed the possible commercial advantages. Efforts were thus discontinued.

Obtaining organic certification is a key element in the feasibility of the fruit drying facility which was examined during this past year; the price differential between conventional and organically certified apple banana and pineapple is the determinant factor in the financial viability of the project. ADAR has agreed to cost share the inspection visit with the promoter and will provide technical advice in preparation for certification. The project will not, however, play a lead role in the organization and training of producers in view of obtaining certification. This is a major task which will involve identification of apple banana and pineapple producers, the elaboration of maps indicating the physical location of each plot of land to be certified, explaining organic requirements to candidate farmers and putting into place a record keeping system which meets international norms. This task is best left to an NGO which has a strong presence in Kibuye.

Obtaining organic certification poses a host of special problems for a country such as Rwanda where total family farm size is generally less than 0.5 hectares and is distributed over several individual plots. The number of individual plots which must be certified often reaches into the hundreds and the number of farmers which need to receive training in organic agriculture and record keeping can be equally daunting. Moreover, the geographic isolation of many of the fields and the low rate of literacy in Kinyarwanda makes record keeping problematic.

Despite these hurdles, organic certification can be obtained in Rwanda and land in Kibungo Province on which apple banana is currently produced for export is indeed certified. Obtaining additional certification will entail a substantial organizational effort on the part of the entity seeking official recognition.

5. FLORICULTURE

Floriculture, particularly rose production, has grown exponentially in east and southern Africa over the last two decades and has captured virtually all of the European supermarket and discount rose trade. Rwanda's sole foray into rose production for export has not been successful. Highland Flowers which began operations in 1998 closed its doors definitively in November 2002, after having lost money in each quarter of operation since project start-up.

Highland Flowers was a high profile operation, widely considered to be a flagship of Rwanda's agribusiness development. It received significant financial and technical support from donors and local financial institutions. Despite this assistance, weak technical and financial management, combined with poor advice by international experts and onerous debt service requirements, resulted in sustained financial losses.

In October 2002, ADAR was approached by Tristar, the majority shareholder of Highland Flowers and the Banque Rwandaise de Développement to conduct a diagnostic mission. Based on the results of this study published in December 2002, the project received a request to undertake a comprehensive restructuring plan which expanded the original technical assessment and developed options for the resumption of exports. In view of the importance of this investment as both a flagship activity and generator of employment, an ADAR financial analyst and rose production and marketing expert undertook a restructuring and business plan, the results of which were published in August of 2003.

The report concluded that failure was attributable to several factors including: a bad choice of rose varieties at project start-up, a weak capital structure leading to a heavy use of expensive, short-term loans, a poor input supply management system, deficient technical and financial management expertise, a poor choice of marketing agent in Holland, the absence of cold storage facilities at the Kigali airport and limited cargo space on north bound planes.

Based on a close examination of cost of production figures and European market conditions for African roses, the report concluded that the production of roses for export can be a profitable investment, even under conservative yield and price per stem estimates. A sensitivity analysis was conducted which varied the sale price per stem (C&F Amsterdam) from 7 to 12 Euro cents and the yield per m² from 200 to 330 stems, based on 5.2 hectares of greenhouse space. A conservative estimate of 9 Eurocents per stem, based on an annual production of 266 stems per m², yielded an internal rate of return of 27%, which increases to 38% with a m² yield of 300 stems and 46% with a yield of 330 stems per m².

An estimated investment of 300 million FRW (\$570,000) is required, principally to renovate greenhouses, purchase new plant stock and purchase an additional vehicle. Based on a production level of 20% capacity in the first year, increasing to 80% in Year 2 and 100% in Year 3, the company will register a positive cash flow of 109 million FRW (\$198,000) in Year 2, after restarting exports.

In November of 2003, ADAR was informed that Highland Flowers had been sold to a Rwandan businesswoman who used the ADAR restructuring and business plan as a principal decision-making source. Project management has met with the owner of the renamed company "Rwanda Flora" who appears committed to implementing the recommendations contained in the restructuring plan. The new owner has obtained a commitment from the GOR to finance the construction of a cold storage facility at the airport. She has called upon ADAR to assist in the identification of a competent general manager and production manager and has solicited project support for training of personnel in flower production, harvesting and post-harvest handling. ADAR anticipates providing the requested services during the first quarter of 2004.

PLANTOR sarl, another ADAR client involved in the production of anthurium for the local market, received technical assistance in 2002 for the renovation of the productive capacity of the company. During this past year, PLANTOR management has not been able to implement investments recommended in the 2002 due to unavailability of capital. It is anticipated that rehabilitation will begin in the early part of the coming year.

6. FOOD PROCESSING

The development of food processing industries is critical to the creation of a vibrant agri-business sector in Rwanda. Food processing in a developing country context is generally labor intensive and creates jobs, particularly for women. It is an activity which creates markets for locally produced fruits and vegetables while adding value to the final product. Rwanda's relatively low labor and raw material costs are two favorable elements for local food processing industries.

During the past year, ADAR continued its efforts in assisting promoters to identify and secure funding for business start-ups while helping established firms improve product quality and financial management. In addition, the project implemented a regional market study to determine demand and supply conditions for processed fruit products in the sub-region.

In March, ADAR, in response to a client request, implemented a technical and financial feasibility study for the establishment of a factory to produce soy and maize-based nutritional supplements. Nutritional supplements such as these are purchased by relief and food aid programs for distribution to nutritionally at-risk populations.

The current regional consumption for UNIMIX and similar products in Rwanda, Burundi and the RDC is 10,500mt per year, only 23% of which is produced by Uganda, the remainder being imported from overseas. The feasibility study demonstrated a significant return on investment. This study was refined during the third quarter of the year. ADAR subsequently implemented a business plan on behalf of the promoter and preliminary contacts have been established with local banks to secure funding and several international funding sources such as Afrique Initiatives have been identified who are actively involved in funding investments which have a clear and direct impact on nutrition. During the coming year, ADAR will work with the promoter to line up the required investment and provide training in equipment installation and operation.

ADAR consultants continued to refine the feasibility study of an organically certified fruit drying facility based in Kibuye, the first draft of which was produced in December of 2002. The original study was found to have serious technical flaws which skewed the financial analysis. ADAR solicited technical expertise from a Uganda-based food processor to examine underlying hypotheses of the study, notably the sales price used for financial calculations and the availability of raw material. The consultant also contacted organic dried fruit importers in Europe to determine a theoretical sales price. Unfortunately, importers would not hazard an estimation of sales price without seeing a sample of the product.

During the month of December, ADAR provided partial funding for the promoter to participate in a week long seminar on fruit drying in Cameroon which was attended by importers, producers of dried tropical fruit, manufacturers of drying equipment and researchers from CIRAD, the French tropical agronomic institute. Apple bananas were transported from Kigali to Yaoundé and were dried using local processing equipment and were sent to importers for evaluation with respect to quality, price and volume requirements. ADAR is awaiting feedback from the promoter regarding importer reaction.

Despite key unresolved and outstanding issues in the feasibility study, the promoter appears committed to moving forward with the investment and has secured the necessary funds to begin construction in the near term. ADAR has agreed to cost share the inspection by an organic certifying agency such as ECOCERT and will provide technical assistance and training for project start-up, if requested.

During the third quarter of the year, ADAR provided hands-on technical assistance and training to SHEMA FRUITS to improve product quality, diversify product offerings, valorize existing equipment and master costs of production.

A successful, small-scale jam maker from France was recruited to work with SHEMA management and staff. During a week of intensive effort, the consultant elaborated several new recipes for strawberry jam, varying the amount of pectin and sugar, in an effort to improve taste while reducing the cost of production. A new passion fruit jelly was developed, based on the consultant's own recipe (for which he received the first prize for innovation at a recent French trade fair), an electric pressure cooker was put into service for the first time and was adapted to SHEMA's specific requirements. Finally, an improved method to calculate cost of production figures for the fifteen different SHEMA products was developed and instructional training in its use was provided to company management and accounting staff.

