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Burundi Agribusiness Program: PY 4 Fourth Quarter Report

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Acronyms and Abbreviations

ADC	Agent de Développement Communautaire
AFAB	The Burundi Association of Women Entrepreneurs
ARFIC	Agence Régulateur de la Filière Café
ASBL	Association sans but Lucratif
AVEDEC	L'Association Villageoise d'Entraide et de Développement Communautaire
BAP	Burundi Agribusiness Program
BBIN	Burundi Business Incubator
BCC	Business Concept Course
BBN	Burundi Bureau of Normalization
CAPAD	The Confederation of Agricultural Producer Associations for Development
CECM	Caisse d'Epargne et Crédit Mutuelle
CERADER	Centre de Recherche Agronomique et du Développement Rurale (U Ngozi)
CNAC	Confédération National des Caféculteurs
CNTA	Centre Nationale de Technologie Agro-Alimentaire
COGS	Cost of Goods Sold
COP	Chief of Party
COTR	Contracting Officer's Technical Representative
CQI	Coffee Quality Institute
CTO	Cognizant Technical Officer
CURDES	Centre Universitaire de Recherche sur le Développement Socio-économique
CWS	Coffee Washing Station
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DG	Directeur Général (Managing Director)
DPAE	Direction Préfectorale de l'Agriculture et Elevage
EAFCA	East African Fine Coffee Association
EAWEEExN	East African Women Entrepreneurs Exchange Network
ESF	Economic Support Funds
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FBU	Francs Burundais
GAP	Good Agronomic Practices
GDP	Gross Domestic Product
GMP	Good Management Practices
GOB	Government of Burundi
HACCP	Hazard Analysis and Critical Control Point
HVC	Horticultural Value Chain
IAB	Industrie Agro-alimentaire de Buterere (dairy)
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
INADES	Institut Africain du Développement Economique et Sociale
IQC	Indefinite Quantity Contract
IRAZ	Institut de la Recherche Agronomique en Zootechnie
ISABU	Institut de Recherche Agronomique du Burundi
KIST	Kigali Institute of Science and Technology

KTBH	Kenyan Top Bar Hive
LF/CV	Lead Farmer/Community Veterinarian
LOE	Level of Effort
LOL	Land O'Lakes
MFI	Micro-Finance Institution
MINAGRIE	Ministère de l'Agriculture
MCC	Milk Collection Center
MOU	Memorandum of Understanding
MSU	Michigan State University
NGO	Non-Governmental Organization
OTF	On the Frontier
OCIBU	Office du Café de Burundi (Coffee Board)
PAGE	Projet d'Appui à la Gestion Economique
PHAST	Participatory Hygiene and Sanitation Transformation
PNIA	Plan Nationale d'Investissement Agricole
PRASAB	World Bank Funded Development Program in Burundi
PO	Producer Organization
PP/S	Participants per Session
SCAA	Specialty Coffee Association of America
SCAE	Specialty Coffee Association of Europe
SCEP	Service Conseil aux Efforts de Privatisation
SCP	Soil Conservation Practices
SIVCA	Société pour la Valorisation Industrielle du Café
SODECO	Société de déparchage du Café
SOGESTAL	Société de Gestion des Stations de Lavage
STTA	Short Term Technical Assistance
UHT	Ultra-High Temperature
USD	US Dollar
USG	US Government
VC	Value Chain
WB	World Bank

Executive Summary

This report is submitted to USAID/Burundi to document activities of the Burundi Agribusiness Program for the fourth quarter of our fourth project year (July-Sept 2011).