As a fortuitous offshoot of this important mission, the French jam maker showed interest in importing passion fruit purée for his enterprise from SHEMA to meet his own needs for jelly, sherbet and ice cream production and also to supply other ice cream, sherbet and jam makers in France. According to the consultant, tropical fruit purées are imported by specialty houses in France who charge a steep mark-up on product. Upon his return to France, the consultant transported fifteen kilos of passion fruit purée in specially designed vacuum-sealed envelopes. After one month of storage under refrigerated conditions, no deterioration in product quality was noted. If the product obtains the required import authorization from the French authorities and air freight costs do not unduly compromise profitability, export of passion fruit purée will begin during the first quarter of next year.

During the month of August, an ADAR consultant implemented a regional market study of jams, fruit juice concentrate and fresh juice to determine potential demand for processed fruit products in neighboring countries. The consultant examined prevailing supply and demand conditions in the cities of Bukavu and Goma in eastern Congo as well as in major cities in Uganda along the Kabale to Kampala corridor. Established legislation governing import licenses, regulations and taxes was examined in detail. The consultant concluded that there exists an unmet demand for natural juice drinks in Uganda, and, in particular, Kampala which could be economically filled through imports of quality products from Rwanda.

7. PYRETHRUM

During the past year, ADAR continued to provide highly specialized technical support to SOPYRWA, the Ruhengeri-based pyrethrum manufacturer, in the areas of quality control and plant renovation. In the first quarter, ADAR's consulting industrial chemist undertook a follow-up visit to monitor the performance of the recently renovated quality control laboratory and assess the analytical methods used to evaluate product purity. The chemist found that the sophisticated laboratory equipment such as the spectrophotometer was being used and maintained properly and that the quality control tests conducted by SOPYRWA staff were sound and reliable.

The importance of establishing and maintaining a reliable quality control laboratory cannot be overstated. The purity levels achieved during the extraction and refining processes are determinant factors in purchase decisions by international pesticide makers. Monitoring product evolution through all stages of extraction is necessary in order to identify purity problems and take corrective action to guarantee adherence to contractual requirements.

The effectiveness and impact of ADAR's assistance was confirmed this past year as product purity levels have increased since laboratory renovation and the exactitude of analytical tests by SOPYRWA was confirmed by an EPA-mandated testing facility in the United States.

SOPYRWA's medium-term goal is to renovate the plant's dormant refining unit. At present, the company produces unrefined extract which is processed for a fee by a South African firm prior to export to Europe or North America. Because of the absence of its own refining capacity, SOPYRWA is unable to capture the significant added value which accrues during refining (refined extract commands twice the price, \$162/kg, of unrefined extract) and moreover is beholden to a competitor for final refining.

During the first three quarters of the year, the company assembled financing to purchase the \$200,000 of spare parts which were identified during the ADAR-sponsored diagnostic study of the refining unit in 2002. Company management plans to begin renovation of the unit in the beginning of 2004 and has requested ADAR technical assistance for plant renovation, establishment of ISO certification and reinforcement of safety and industrial hygiene.

The impact of the ADAR-assisted introduction of solar flower dryers in 2001 continues to be evident. During the past year, solar dryers were used exclusively to dry raw material. Previously, SOPYRWA clear cut approximately 1100 hectares of eucalyptus stands per year to supply fuel wood for flower drying. In addition to the negative consequences on soil erosion, fuel wood was an expensive energy source as transport fees and labor requirements were significant. SOPYRWA has been able to reduce its production costs while exercising responsible stewardship of existing resources. The company, moreover, continues to replant eucalyptus as a mitigation measure against erosion on the steep hillsides of northwest Rwanda.

8. CROSSCUTTING ACTIVITIES

8.1. Business Development

During 2003, ADAR continued to provide an array of business development services to its clientele. Emphasis was placed on identifying viable investment opportunities through the implementation of feasibility and restructuring studies, developing and diffusing financial models to estimate profitability, assisting promoters in securing loans for capital investment and operating funds and serving as the principal project interface between agri-business investors and the local banking community.

Nine feasibility studies were conducted over the course of the year, almost half of which concerned the establishment of new coffee washing stations. Many ADAR coffee sector clients considered investing in smaller capacity washing stations which use TOTO brand pulping equipment and can be easily expanded to increase processing capacity. In order to streamline the implementation of feasibility studies for similar washing station designs, the project developed a financial model which can be adapted to the needs of the investment project with minimal adjustment. This innovation has greatly decreased both the cost and time required to execute the studies. The project's business development advisor also provided individual training to loan officers from the Rwanda Development Bank in the use of the analytical tool to estimate coffee washing station profitability which was elaborated in 2002.

Over the past twelve months, ADAR served as a focal point for exchanges between the agribusiness community and local banking institutions in order to improve access to finance. Three important meetings were held during the year. Nine ADAR clients met with the Director of Project Financing from the Rwandan Development Bank in order to gain a better understanding of existing lending requirements and facilities. A second meeting was held with representatives of the World Bank's Rural Sector Support Project in order to better understand the different types of lending facilities offered by this institution. Several meetings were held between AQUADEV, a Belgian NGO and coffee sector actors with a view to elaborating a pilot micro-credit program tailored to the needs of coffee producers who supply washing stations with coffee cherry.

8.2. The Small Grants Cost-Sharing Program (SGCSP)

During its first year of operation, the SGCSP received twelve requests for funding, seven of which concerned the coffee sector. The remaining five grant requests pertained to the horticulture and food processing sectors.

Five of the twelve grants were approved, representing a financial obligation totaling \$110,975. One grant was rejected (construction of a pack house) due to the absence of any technical assistance role for ADAR. The six remaining grant requests are currently being modified, either to reorient the request or to conform to established procedures.

As of early December, \$34,502 has actually been disbursed. By the end of December, the three grants which are currently being implemented should be completed, representing a total disbursement of \$68,359. During the first quarter of 2004, two additional grants (water supply for a coffee washing station and equipment supply for a food processor) will be executed, bringing total disbursements to \$110,975.

The overwhelming majority of grant requests received entail cost sharing of construction activities. The correct evaluation of competing construction estimates requires specialized knowledge which ADAR staff does not possess. To remedy this situation, ADAR hired two Rwandan civil engineers who had received project-sponsored training in CWS construction to provide expert technical advice concerning competing offers. This arrangement has proved very satisfactory over the course of the past year.

8.3. Environment

Responsible stewardship of the natural resource base is a major component in all activities supported by ADAR. Given the potential for soil erosion on Rwanda's steep hillsides, combined with intensive cultivation, often on land inappropriate for crop production, the need to insure sustainable agricultural practices is paramount. Moreover, two major activities in which ADAR is implicated, coffee processing and pyrethrum production, can cause substantial environmental harm if improperly regulated. The project incorporates mitigating measures in all ADAR initiatives.

During 2003, the construction of four coffee washing was completed during the first quarter of the year. Each station incorporated water recirculation systems, water filtration pits and reception and drying areas for coffee pulp, in order to minimize contamination of water sources by toxins contained in coffee pulp. In each station, dried pulp was recycled to fields for mulching. Six new coffee investors began construction on coffee washing stations over the past twelve months; the environmental suitability of each site for washing station establishment was considered during the site selection process. Each new station incorporated environmentally sustainable design characteristics in the construction plans.

The project provided training in passion fruit seed selection, nursery establishment and production to over three hundred individual farmers during the course of the year. Anti-erosion measures, mulching, and integrated pest management were key components to the training program. Additionally, at the request of the Minister of Agriculture, ADAR's horticultural specialist developed a policy paper on the management of passion fruit diseases.

During the third quarter, following a request from USAID's Cognizant Technical Officer (CTO), ADAR's horticultural advisor assisted with preparations for a workshop on Environmental Capacity Building which was held in Rwanda from 15 – 19 September. The ADAR staff member identified a venue for the workshop (the Foyer de Charité in Remera-Ruhondo) as well as sites for "case studies" (including ADAR-assisted coffee washing stations and SOPYRWA) and workshop participants from the agriculture and environment sectors. She has also assisted with the logistical arrangements for a pre-planning visit to Rwanda by the course coordinators which transpired in July. ADAR's coffee advisor attended the week long training program which reinforced local capacity to identify and integrate mitigating measures into project agribusiness activities.