During this reporting period the program undertook its annual field survey to document a number of internal performance indicators. Managed by our Monitoring and Evaluation team and using students from the University of Ngozi as enumerator, the current study interviewed members of 542 client households, representing all sectors of project activity in 10 of the 12 provinces of the project zone. The report in its entirety is presented in the annex, but key findings include:

- 62,276 households are direct beneficiaries of BAP assistance. According to recent survey conducted by BAP, average family size among our clients is 6.2 persons, meaning we are indirectly impacting 386,111 people in the project zone
- 34% of our clients believe their revenues have increased due to BAP interventions. This is a 28% increase over PY3
- 96.9% of clients surveyed have adopted at least one improved technique being promoted by BAP
- 44.8% of clients have adopted at least one new technology proposed by BAP. In coffee fully 64.6% of clients have adopted a new technology while only 11.8% of clients collaborating with our horticultural component have done so thus far. In dairy the adoption rate is 58%
- 86.3% of our clients affirm that BAP activities respect or improve environmental conditions in their communities. This is an increase of 8.8% over PY3
- The percent of clients with latrines at their “work sites” has increased 67.5% from 8% of households to 13.4% of households between Py 3 and PY 4
- 54% of clients interviewed have incorporated some form of agroforestry on their farm while 80% use some sort of technology to protect against soil erosion with 55% using contour planting and 43% planting hedgerows on contours
- 17.3% of our client households are producing and applying compost as fertilizer, while 26.7% are land applying some form of manure. Only 9.2% are using chemical fertilizers
- 86.5% of clients say that BAP activities have led to increased economic opportunities in their communities. This is a increase of 1.4% over PY3
- 63% of our clients listen regularly to the Akeza karigura radio program
- 96.6% of associations assisted by the program have some form of legal recognition. 20.1% are recognized nationally while 36.2 % have provincial level agreements.
- 85.4% of client associations have statutes available in Kirundi, while 83.2% also possess written internal rules of order in local language

In Coffee activities this quarter focused on the organization and successful execution of the Burundi Prestige Cup competition for the best Burundi Coffees and a precursor for 2012’s Cup of Excellence competition; on seminars, including field visits, organized at the request of Provincial governors to explain the first year’s results of BAP’s field demonstrations -designed to improve coffee productivity, on capacity reinforcement of our client associations and on monitoring and documenting the renaissance of the government’s efforts to divest itself of the operational infrastructure in coffee and finally proceed with the privatization of the sector. We note that the percentage of washed coffee has risen vs fully washed coffee and that overall sector productivity

declined by 50% this campaign. The fact that washed coffee is now almost half of Burundi's total coffee production does not bode well for Burundi's retaining its reputation for single origin quality among the international specialty coffee community. We note that direct sales of Burundian coffee represent 7.4% of the annual production of fully washed coffee for 2011. Further, the diversity of international buyers, as well as their geographic spread has increased this year.

In dairy, the equipment for the two Milk Collection Centers has arrived in country. By the end of the quarter the equipment at the center of Bukéyé was fully installed and calibrated, the management team was recruited and trained and final negotiations were underway with dairy association members in the draw zone for the contracting of their milk. The Rutegama MCC should be operational in November 2011. Thirteen technicians were trained with BAP facilitation, in artificial insemination and 50 cows were inseminated with improved race semen in the Bukéyé draw zone as part of this training. In other activities BAP tracked the distribution of forage legumes and Pennisetum; trained forage producers in proper cutting and pruning techniques, documented the re-diffusion of forage seed from multipliers to other dairy herders, and worked on introduction of improved appropriate technology hay balers and forage cutters to our clients.

In horticulture, most of our effort focused on the 24 demonstration plots that were established in seven of twelve provinces in the project zone to showcase best production practices. Six field days were organized at sites in five of the provinces. During these days the program emphasized farmer to farmer exchanges, achievements and appreciations of the best practices and technologies being promoted. 1350 farmers were trained this quarter in best agronomic practices for horticulture while 331 farmers (53.5%) of whom were women participated in the field days. Collaboration with the DPAE was evident as 12 cadre of the DPAE and 6 rural monitors participated actively in horticulture activities. New techniques highlighted during this reporting period included raised bed planting, optimum seed density, mixed fertilization and pest management, mulching, irrigation using treadle pumps and vertical trellising for tomatoes. By the end of the reporting period production results were only partially known, but the "buzz" and excitement for these activities was growing.

This reporting period **in gender and microenterprise** activities there was an intensification of capacity reinforcement activities for associations and their members both for institutional capacity reinforcement and improved governance, but also for better management and business practices. The end of the first phase of literacy training found that 80% of those who registered for training became regular participants and greater than 93% of regular participants finished the literacy curriculum and became "neo-literates". Other activities included working with dynamic associations on the development of income generating activity proposals, identification of pilot sites for the introduction of fuel efficient stoves and kitchen gardens and assisting AFAB with the organization of a regional women's entrepreneurship workshop.

In Grants and Financial Intermediation we note that three of the community water systems- Kinyovu, Murema and Kayenzi were remitted to their communities through grants at the end of their guarantee periods with the enterprises that had rehabilitated them. Much of our time during this reporting period was spent increasing our pipeline of potential grantees, in field visits with potential grantees to discuss proposed activities, documenting their organizational and economic history, offering technical backstopping in the preparation and financial analyses of proposed activities, and collaborating with clients in the development of dossiers for submission under the DCA.

In Community Water, Sanitation and Effluent Mitigation much of the quarter was spent in support of other project components, particularly gender and micro-enterprise and coffee. Water harvesting effluent control system redesign and sized tailoring of systems for use at mini-washing stations; analyses of water environmental results garnered from samples taken at different points at washing stations with improved effluent control systems and those where none exist; as well as time invested in negotiating the terms and conditions of the community water system grants were major time sinks during this reporting period. BAP pilot washing stations with properly managed effluent control systems showed decreased levels of nitrites and nitrates, decreased suspended matter, and significantly higher pH after treatment than in control stations without effluent control. We note too that these stations showed a marked decrease in noxious odors due to the separation of pulp solids from grey water in the effluent outflow, post pulping. While BOD was significantly improved at pilot washing stations, more work still needs to be accomplished to better aerate grey water before it rejoins surface flow.

At the Burundi Business Incubator the quarter was characterized by was characterized by the effective start up of the Shika Business Plan Competition in collaboration with BidNet, an intensification of training activities, acceptance of the BBIN as a Business Edge franchisee with the International Finance Corporation (IFC), the beginning of mentoring services to pre-incubatee clients and a number of team building sessions for the management team of the BBIN. By the end of this quarter the BBIN had accumulated sufficient cash reserves to cover operational expenses (if kept at current levels), post donor financing, for a period of eight months. This tendency bodes well for BBIN medium term sustainability.

Value Chains

Coffee

Introduction

Four principle activities characterized our interventions in coffee during this reporting period. First was the continued capacity reinforcement for and with our farmer clients. Second was the Burundi Prestige Cup, a precursor to the Cup of Excellence, a capstone marketing event for specialty coffee. Third was activities related to coffee productivity and fourth was liaisons, organizing and documenting the direct sales of Burundi's 2011 coffee harvest to international buyers and roasters.

Activites

Monitoring of coffee sector reforms

Burundi has subscribed to a policy of privatization of the industrial infrastructure of the coffee sector, retaining the role of sector regulator. In 2009 the first tender of infrastructure resulted in the sale of only 13 washing stations to one private sector operator WEBCOR. It was anticipated that the tendering would continue annually until all remaining 133 washing stations and two dry mills were sold. This disengagement remains as a precondition for continued World Bank budgetary assistance under DARE IV. Since 2009 the GOB has not followed through on its promise to re-tender the infrastructure, partially due to the electoral campaign in 2010 and partially due to continued resistance from the coffee farmer's confederation (CNAC) over the terms and conditions of the sales. The GOB has now announced its intention to tender the remaining infrastructure by the end of the 2011 calendar year.