9. MONITORING AND EVALUATION

ADAR is contractually obligated to provide twice yearly updates on attaining defined indicators. Performance indicators are assessed in June and in December. Impact indicators are reviewed only in December. In order to closely monitor project progress, ADAR, since late 2001 has provided quarterly data and analysis on all performance indicators.

9.1. Impact Indicators

ADAR has five impact indicators which cover the three intermediary results: Enhanced Performance of ADAR-Assisted Firms; Improved Quality Products from ADAR-Assisted Firms; Improved Access to Financing for ADAR-Assisted Firms. Data for measuring impact was supplied by clients, in response to the annual client survey administered by the project. Impact indicators reflect the quantitative effect of project activities on the project's client-base. ADAR far surpassed the targets related to enhanced performance and improved quality but fell short for the indicators related to access to financing.

The 563% increase in the value of goods marketed compared to the pre-project 2000 baseline attests to the very significant impact of project activities on ADAR client enterprises. The target for 2003 was a 25% increase. In a similar manner, the volume of goods produced by project clients rose 550% to 1364 tons, compared to a target increase of 25%.

The second impact indicator is related to product quality enhancement. Thirty-one quality enhancement innovations were initiated by project clients, compared to the 25 which were programmed.

The two impact indicators related to bank financing were not attained, reflecting pervasive and persistent problems with access to funds. Seven business plans were submitted to local banks, compared to the ten programmed. Only one loan was approved compared to the three programmed.

9.2. Performance Indicators

Performance indicators measure project outputs such as the number of persons trained, the number of new market opportunities for project clients or the number of seminars held.

The project has sixteen performance indicators (see following table). During 2003, ADAR exceeded its targets for eight indicators and achieved at least 70% of the target for two indicators.

The project exceeded or met all performance indicators related to Increasing Access to Information and Improved Information Exchange. The pertinence of ADAR's Agribusiness Center was once again reflected in the number of persons using its facilities. The project received almost 1,200 visitors during the year, far surpassing the target of 400. The number of training participant sessions sponsored by the project (workshops, seminars, study tours, fora) significantly exceeded the target of 1000. The number of new registered clients (19) fell one short of the target. The total number of ADAR clients now stands at 61. The number of clients participating in ADAR-sponsored price information models (158) was almost double this year's target.

Regarding Project Intermediate Result 1.B, Expanded Access to Markets and Increased Client Sales, two of the three indicators were exceeded while the third attained 70% of the target. Eighteen clients used ADAR direct assistance to access markets, compared to the target of 25. The number of clients using the Internet to access markets (399) far exceeded the target of 50. The number of clients who established market contacts was 36, surpassing the target of 30.

Project Intermediate Result 1.C, Improved Agribusiness Management Skills contains two performance indicators. The number of training course modules completed (1057) far outstrips the 350 programmed. The number of clients applying ADAR training in business practice was 13, compared to a target of 35. This shortfall was due to the fact that many ADAR clients have not yet begun production and so have not had an opportunity to apply project sponsored training.

PIR 2.A, Increased Awareness of Product Quality Management Strategies, has one performance indicator, the Number of Operators assisted by ADAR to upgrade quality standards. Seventeen operators improved product quality as a direct result of ADAR assistance, compared to five which had been programmed. This attests to the impact of project initiatives on product quality.

PIR 3, Improved Access to Financing for Agribusiness Firms has two performance indicators, neither of which were met during the year. The reasons for the shortfalls vary according to the indicator. Only four firms requested copies of the Directory of Financing Sources, compared to the target of 50. This was probably due to the fact that private operators and institutions had already received the directories in 2001 and 2002. Only one of five programmed seminars on project financing was held. This reflected the very heavy workload that project staff assumed in order to execute the 2003 work plan.

Regarding PIR 3.B, Improved Receptivity of the Banking Community to Agribusiness Borrowers, ten clients who had pending dossiers at local banks were assisted, compared to the fifteen programmed. Only one loan officer received training in agribusiness lending, compared to the target of 25. This reflected both weak interest on the part of banks as well as the full schedule of the ADAR Business Development Advisor.

With respect to PIR 3.C, Enhanced and Integrated Agribusiness Support Services, six service providers received project assistance, falling short of the 25 programmed. Conversely, the number of service provider training sessions conducted doubled the target of five.

ADAR 2003 PERFORMANCE INDICATOR RESULTS

	1st Semester 03			2nd Semester 03			Tot. 03	Target 03	%
	W	M	T	W	M	T			
PIR 1.a. Increased access to information and improved information exchange									
	102	575	677	77	443	520	1197	400	299,25
Number of registered ADAR clients	1	8	9	2	8	10	19	20	95
N° of participants - sessions at ADAR - sponsored: Workshops:	17	115	132	28	140	168	300	1000	134,4
Seminars/training-ADAR	193	709	902	18	67	85	987		
Foreign Study Tours	0	2	2	0	0	0	2		
Forums:	9	4	13	6	36	42	55		
							1344		
N° of stakeholders participating in ADAR-sponsored price information models			0			158	158	80	197,5
PIR 1. b Expanded access to markets and increased client sales									
N° of clients using ADAR direct assistance to access markets	2	11	13	0	5	5	18	25	72
N° of clients using the Internet to access markets; by gender	0	0	206	0	0	193	399	50	798
N° of new market contacts established by selected ADAR clients		35	35	1		1	36	30	120
PIR 1. c Improved Agribusiness Management skills									
N° of person-modules of ADAR training courses completed; by gender	175	768	943	19	95	114	1057	350	302
N° of clients applying ADAR training in business practice	1	9	10	1	2	3	13	35	37,143
PIR 2. a Increased Awareness of product quality management strategies									
N° of operators assisted by ADAR to upgrade quality standards	2	10	12	1	4	5	17	5	340
PIR 3. Improved access to financing for Agribusiness Firms									
	Number								
N° of firms requesting directories of financing sources and/or borrower's institutions	1	0	1	1	2	3	4	50	8
N° of financing seminars sponsored by ADAR			0			1	1	5	20
PIR 3. b Improved Receptivity of Banking community to Agribusiness Borrowers									
N° of bank agribusiness clients assisted by ADAR	0	6	6		4	4	10	15	66,667
N° of bank participant-sessions trained through ADAR; by gender	0	0	0	1	0	1	1	25	5
PIR 3. c Enhanced and Integrated Agribusiness Professional Support Services									
N° of service providers assisted by ADAR	0	3	3	1	2	3	6	25	24
N° of service providers training session conducted	0	3	3	0	7	7	10	5	200

Notes: W = Women; M = Men; T = Total

PROJECT IMPACT INDICATORS

Indicators	Units	Baseline déc-00	Results déc-03	Target 2003	%Evolution
I. Enhanced Performance of ADAR assisted firms					
I.1. Increased value of goods marketed by ADAR assisted firms & cooperatives	000 Frw/year	242355	1 363 645	25%	563
I.2. Increased volume of goods marketed by ADAR assisted firms & cooperatives	MT/year	248	1364	25%	550
II. Improved Quality Products from ADAR Assisted Firms					
II.1 Increase Number of Quality Enhancement innovations initiated by ADAR clients	Number	10	31	25	124
III. Improved Access to Financing For Agribusiness Firms					
III.1 Number of Agribusiness proposals with Business Plans prepared/submitted to financial institutions.	Number	NA*	7	10	70
III.2 Number of agribusiness loans approved by financial institution through ADAR Catalyst*	Number	0	1	3	33

The classification system used by the banks does not allow to identify

* Business Plan were late completed

10. ADMINISTRATION AND FINANCE

During this past year, the administrative unit continued to provide efficient and effective support to program implementation. Two key administrative matters involving the local tax issue and computer support were satisfactorily resolved. The unit oversaw all bureaucratic questions related to the hiring of four Kenyan coffee trainers and prepared for the arrival of ten trainers for the 2004 season. Two local civil engineers were brought under contract to provide specialized expertise in bid evaluation and coffee washing station design.