In the period between the first tender and the present, the GOB has not remained inactive. Several studies were commissioned, one evaluating the strengths and weaknesses of the first tender, and a second study evaluating the mechanisms for activating the reserved shares in the privatized stations for the benefit of the farmers and their organizations. Further, SCEP (the Service in charge of Public Enterprises) underwent a restructuring post-election and the new Commissaire, with members of the Coffee Reform committee made a tour and held a series of meetings with farmers and other interested parties in the interior of the country in order to understand peoples questions and concerns and to respond where appropriate in order to advance the privatization dossier.

In zones where sales have already occurred (Kayanza and Ngozi provinces), the farmers requested clarification from the government as to how they are to purchase their shares, insisting that any effort should be accompanied by a capacity reinforcement of existing cooperatives in order to enable them to transparently and professionally manage their structures in the future. In other zones, the farmers suggested the GOB re-think the conditions of sale, especially the size and distribution of the "lots". The farmers suggest that subdividing the lots into individual units (one washing station or one dry mill) would open the door for small or medium sized Burundi investors to procure the industrial infrastructure, conserving this, this "national heritage" in the hands of Burundians at affordable prices.

We are pleased with the GOB's decision to move forward with the next round of tendering but wonder if the wish to tender before the end of this calendar year is feasible. It will take time to name

a committee to oversee the bids, to review and revise the terms and conditions of sale and to publicize the tender in conformity with the legislation governing public tenderings. Further, once the terms and conditions are defined, the outside world needs to be informed and time reserved for potential investors to perform their own assessments and prepare the complete bidding documents. Once bids are received there will necessarily be a period during which the bids are analyzed adjudicated and the sale consummated.

We believe this process will take a minimum of 4 months, suggesting that if the process gains momentum in November, it could be finalized by late February 2012, which is late given that next year's coffee harvest risks to be both early and abundant. Further, investors will expect to use land title as guarantee against their request for operating capital and the infrastructure in question, while effectively "purchased" under rights of Eminent Domain, remain untitled and a source of conflict with the hereditary land owners. Add to this usury privileges that have accrued for certain farmers in the bottom lands of the washing stations for the past 20+ years that will probably need to be terminated, as well as the need to upgrade and improve infrastructure prior to the start of the coffee campaign and it is unlikely that any new investors will be operational for 2012.

Continuing the transition period for another year may not be a solution because, currently, the SOGESTAL that manage the infrastructure under contract with the GOB will be ineligible as bidders for two reasons- first, they have huge debt overhangs and are effectively underwater to the government and second, the government will need to divest itself of its shareholdings in the SOGESTAL so that they may qualify as bidders, as it is not anticipated that a parastatal would be a qualified bidder. How much time will this sale of shares take? This is unclear. What is unknown is whether the SOGESTAL and their staff will remain motivated and continue the necessary steps to prepare the 2012 coffee campaign in the face of uncertainty. During the previous tender the SOGESTAL held off and delayed preparing for the campaign pending the results of the tender. This was detrimental both to the efficiency of coffee operations and the quality of the coffee.

BAP continues to monitor the situation as things unfold.

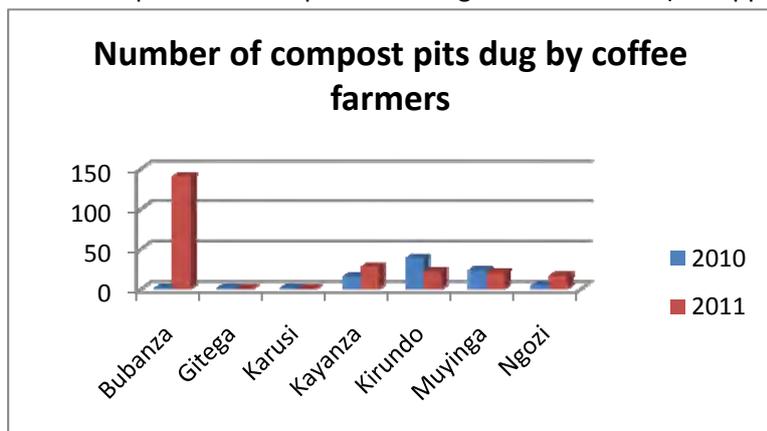
Operational Research/Development actions destined to improve coffee productivity

From July through September, in conformity with the agronomic calendar for coffee, BAP's coffee agronomists collaborated with lead farmers managing demonstration plots to ensure that mulching and pruning activities were accomplished in a timely manner. For farmers seeking to plant more coffee, the agronomist assisted in the choice of land with the best mix of appropriate characteristics. In addition, the agronomists continued to promote the production of compost using coffee pulp or other available vegetative matter. This reporting period the agronomists assisted in setting up 25 new compost pits-6 in Kayanza, 16 in the province of Ngozi and three in the province of Kirundo. A total of 70 farmers were assisted directly with mulching, pruning and thinning on their demonstration fields.

Farmers understand well the need to prune, thin, and mulch their coffee. However they are confronted by a) a lack of appropriate tools; b) a lack of available straw and c) a labor constraint during the months of May and June (the opportune time for mulching). Concerning the compost pits, farmers rue the distance to the washing stations as they seek to procure pulp and/or the lack of available, affordable manure in proximity. Mulching earlier in the cropping cycle (just at or post harvest) before the rains cease assists in maintaining soil moisture in the rooting zone. Mulch

applied in July/August, during the dry season a) breaks down slower and b) does not assist the plant in avoiding hydric stress by retaining soil moisture near the surface.

The development of compost as an organic alternative (or supplement) to chemical fertilizer was



introduced during exchange visits by farmers to Rwanda and Tanzania in 2010. At the end of last fiscal year there were 83 compost pits being experimented. One year later there are 224 in the project zone. As can be seen from the figure below 98 farmers in the commune of Ntamba in the province of Bubanza have instituted 140 of these,

representing 62.5%. These farmers are in an isolated commune far from input dealers. The number of compost pits in Ngozi and Kayanza provinces increased over the past 12 months while the numbers in Kirundo and Muyinga provinces decreased slightly. As farmers learn of the results of our production demonstrations and the benefit compost can add to their overall productivity, we expect to see more compost being applied to coffee plantations.

In September, the agronomists began documenting production costs for farmers participating in demonstrations. The component leader monitored progress being made in the collaborative effort between ISABU/BAP and the University of Ngozi to improve productivity, reduce cyclicity of production and diminish the prevalence of potato defect in Burundi's coffee. By the end of the reporting period 72 farmers had been identified to participate in the study, background information on their demographics and agronomic systems was being collected and soil samples had been procured for analysis at ISABU.

At the request of the governor of Ngozi, BAP- having published the results of our first year's demonstrations, held a workshop for communal administrators, deputies, farmer federation representatives, personnel of the SOGESTAL and WebCor and DPAE technicians on extension techniques for improving coffee productivity in the province. During the workshop it was revealed that only 68% of the coffee plants in the province are in a productive state and that per tree productivity has declined to less than 1 kg/cherry per coffee tree. BAP presented the results of our demonstration plots and all participants proceeded on a field visit. At the end of the workshop the following strategic decisions/recommendations were formulated.

1. Communal administrators will insert coffee extension activities as a priority in their agenda
2. The communal extension committees need to be rendered operational, using the existing means available at the communal level
3. A provincial oversight committee will be established to monitor coffee production, productivity and extension efforts
4. Communal agronomists will be formally tasked with providing coffee extension messages on best practices at the hillside level each Thursday
5. In addition to normal cultural practices and proper agronomic maintenance, all extension personnel should actively promote the use of fertilizers and compost.

6. The provincial oversight committee will make regular trips to each commune to sensitize the populations and motivate the agronomic monitors. This will be scheduled on a regular basis and will implicate the communal administrators and their staff.

BAP notes that a World Bank team visited demonstration plots in the commune of Gashikanwa to take note of the effects of improved fertilization and production practices on coffee plantations.