During the fourth quarter of 2003, the project resolved the outstanding issue of local tax payments with the Rwanda Revenue Authority. This complex issue had significant financial implications for all parties involved and a solution which satisfied the needs of local personnel, Chemonics, USAID and the Rwanda Revenue Authority was found.

At the beginning of the year, ADAR hired Abs-Net, a local computer consulting company to maintain the project's computer system which, until then, had been a constant source of problems. Since Abs-Net's engagement as service provider, computer problems have decreased dramatically and productivity has been enhanced.

The project's computer network was reinforced during 2003. Computer memory was upgraded on the server and work stations. Windows XP was also installed on project computers and two additional laptops were purchased for project use.

ADAR's Administrative Unit oversaw the many contractual and administrative aspects involved in engaging Kenyan trainers during the four month coffee season. This entailed obtaining the appropriate visas and work permits required under Rwandan law. The project has already begun the recruitment process for the ten trainers who will be working for ADAR during the 2004 season.

The unit implemented the administrative procedures for fielding 27 consulting missions and obtaining 20 travel approvals. Consulting contracts were signed with two civil engineers to facilitate timely mobilization of their services in the areas of construction bid evaluation and topographical and hydrological studies. The project will now be able to mobilize these resources on an as needed basis.

Two members of the technical team left the project at the end of the year. The COP resigned in December. His position was assumed by the DCOP. The Market Information Specialist also departed at the beginning of November.

Financial Overview

While the official contract Year 3 covers the period of November 14, 2002 – November 13, 2003, financial data for this annual report will cover January 2003 – December 31, 2003. We use these reporting dates in order to be consistent with last year's reporting. The financial analysis of contract year 3 also includes the 3 year contract extension, which began on November 14, 2003.

Total expenditures over the third year reflect a slightly decreased spending level from the second year, reflective of lower expenditures in the Materials line item (6,5% decrease). The chart below is a summary of the budget, expenditures from last year, expenditures for the period of this report, and total expenditures to date:

	Current Budget	Jan. 1, 2002– Dec. 31, 2002	<i>Jan. 1, 2003 – Dec. 31, 2003</i>	Total Expenditures thru Dec. 31, 2003	Amount Remaining
Labor	\$ 5,669,376	\$ 1,121,850.18	\$ 1,200,766.49	\$ 3,085,620.02	\$ 2,583,755.98
Materials	\$ 4,542,232	\$ 792,532.02	\$ 588,939.57	\$ 2,202,634.31	\$ 2,339,597.69
Total	\$ 10,211,608	\$ 1,914,382.20	\$ 1,789,906.06	\$ 5,288,254.33	\$ 4,923,353.67

Overall Expenditures. From the increased extension ceiling price of \$10,211,608, a total of \$5,288,254.33 (52%) was billed through December 31, 2003. The most recent contract modification increased the obligated amount to \$7,162,914 (70%). Because of economical use of contract funds, we were able to carry over \$565,976 from the original project budget into the extension years. Our extension budget increased the Cost Sharing Grant Program by \$90,000, making the total available in grants \$390,000.

Reporting Period Expenditures. Considering total budgeted Materials of \$4,542,232, \$588,939 or 13% of this total was spent during the reporting period. From the total labor budgeted of \$5,669,376, \$1,200,766.49 or 21% of this total was spent during the reporting period. Of the \$390,000 available in the Cost Sharing Grants Program \$111,949 or 29% has been obligated through five existing grants agreements and \$47,576.16 or 12% was disbursed to these grantees in 2003.

Rwanda ADAR anticipates an intense and eventful Year 4 with continued spending focus on the areas of training, Short-Term Technical Assistance and marketing, principally related to coffee, horticulture, pyrethrum and tea.

ANNEXES

Annex 1: Workshops/meetings, seminars/trainings and forums organized in 2003

Description	Facilitator	Participants			Date
		Men	Wom.	Tot.	
Workshops/meetings					
Debriefing 9 th visit Alan Finney to Masaka CWS	Alan Finney	1	2	3	January 20
Pre-debriefings on Paprika	Mark Terken	7	-	7	January 20
Debriefing 1 st visit Alan Finney to CO-OP APCAR	Alan Finney	1	-	1	January 21
Meeting between ADAR and Seven Lakes Trading Co	ADAR	2	1	3	January 22
Pre-debriefing meeting on paprika	Mark Terken	4	-	4	January 23
Debriefing on Paprika study	Mark Terken	6	-	6	January 24
Meeting Sonafruits/BRD on maracuja		1	1	2	February 6
Réunion d'information sur « Evaporative cooler »	Ngoni Nenguwo	5	1	6	February 18
Debriefing 9 th visit Alan Finney to Masaka CWS	Alan Finney	1	1	2	February 18
Réunion de préparation accueil techniciens kenyans	ADAR	2	1	3	February 20
Réunion de préparations formation Bicumbi	ADAR	1	1	2	February 21
Atelier/Suivi du stage de formation AUTOCAD	A. Finney	3	-	3	February 26
Debriefing visit Alan Finney à Mpanga	Alan Finney	1		1	February 28
Debriefing visit Alan Finney à Sake	Alan Finney	1	-	1	February 28
Kenyan Technicians introduction meeting	ADAR	15	2	17	March 1
Réunion de préparation assistance ADAR à UCAR	ADAR	1	1	2	March 3
Réunion de préparation sur la certification biologique, séchage des fruits - Kibuye	ADAR	13	-	13	March 11
Réunion sur les modalités de l'accord de subvention	ADAR	3	1	4	March 14
Accounting information exchange on CWS between ADAR & PEARL	ADAR	3	-	3	March 20
Programme de Partage de Coûts - Réunion sur les modalités de déblocage des fonds	ADAR	2	1	3	March 21
Briefing of Soya project	John Magnay & Stephen Abele	2	--	2	March 25
Preparation of OCIR Café group training on "Cost accounting for a coffee washing station"	ADAR	2	-	2	March 25
Assessment of 2003 Coffee season preparation	ADAR	6	1	7	April 1
Meeting on Contract proposal with civil engineers	ADAR	3	-	3	April 2-3

Description	Facilitator	Participants			Date
		Men	Wom.	Tot.	
Workshops/meetings (cont'd)					
Debriefing meeting on coffee dry milling	J. Ternoy & P.Jones	8	2	10	April 11
Debriefing meeting with Kenyan Coffee Technicians	ADAR	4	-	4	May 12
Debriefing meeting on tea production	John Walton	7	-	7	May 23
Debriefing meeting on Highland Flowers Restructuring Study & Business Plan	Jacques Ternoy & Loek Koop	6	1	7	May 23
Debriefing meeting with Kenyan Coffee Technicians	ADAR	5	-	5	June 16
Final debriefing with Kenyan technicians	ADAR	5	-	5	July 7
Debriefing on the mission "Regional Market Study for Processed Fruits and Vegetables "	Emmanuel Ntaganda	8	3	11	July 18
"Access to BRD Finance" with ADAR clients	BRD - JP Rubulika	6	3	9	August 6
Presentation of the RSSP program to ADAR clients	RSSP - J. Nyirimana	8	2	10	August 12
Application for training of Gashonga passion fruit producers in collaboration with ACIDI-VOCA - Cyangugu	Pierre Célestin Habyarimana	70	7	77	August 18-19
Debriefing of Fruits Dehydration Study	John Magnay	1	-	1	August 22
Food and Security - Assessment of the Rwandan Crop and Food Situation	Sophie Walker	11	2	13	August 29
Debriefing of the Feasibility Study of COFII	François Sihimbiro	1	-	1	September 1
Preparation of the forum on "Promotion of horticulture" by the Dutch Embassy	ADAR	1	1	2	September 3
Preparation of the workshop on « micro-credit and coffee »	ADAR	2	-	2	September 9
« Micro-credit and coffee »	AQUADEV - J. Sam	6	4	10	September 16
"Updated Assessment of the Rwandan Crop and Food situation" (production, prices, imports, logistics, relief needs situation in neighboring countries, etc.).	Sophie Walker	5	1	6	September 26
Debriefing meeting on Feasibility study for a standard CWS of 100 tons of café vert capacity		4	-	4	October 6
Debriefing meeting sur "Projet Pilote de création d'une unité de séchage des fruits	Norbert Monkam	1	-	1	October 11
Debriefing meeting sur le Projet de création d'une unité de séchage des fruits	Norbert Monkam	2	-	2	October 29
Meeting between UCAR, ACIDI/VOCA and ADAR/Signature contrat de subvention UCAR	ADAR	3	2	5	November 3
Table ronde/discussion sur l'extension du projet ADAR	ADAR	2	1	3	November 4
Réunion de discussion sur modalités de production, d'exportation et de financement de maracuja	ADAR	1	3	4	November 18
Debriefing meeting visite à la future SDL de Kibuye	Jean Paul Rwagasana	1	-	1	November 18
Meeting on the development of SOPYRWA activities for 2004	ADAR	6	-	6	December 31
S/Tot.		260	46	306	