Private Sector Development and Entrepreneurship

Capacity Reinforcement of Lead Farmers by ADC

During this reporting period ADC held 43 training sessions for lead farmers at coffee washing stations throughout the project zone. Three technical themes were developed. Of these the two themes generating the greatest farmer interest were agronomic maintenance of coffee plantations and composting. Nursery production of coffee plants was facilitated only for farmers in the provinces of Kirundo, Muyinga and Ngozi.

Table 1: Participation by Lead Farmers at Training Sessions facilitated by ADC at Coffee Washing Stations

Thèmes agronomiques	Total				
	M	W	T	#s	% W
Agronomic maintenance of the coffee plantation	257	144	401	20	35.9
Composting	230	90	320	15	28.1
Nursery Production of Coffee Plants	89	21	110	8	19.1
Total	576	255	831	43	30.7

We note that this is a down time in the cycle of agronomic training for coffee farmers as the harvest has finished and the coffee is being prepared for sale. Too BAP had two ADC out on maternity leave and a third who resigned during the reporting period to pursue further study in the US. We note as well that no training sessions for coffee were offered at washing stations in the Sogestal Mumirwa (provinces of Cibatoke, Bubanza, Bujumbura Rural, Bururi and Makamba) during this period. Women's participation averaged 30.7%, with the greatest average participation noted for themes related to the agronomic maintenance of coffee plantations (35.9%) and composting (28.1%).

Capacity Reinforcement by Lead Farmers for others on their hillsides

One hundred forty nine sessions on 111 different hillsides occurred during this quarter. Effective participation ($\#s/h \times \text{mean pp/s}$) = 3363 of whom 40.4% were women. The most popular topic of this reporting period, judging by the number of total participants and the number of sessions held was agronomic maintenance of the coffee plantation (76 sessions) followed by pest management (20 sessions). Mean participation was 30.3 pp/session. Greatest average participation occurred at sessions on fertilization (55.5 pp/s), improved methods for processing coffee (39.3 pp/s) and composting (37.4 pp/s). Women's participation followed the overall trending during this period.

Table 2 : Participation at training sessions facilitated by Lead Coffee Farmers from July-Sept 2011

Agronomic Theme	M	W	% W	Total	#sessions/ hillside	#sessions	X pp/s
Agronomic maintenance of the coffee plantation	2021	1323	39.6	3344	76	113	29.5
Pest Management	302	186	38.1	488	20	20	24.4
Fertilization	106	116	52.2	222	4	4	55.5
Composting	200	137	40.6	337	8	9	37.4
Improved methods for processing coffee	58	60	50.8	118	3	3	39.3
Total	2687	1822	40.4	4509	111	149	30.3

Evolution of mini-washing stations

Construction of infrastructure by the cooperative members at Karinzi and Korane has been completed. Small warehouse/offices have been constructed as has the site for the installation of the eco-pulper. The members of Karinzi preferred to construct a mini holding bin for cherry in the image of the larger holding tanks at classic washing stations while at Korane the farmers have constructed an open air hangar with concrete slab to which the eco-pulper will eventually be fixed by without an associated holding tank for cherry. At Korane, however, the members have built a small water retention dam near the site of the future eco-pulper to facilitate pumping water to the processing equipment's tank.

At Bwayi, the construction of the warehouse/office has reached the level of the roof. The cooperative has attained from the administrative authorities land title for their holdings and are currently developing a mini-land use plan for the site to determine the best placement for their drying tables. This diagram will constitute part of the dossier submitted by the cooperative to ARFIC in order to receive their official authorization to process coffee.

The cooperative Ntamba in Bubanza province requested technical assistance from BAP coffee and wastewater treatment cadre in order to determine the best plan for laying out their mini-washing station given the land available and its topography. Immediately following this visit the cooperative began construction of its warehouse facility and roofing the structure had begun by the end of this reporting period.

Observations

- All four cooperatives are fully engaged in the process of respecting the terms of their agreements with BAP. We have three eco-pulpers already purchased and ready for installation but must now move forward with the purchase of material to cover the drying tables as well as the assistance promised for the treatment of washing station effluents
- No Cooperative has yet obtained the official concurrence from ARFIC that will permit them to process cherry into parchment. We have recommended that they quickly develop the necessary documentation in order to be ready for the start of the 2012 coffee season.