Description	Facilitator	Participants			Date
		Men	Wom.	Tot.	
Seminars/ Local training					
Formation sur les techniques de production, manutention et emballage du maracuja – Gashonga, Cyangugu	P.C. Habyalimana & ADAR (A.Turner)	27	2	29	January 7
Formation sur le transport du maracuja destiné à l'exportation/ Gashonga, Cyangugu	P.C. Habyalimana & ADAR (A.Turner)	7	3	10	February 12
Formation des caféiculteurs de Bicumbi sur la manutention du café destiné à Masaka CWS	ADAR	51	11	62	February 25 & 26
Formation sur le suivi des coûts d'exploitation des stations de lavage de café - ADAR, Kigali	Célestin Nizeyimana	5	1	6	February 27 & 28
Formation sur la tenue de la compatibilité dans les stations de lavage de café	David Sussman/PEARL	6	4	10	March 26-28
Formation sur le suivi des coûts d'exploitation des stations de lavage de café - Kibungo, Mpanga	Célestin Nizeyimana	4	-	4	March 26-28
Formation sur les Maladies du Maracuja à Nyirangarama, Kigali Rural	P.C. Habyalimana & ADAR (A. Turner)	52	3	55	March 27
Formation pour le personnel spécialisé en techniques de production de café de qualité à Masaka (6), Ndera (8), Sake (6) et Migongo (10)	J.O.Wsambla, J. Kanyi, G. N. Mwangi & H.K.Gachogu	18	12	30	March-June
Formation sur la production du café dans les SDL pour les ouvriers saisonniers : Masaka (44), Ndera (34), Sake (29) et Migongo (40)	J.O.Wsambla, J. Kanyi, G. N. Mwangi & H.K.Gachogu	74	73	147*	March-June
Formation sur le suivi des coûts d'exploitation des stations de lavage de café pour les agents de l'OCIR Café (I)	Célestin Nizeyimana	7	-	7	April 1-3
Formation sur les techniques améliorées de production du Maracuja à Gashonga/APROJUFUGI et groupe Hortense, Cyangugu	Anne Turner P. Célestin Habyalimana	86	11	97	April 8-9
Formation sur les techniques améliorées de production du Maracuja à Gashonga/SONAFRUITES et Caritas	Anne Turner & P. Célestin Habyalimana	87	18	105	April 10-11
<ul style="list-style-type: none"> It was difficult to estimate the number of men and women who participate in those trainings. However, concerning the training of the seasonal workers (147), the number of trained women was approximately 50% (they usually do the sorting on the drying tables) 					
Formation des gestionnaires des stations de lavage sur le suivi des coûts d'exploitation d'une station de lavage de café pour les agents de l'OCIR Café (II)	Célestin Nizeyimana	4	3	7	April 15 -17
Formation sur les techniques de production du maracuja de qualité/Sina Gérard et partenaires, Kigali-Ngali	Anne Turner & P. Célestin Habyalimana	100	16	116	April 22 & 23
Formation des caféiculteurs de Bicumbi sur la manutention du café destiné à Masaka CWS	J.O. Wasambla	20	1	21	May 7 & 9
Formation personnalisée à Masaka sur le suivi des coûts d'exploitation des stations de lavage de café, Kigali	Célestin Nizeyimana	2	3	5	May 19

Formation sur les techniques de préparation des semences sélectionnées /SONAFRUITTS et Caritas, Cyangugu	Anne Turner & P. Célestin Habyalimana	24	5	29	May 28
Description	Facilitator	Participants			Date
Seminars/ Local training (cont'd)		<i>Men</i>	<i>Wom.</i>	<i>Tot.</i>	
Formation sur les techniques de préparation des semences sélectionnées/APROJUFUGI et groupe Hortense, Cyangugu	Anne Turner & P. Célestin Habyalimana	29	8	37	May 29
Formation des caféiculteurs des Districts de Birenga et Rukira sur la manutention du café destiné à Migongo CWS	Hesbon Gachogu	60	-	60*	May 30
Suivi formation sur le coût d'exploitation d'une CWS, formation personnalisée à Masaka, Kigali	Célestin Nizeyimana	1	1	2	June 12
Suivi formation sur le coût d'exploitation d'une CWS, formation personnalisée à Nyandungu, Kigali	Célestin Nizeyimana	-	1	1	June 13
Suivi formation sur le coût d'exploitation d'une CWS, formation personnalisée à Masaka, Kigali	Célestin Nizeyimana	1	1	2	June 13
Suivi formation sur le coût d'exploitation d'une CWS, formation personnalisée à Masaka, Kigali	Célestin Nizeyimana	1	-	1	June 18
Suivi formation sur le coût d'exploitation d'une CWS, formation personnalisée à Nyandungu, Kigali	Célestin Nizeyimana	-	1	1	June 19
Suivi formation sur le coût d'exploitation d'une CWS, formation personnalisée aux Ets ENAS, Kigali	Célestin Nizeyimana		1	1	June 19 & 20
Formation sur les techniques améliorées de préparation et de réalisation de germoirs et pépinières/Groupe SONAFRUITTS et Caritas, Cyangugu	Anne Turner & P. Célestin Habyalimana	15	10	25	June 25
Formation sur les techniques améliorées de préparation et de réalisation de germoirs et pépinières/Groupe APROJUFUGI et Hortense, Cyangugu	Anne Turner & P. C. Habyalimana	28	4	32	June 26
Cost accounting for CWS - Nyandungu	Célestin Nizeyimana	-	2	2	July 5 (1) Sept. 2 (1)
Formation des membres d'APROJUFUGI sur les techniques améliorées de préparation de champ et de repiquage à Gashonga/Cyangugu	Anne Turner & P. C. Habyalimana	36	8	44	October 15
Formation SONAFRUITTS et Caritas sur les techniques améliorées de préparation de champ et de repiquage à Cyimbogo/Cyangugu	Anne Turner & P. C. Habyalimana	33	6	39	October 16
Formation sur les techniques de lutte contre les maladies des fruits/APROJUFUGI, SONAFRUITTS et CARITAS	Anne Turner & P.C. Habyalimana	57	8	65	November 19 & 20
Formation sur le triage manuel du café de spécialité	Femmes de Maraba	-	76	76	November 5-12
<i>S/Tot.</i>		835	293	1128	

Description	Facilitator	Participants			Date
		Men	Wom.	Tot.	
Forums/ Study tours/Events/Training abroad					
Horticultural opportunities around the city of Kigali	ADAR	-	4	4	February 24
La filière Pomme de Terre (with Dutch Embassy)	ADAR	3	-	3	March 14
Presentation of « Rwanda Small Loan Facility »	Sarah Mattingly/World Bank	6	-	6	April 25
Participation at the SCAA exhibition in Boston	Juvéna Nkusi	1	-	1	April 25-28
Pilot projects for Rwanda to promote commercialization of agro-based manufacturing	Delegation from Malaysia & RSSP	6	-	6	July 31
« Promotion of Horticulture / Floriculture Chain » by the Dutch Embassy in Rwanda	Mr Von der Assen Monique Calon	18	2	20	September 17
3 meetings on Assessment of the Rwandan crop and food situation	Sophie Walker	16	4	20	Sept. 26, Oct. 31 & Nov 28
Training on coffee cupping	Jean Bahizi / OCIR Café	1	-	1	Feb.16-March 9
Study Tour in Uganda for implementation of a Soya Factory	ADAR	2	-	2	September 3-5
	<i>S/Tot:</i>	53	10	63	
	GRAND TOTAL	1148	273	1421	

Annex 2: Reports published during 2003

N°	Report title	Date of visit/Date of contract	Date of report	Report status	Author
67	9 th report on visit to Masaka CWS	January 13 & 14	January	Final	Alan Finney
68	1 st report on visit to APCAR sites	January 17	January	Final	Alan Finney
69	10 th report on visit to Masaka CWS	February 18 & 19	January	Final	Alan Finney
70	5 th report on visit to Mpanga CWS	January 21 & 22	January	Final	Alan Finney
71	3 rd report on visit to Sake CWS	February 25	January	Final	Alan Finney
72	1 st report on visit to Mpanga CWS	February 4 & 5	January	Final	Jean Paul Rwagasana
73	1 st report on visit to Sake CWS	February 6 & 7	January	Final	Jean Paul Rwagasana
74	2 nd report on visit to Masaka CWS	February 11, 12 & 17	February	Final	Jean Paul Rwagasana
75	Report on the 3 rd visit to SOPYRWA	December	March	Final	Stafford Head
76	Final report consultancy mission	March 2002-June	March	Final	Jean Paul Rwagasana
77	Rapport sur la session de formation sur le suivi des coûts d'exploitation d'une station de lavage de café	March 2002-April 3	March	Final	Célestin Nizeyimana
78	2003 First quarter report		March	Final	Geoffrey Livingston
79	Production of Paprika for export in Rwanda	January	April	Final	Mark Terken
80	Analysis of Dry Milling Options in Rwanda (English & French)	March	May	Final	Jacques Ternoy & Peter Jones
81	Pre-feasibility Study for a tea plantation, fuel wood plantation and construction of a private tea factory in Cyangugu	May	May	Final	John Walton
82	Highland Flowers Restructuring Study	May	June	Final	Jacques Ternoy & Loek Koop
83	9 rapports de formation sur le suivi des coûts d'exploitation d'une station de lavage	April, May & June	April, May & June	Final	Célestin Nizeyimana
84	Feasibility Study For African Food Products on Opportunities of Soya beans processing in Rwanda	March	June	Final	Abele & Magnay
85	Feasibility Study and Business Plan for COFII, a private investor in coffee	April - May	September	Final	François Sihimbiro
86	2003 Second quarter report		July	Final	Geoffrey Livingston
87	4 training reports on cost accounting for a CWS	July - August	July	Final	Célestin Nizeyimana
88	Regional Market Study for Processed Fruits and Vegetables	April	June	Final	Emmanuel Ntaganda
89	Model of Feasibility Study and Business Plan for a small capacity CWS	May	September	Final	Emmanuel Ntaganda
90	2003 Third quarter report		September	Final	Geoffrey Livingston
91	Etude de faisabilité d'une station de lavage standard de 80 tonnes		December	Draft	ADAR
92	Etude de faisabilité de la station de lavage de Ngenda, Kigali-Ngali		December	Final	ADAR
93	2003 Annual report		December	Draft	Geoffrey Livingston
94	Coffee Factory Development and Management*	August-September 02	September 02	Final	Log Associates/Kenya
* This report was not mentioned in the ADAR 2002 annual report. It is the training of engineers in AUTOCAD and production of coffee factory design, held in Nairobi-Kenya.					
95	Business Plan pour le Projet de Production des produits à base de soja et du maïs, Cas de l'UNIMIX	July	November	Final	Théogène G. Kayiranga

Annex 3: OCIR Café's leaflet

Important factors that contribute to the production of high-quality coffee from Rwanda:

- Micro-climates with recurrent patterns of rain and sunshine.
- Excellent elevation of coffee fields with the majority of quality coffee produced from 1400 to 2000 meters in rich volcanic soils.
- Rich coffee culture with a 100 year tradition of growing Arabica coffee.
- Developed coffee infrastructure with central washing stations located in the heart of the various coffee growing regions.
- Traditional Bourbon variety coffee plants combined with the introduction of Blue Mountain and Harrar varieties.

For further information, contact OCIR Café
(The Rwandan Coffee Authority) at:

P.O. Box 104
Kigali-Rwanda

Telephone: 250-575600 or 250-575398
Fax: 250-573992

Email: ocircafe@rwanda1.com
Website: www.rwandacoffee.com

High-Quality Arabica Coffee from Rwanda

Land of a Thousand Hills

Rwanda has a long rich culture of growing highland coffee. The overwhelming majority of coffee growers in Rwanda are individuals who work their farms as a family. There are over 400,000 small scale coffee growers throughout the country.



"We tasted an outstandingly defined crispiness. The coffee is deliciously sweet, with definitive citrus high notes and deeper chocolate tones. We felt we had found a coffee that captured the spirit of Africa in cup."

"Rwanda grows Bourbon coffee, one of the original varieties of Arabica. This coffee is highly prized for its wonderfully sweet & fruity flavor, rich and full body with no astringency or after-taste."

"This coffee is clean, bright and fresh with definite sweet flavors"

Few places in the world offer the soil-altitude-climate relationship Rwanda enjoys, where coffee plants thrive and cherries slowly mature, developing the unique taste and aroma identified with the high-quality coffee from the hills of Rwanda.

Hand-tended, hand-picked, fully-washed, sun-dried, hand-graded Rwandan coffee produces a large, beautiful blue-green bean.

Coffee grown on the slopes of the stately Virunga volcanoes produce a fine high quality coffee characterized by its distinctively Bourbon taste.



The reliable wet season rains combined with high altitude and rich volcanic soils create the ideal coffee growing conditions for Rwandan coffee.

High quality Rwandan coffee is grown above 1400 meters in three unique regional areas:

- ▣ The Western Shores of beautiful Lake Kivu, the largest of Rwanda's many crater lakes.
- ▣ The Central Highlands region where coffee is cultivated.
- ▣ The Eastern Highlands... this high plateau soil is rich in organic matter and enjoys an ideal coffee growing climate.