BAPs capacity reinforcement assistance to the cooperatives is translating into new initiatives being taken in the rural areas.

In Bwayi, when the cooperative was faced with a difficulty in finding sufficient land for the installation of their mini-washing station, a member stepped forward and offered to sell his land to the cooperative. The terms of the sale included 2 million FBU in cash and shares in the new washing station worth 500.000 FBU.

This same cooperative has traded shares in the new washing station with for masonry work and for materials (sand, bricks, stones, wooden stakes etc..) needed to build the center. The masons are paid 3000 FBU/day, 50% of which is being paid in cash, the rest in shares. In total, the cooperative is exchanging 97 shares valued at 1.455.000 FBU for the masonry services and materials.

It is worth noting that the cooperative also hired 4 students who were on vacation as day laborers on the site. The money these students earned permitted them to pay for their school fees and supplies.

Facilitation of direct discussions between farmers and international coffee buyers/roasters

During the day of closing ceremonies for the Burundi Prestige Cup BAP facilitated meetings between members of the international jury and the farmer representatives from the 22 lots in competition. The farmers raised issues related to prices paid for their coffee but also their difficulty in accessing fertilizers and small agricultural equipment. The members of the international jury took note of the farmers concerns, offered advice where possible and raised two issues with the farmers- the productivity of Burundi's coffee and the prevalence of the potato defect. This exchange was appreciated by both sides as an opportunity to develop durable relationships over the medium term.

The international jury also met with the "owners" of the coffee entered for international competition, particularly the DG of the SOGESTAL and the owner's representative for C%AB coffee. A number of side direct sales contracts for coffee that was not ranked in the top 10 were negotiated.

BAP also facilitated contact between the international jury and Burundian freight forwarding companies. In addition to SDV, the buyers met with the managing director of SODETRA who informed the assembly of new paperwork needing to be furnished but assured the buyers that the transport of their coffees to the port of Dar Es Salam or Mombasa would not be unduly delayed.

Production, Promotion and Sale of Coffee

Production

This was an off year for coffee production when compared with 2010. As of 30 Sept 2011 the production of fully washed coffee was estimated at 6400 mT of green and that of washed coffee at 6156 mT (49% of the national production). Anticipated total production of Burundi green this year will only be 12556 mT, approximately 50% of the coffee produced in 2010.

As the figures show, there was intense competition for cherry between the owner/operators of the coffee washing stations and the buyers of washed coffee for cherry this year. The WebCor stations suffered more than most as farmers in the WebCor draw zones chose not to sell to WebCor for two reasons. First, WebCor chose not to make a second payment for 2010 coffee purchases; and second, WebCor opened their stations very late and delayed communication of their pricing strategy in 2011.

Collectors of washed coffee entered into intense competition with each other driving the price of washed parchment up to between 3000 and 3200 FBU/kg. This motivated many farmers to sell directly to washed coffee collectors rather than transporting their coffee to the washing station, where cherry was being purchased at 630 FBU/kg (a parchment price of appx 3159 FBU/kg). We note that the farmer owned coffee washing station at Rohororo, benefitted from farmer's discontentment with WebCor drawing farmers from traditional WebCor draw zones in both Ngozi and Kayanza provinces to their washing station.

In order to counteract the tendency to transition from fully washed to washed coffee, the sector needs to revamp its financing mechanism, allowing for payment of cherry when it is brought to the station, rather than delaying payment 2-4 months. Collectors of washed coffee pay farmers directly at the time of transaction, creating a clear delineation of when the coffee has been "sold" for farmers. Further, the fully washed sector actors should explore the possibility of offering bridge financing to farmers so that they are not forced to sell their coffee "on the tree" at fire sale prices to make ends meet during the lean months prior to harvest. Finally, BAP demonstration plot data suggests that coffee produced by traditional cropping systems suffers a reject rate of up to 30% at the washing stations because of its poor quality. Rather than risk needing to return to the farm with 1/3 of their production, many farmers are choosing to sell their coffee to washed collectors in proximity to their hillsides. To reverse this tendency InterCafe and the MINAGRIE need to rethink their strategy for furnishing good quality inputs in sufficient quantity and on time to farmers so that the quality of their cherry may improve.