Annex 4: ADAR's leaflet

<h3>Other Special Features</h3> <p>ADAR develops and diffuses training modules and materials in support of its technical assistance activities. Modules produced to date (October 2003) include:</p> <ul style="list-style-type: none"> ▶ Coffee Pruning and Integrated Pest Management Techniques; ▶ Model of a Feasibility Study and Business Plan for an investment in a small Coffee Washing Station (CWS); ▶ CWS Management Techniques; ▶ An Analytical Tool to Estimate CWS Financial Profitability; ▶ CWS Cost Accounting Module; ▶ CWS Construction Drawing Design; ▶ Evaporative Cooler Construction Module; ▶ Production and Post-Harvest Handling of Passion Fruit for Export; ▶ Production and Processing of Bird's Eye Chillies; ▶ Regional Market study of Fresh and Processed Fruits and Vegetables; ▶ An Environmental Management Review for Rwandan Agribusinesses. <p>In addition to offering technical assistance, training and market research and information, ADAR sponsors seminars and workshops of interest to the Rwandan agribusiness community, at large.</p>	<h3>MORE INFORMATION</h3> <h4>Technical Staff</h4> <p>Chief of Party Maurice Wiener Horticulture Specialist Anne Turner Senior Technical Cadre Anastase Murekezi Business Development Jean-Bosco Seminega</p> <h4>Members</h4> <p>ADAR is guided by the ADAR Advisory Group whose members are:</p> <table border="0"> <tr> <td>ACDI VOCA</td> <td>Country Representative</td> </tr> <tr> <td>AFER</td> <td>President of the Association</td> </tr> <tr> <td>Banques Populaires</td> <td>General Manager</td> </tr> <tr> <td>BCR</td> <td>General Manager</td> </tr> <tr> <td>BRD</td> <td>General Manager</td> </tr> <tr> <td>CARE</td> <td>Country Representative</td> </tr> <tr> <td>Emballage Rwanda</td> <td>Manager</td> </tr> <tr> <td>Ets Kanock</td> <td>General Manager</td> </tr> <tr> <td>FRSP</td> <td>Executive Secretary</td> </tr> <tr> <td>Inyange Dairy</td> <td>General Manager</td> </tr> <tr> <td>MINAGRI</td> <td>Secretary General</td> </tr> <tr> <td>MINECOFIN</td> <td>Executive Secretary CEPEX</td> </tr> <tr> <td>MINICOM</td> <td>Secretary General</td> </tr> <tr> <td>RSSP</td> <td>Coordinator</td> </tr> <tr> <td>SICAF</td> <td>General Manager</td> </tr> <tr> <td>USAID</td> <td>S03 Cognizant Technical Officer</td> </tr> </table>	ACDI VOCA	Country Representative	AFER	President of the Association	Banques Populaires	General Manager	BCR	General Manager	BRD	General Manager	CARE	Country Representative	Emballage Rwanda	Manager	Ets Kanock	General Manager	FRSP	Executive Secretary	Inyange Dairy	General Manager	MINAGRI	Secretary General	MINECOFIN	Executive Secretary CEPEX	MINICOM	Secretary General	RSSP	Coordinator	SICAF	General Manager	USAID	S03 Cognizant Technical Officer	 <p>Assistance à la Dynamisation de l'Agribusiness au Rwanda</p> <h1>ADAR</h1> <p>Helping Rwandan Agribusiness Add Value</p> <p>The ADAR Project Rue du Lac Mpanga B.P. 3582, Kigali Tel: (250) 517400 517401 570433 570434 Fax: (250) 517467 E-mail: info@adar.org.rw</p> <p>The ADAR Project is open Monday through Friday, from 8 a.m. to 5 p.m.</p>   <p>CHEMONICS INTERNATIONAL INC.</p>
ACDI VOCA	Country Representative																																	
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<h3>Cost Sharing</h3> <p>In November 2002, ADAR received USAID authorization to begin implementing a Small Grant Cost-Sharing Fund which is aimed at defraying the cost (and risk) of certain, specific types of initiatives undertaken by ADAR clients.</p> <p>The cost-sharing facility, funded in the amount of \$300,000 will provide financing up to \$25,000 for individual projects.</p> <p>A cost sharing procedures and operating manual which includes an application form, detailed implementation and monitoring procedures, selection criteria, model of contract and templates for correspondence and tracking forms provides the framework for the administration of this new project service.</p>																																		

Background

The ADAR Project, a six year agribusiness development project (Nov. 2000 - Nov. 2006) financed by the United States Agency for International Development (USAID), is being implemented by Chemonics Inc.

The project helps clients to increase productivity and profit, improve product quality and increase access to financing and market. Emphasis is placed on the coffee, horticultural production for export, pyrethrum, food processing, ornamental flowers and the tea sub-sectors.

Our Approach

ADAR seeks to develop in-depth, long-term relations of confidence with its partner-clients. Whether accompanying a client from the project identification phase through project launching or providing targeted technical assistance and training to an on-going business.

ADAR's permanent staff is committed to really understanding our clients businesses to better respond to their needs. Close partnerships are developed between Project and investor which help assure that ADAR assistance will significantly contribute to project success.

Be it providing master trainers to newly constructed coffee washing stations, advising an investor on passion fruit plantation establishment or conducting a diagnostic study of an existing business, ADAR believes that personalized, hands-on expert advice is critical to successfully launching a new business venture.

ADAR recognizes that most agribusiness problems demand multi-dimensional responses which are generally beyond the competence of any one project.

ADAR collaborates closely with USAID partners and other programs and institutions which have complementary areas of expertise to bring the required integrated solution to the problem at hand.

Services Offered

- Implementation of technical and financial feasibility studies;
- Development of business plans;
- Individualized technical assistance and training in all phases of the project implementation cycle from identification through start-up and product marketing;



- Targeted training to improve business management skills;
- On demand Internet research for crop production, post-harvest and processing technologies, market supply and demand conditions, potential partners, norms and standards, import and export regulations, etc.;
- A Documentation Centre with a Cyber Café - called the **AgriBusiness Centre** for all agribusiness-related information needs.

What is Your Profile?

- You may be actively running an agribusiness venture;
- You may consider starting up again a business that has ceased operating;
- You may be starting or expanding your range of business activities;
- You may be looking for partners, to bring capital and skills to help your business;
- You may be in need of management training, business consultant or other technical assistance;
- You seek to improve your management, your operating performance, product quality, market position, and exports;
- You want to learn more about institutional sources of financing and how to access them.

What You Can Expect

- A team of four highly qualified advisors to provide personalized attention to your project requirements;
- Access to a vast array of highly specialized local and international expertise which can be mobilized as needed;
- Technical and managerial training programs tailored to specific needs;
- Pertinent and comprehensive technical and market information to help clients make the right choices;
- Identification of input suppliers, equipment dealers, sources of financing and prospective buyers.

ADAR is the resource needed by hard working, committed private sector agribusiness operators who seek technical advice to promote and develop:

- ▶ better quality of their products;
- ▶ better product range and market access;
- ▶ better internal organization and procedures;
- ▶ better business plan - concept and design;
- ▶ better planning, marketing, and financial controls;
- ▶ better information sources of financing;
- ▶ increased profitability.



The ADAR project specializes in management and marketing assistance for private sector agribusiness operators.

Annex 5: Fact Sheet Migongo Coffee Washing Station

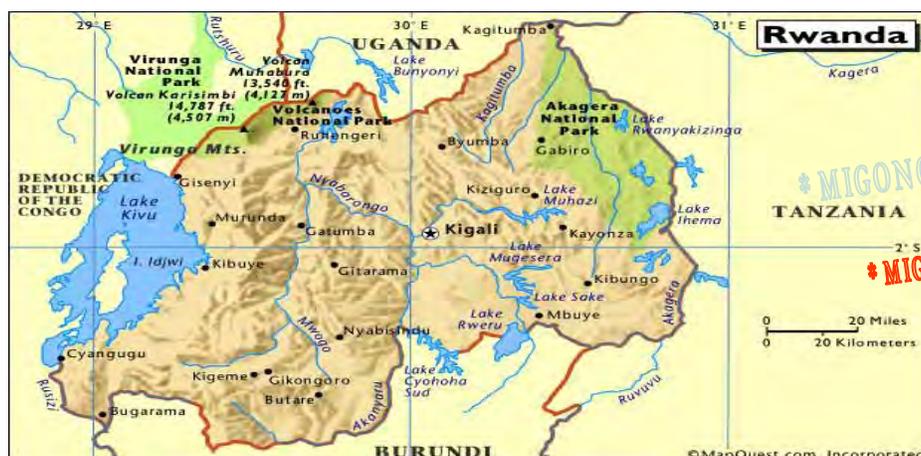


Coffee Washing Station Fact Sheet

MIGONGO



- Owner:** ENAS, Mr. Alfred Nkubili. Address: B.P. 2690, Kigali, Rwanda.
Phone (250) 57-13- 49); Cell Phone: (250) 0830-07-60. Fax (250) 57- 40-68).
Email: nkubili@rwanda1.com. Language: French.
- Type of Business:** Private Enterprise.
- Location:** Mpanga Sector, Nyarubuye District, Kibungo Province; 3 hours from Kigali.
- Start-up date:** April 2003.
- Origin of Cherries:** Nyarubuye & Rukira Districts smallholders and estate plantation (48 hectares of Arabica Catuai).
- Production Season:** March 15 through June 30.
- Varieties:** Arabica Bourbon & Arabica Catuai.
-
- Growing conditions:** Altitude of 1350 - 1700 m; Average Rainfall of 850 mm; Average annual temperature 27°C; clayey sandy soils.
- Processing:** Wet milled; three disk pulper with pre-grader. Deep well water source; fermentation tanks; washing-grading channel; soaking tanks; sun-dried.
- Production capacity:** 200 T of parchment coffee.
- Coffee characteristics:** Bluish-green color; sweet, balanced flavor.
-
- 2003 Production:** 25 T of export-quality coffee.



Chers collègues, membres et amis de l'AgriBusiness Centre (ABC),

Ce 4^{ème} Bulletin/Newsletter de ADAR vous offre le résumé des activités du Projet de Juillet à Septembre 2003, trimestre qui a été marqué par un certain nombre d'événements significatifs. Intenses activités comme toujours !

Highlights

ADAR a co-financé la visite au Rwanda de représentants de BD Imports, Intelligentsia Coffee et Thanksgiving Coffee des USA, intéressés par le café *Fully Washed* de qualité.

Ces acheteurs ont exprimé leur intérêt pour l'achat de 2 conteneurs de grade A produit par les 11 stations actuellement opérationnelles, dont celles assistées par ADAR.



Dégustation par les 3 acheteurs au laboratoire de l'OCIR Café

En raison du nombre croissant de promoteurs intéressés à investir dans le secteur café et plus spécifiquement dans une station de lavage, ADAR a développé un document intitulé

« **Etude de Faisabilité et de Business Plan d'un Modèle Standard de station de lavage de capacité moyenne de production** »

L'objectif de ce document est de permettre à tout investisseur potentiel d'identifier les critères déterminants d'implantation de ce type de station lavage de café et d'avoir une estimation du coût de l'investissement.

Ce document, révisé sur base des commentaires des bénéficiaires, peut être personnalisé sur demande et après étude du dossier.

Assistance Technique

Café

Au cours de ce trimestre, ADAR s'est particulièrement impliqué dans :

- l'assistance technique à un investisseur dans la région de Ngenda pour l'identification de son site et le démarrage des travaux. En vue de négocier un accès au financement auprès de sa banque, ADAR lui remettra au mois de Novembre une étude de faisabilité et un Business Plan adaptés à ses besoins ;
- l'assistance et le conseil à quatre nouveaux promoteurs portant de l'intérêt au secteur café ;
- les coûts de production : un rapport préliminaire a été remis sur ce sujet aux opérateurs des stations de lavage de Masaka, Sake, Ndera et Migongo : il indique dans l'ensemble un prix de revient d'1kg de café vert ex-usine élevé dû en grande partie au transport du café cerise, du centre de collecte à la station de lavage ;
- la logistique pour une mise à niveau à la dégustation du café de Spécialité organisée par l'EAFCFA - East African Fines Coffee Association et le projet RATES de Chemonics basé à Nairobi; les 7 participants, dont 3 membres du

- personnel de l'OCIR Café et un consultant de ADAR, peuvent désormais mieux évaluer le café du Rwanda par rapport à la compétition et identifier les changements à apporter pour améliorer encore la qualité du produit.
- la mise en application du modèle d'analyse financière d'une station de lavage de café : un cadre de la BRD a suivi une formation en vue d'utiliser cet important outil au sein de sa banque.

Horticulture et Food processing

Au mois d'Août, ADAR a assisté un groupe de producteurs de maracuja de la province de Cyangugu pour préparer et soumettre à ACIDI VOCA un projet s'élevant à \$49.000. L'objectif est de leur permettre d'acheter le matériel nécessaire à la production d'un fruit de qualité pour l'export. Démarrage prévu en Octobre.

Un accord de collaboration a été préparé entre ADAR et ISAR pour l'assister dans ses activités de recherche en général et dans celle du maracuja en particulier. Il consiste en premier lieu dans l'établissement d'une pépinière destinée à produire des fruits sains à la station de Rubona en vue de les distribuer aux producteurs d'ici 2004. Des feuillets couvrant les principales caractéristiques de la maladie du maracuja seront traduits en Kinyarwanda, publiés dans le cadre du programme USAID/ATDT/CIAT et distribués aux producteurs.

ADAR a poursuivi ses activités dans le Tamarillo et le Piment Langue d'oiseau (*Bird's eye chilli*). Des échantillons de tamarillo ont été envoyés dans un laboratoire spécialisé en France pour analyse avant export. La production de *Bird's eye chilli*, plantée au mois de Janvier 2003 à Butare, est toujours sous contrôle à Butare et de nouvelles semences de très bonne qualité venant de Malawi seront plantées au cours du prochain trimestre.

Le projet a travaillé activement avec les promoteurs des projets d'installation d'une unité de « Fruits secs » (banane frecinette) à Kibuye et d'une usine de transformation de soya à Kigali.

Présence de ADAR dans de nombreuses manifestations

Dans le cadre du workshop organisé par la FRSP le 29 juillet, ADAR a parlé de "Stratégie Marketing pour l'Agribusiness" ; et au cours de l'atelier de travail organisé par le MINAGRI, sa présentation a été sur le "Potentiel à l'Export du Maracuja et des autres produits Horticoles du Rwanda".

La présence de ADAR a été très remarquée à la foire de Kigali où un modèle de Chambre Froide au Charbon a été préparé par SINA FRUITS et montré au public. N'oubliez pas que cette petite maison de charbon permet de conserver les fruits frais à une température inférieure de 9° à la température extérieure !

Un stand a également été conçu comme modèle de production de maracuja de qualité à l'export.



Des réunions ont été organisées dans les locaux du projet entre des clients et la BRD, le projet RSSP et le projet de micro-finance AQUADEV en vue de découvrir les opportunités de financement offertes par ces institutions.

Deux départs au sein de ADAR

Geoffrey Livingston va quitter le Projet en Décembre.

Il est appelé à assurer d'autres responsabilités au sein de Chemonics International Inc.

Maurice Wiener prendra la direction pour la 2^{ème} phase, jusqu'en Novembre 2006.

Jean-Claude Nkulikiyinka, responsable de l'AgriBusiness Centre, nous quittera en Novembre. Les services du Centre seront dès lors assurés par Marie Rurangwa.

LA NOUVEAUTÉ du Trimestre

La deuxième version de l'annuaire de l'agribusiness au Rwanda - le *Directory 2003* - élaboré et conçu par le Projet ADAR a été distribuée à tous nos clients au cours de ce trimestre.

Si vous ne l'avez pas reçu, veuillez contacter Marciana Nyirabanguka, notre Assistante Administrative, elle se fera un plaisir de vous remettre un exemplaire.

AgriBusiness Centre

De nouvelles publications sont désormais disponibles depuis ce trimestre :

→ *l'Etude de Marché Régional (Uganda / RDC) des produits dérivés des fruits et légumes.*

Cette étude examine les opportunités d'exportation de jus de fruits, de concentrés de jus et de confitures produits par le Rwanda vers l'Uganda et l'Est de la RDC - région du Lac Kivu. Les conclusions du rapport sont positives : il existe une demande pour le jus et le concentré de maracuja. En vue d'y répondre, les entreprises rwandaises doivent améliorer dans l'ensemble leurs outils de production ;

→ *L'Etude de Faisabilité et de Business Plan d'un Modèle Standard de station de lavage de capacité moyenne de production.*

→ *La Directive Européenne sur les importations de jus de fruits, confitures et leurs ingrédients.*

L'Agribusiness Centre poursuit sa formation à l'Internet pour ses membres : 18 clients en ont bénéficié ce trimestre ! Vous êtes toujours les bienvenus si vous avez besoin d'assistance.