Coffee Cyclicity

Between 2003/2004 and 2009 year on year cyclicity varied from 72 to 83% between good years and bad years. If we consider cyclicity between 2010 and 2011, the amplitude has dropped to 50%. If the sector decides to reinvest profits earned over the past two seasons because of favorable world market prices for coffee back into the plantations, it is possible that year on year cyclicity could drop to between 25 and 35%.

Coffee purchased and processed by BAP "pilot" washing stations

According to figures received from ARFIC national purchases of cherry for processing as fully washed coffee attained 41,319.1 mT in 2011. The table on the next page gives data received the washing station managers at BAP "pilot" washing stations. This campaign these stations purchased 12,141.9 mT of cherry from more than 51,000 farmers. This represents 29.4% of all cherry purchased by washing stations this campaign. The average cherry production per farmer equals 220.56 kg.

Province	Washing Station	Owner/Operator	Cherry Production (Kg)	# of Farmers	Mean Cherry Production/Farmer (Kg)
Bubanza	Ntamba	GOB/Sogestal Mumirwa	88,337	354	249.54
Cibatoke	Mugina	GOB/Sogestal Mumirwa	1,029,875	2167	475.25
	Murwi	GOB/Sogestal Mumirwa	362,590	1055	343.69
	Buhayira	GOB/Sogestal Mumirwa	172,776	681	253.71
Gitenga	Butemba	GOB/Sogestal Kirimiro	152,905	807	189.47
	Kibuye	GOB/Sogestal Kirimiro	130,999	963	136.03
	Mahonda	GOB/Sogestal Kirimiro	97,243	548	177.45
Kayanza	Butegana	WebCor	112,051.50	639	175.35
	Bwayi	GOB/Sogestal Kayanza	438,790	2844	154.29
	Buziraguhindwa	CPC	323,000	3172	101.83
	Buhorwa	Sogestal Kayanza	289,418	2278	127.05
	Kirema	Coprotra	700,286	2374	294.98
	Karinzi	Coop Dusangirijamba	396,287	1576	251.45
	Karehe	Coprotra	877,144	2569	341.43
	Codemu	Mini-cws operated by coop	82,388.00		
	Codenya	Mini-cws operated by coop	20,593.50		
	Kinyovu	Sogestal Kayanza	374,914	3268	114.72
	Kiryama	Sogestal Kayanza	522,469	2554	204.57
	Ruhororo	Ubwizi Bw'lkawa	832,303	747	1114.19
	Mpanga	SEGEC	1,126,151	4911	229.31
Kirundo	Buhimba	GOB/Sogestal Kirundo-Muyinga	187,032	756	247.4
	Gasura	GOB/Sogestal Kirundo-Muyinga	138,414	818	169.21
Muramvya	Teka	GOB/Sogestal Kirimiro	308,834	1529	201.98
Muyinga	Kagombe	Sogestal Kirundo-Muyinga	1,286,441	4632	277.73
	Nyamasaka	Sogestal Kirundo/Muyinga	242,071	582	415.93
	Nkamwayinka de Kobero	Private –Federation Kirundo-Muyinga	79,610.50		
	Murago	GOB/Sogestal Kirundo/Muyinga	254,024	1512	168
	Ngogomo	GOB/Sogestal Kirundo-Muyinga	325,274	1813	179.41
	Rugerero	GOB/Sogestal Kirundo-Muyinga	239,210	1047	228.47
	Wingoma	APROCO	3280.00	54	228.47
Ngozi	Gatukuza	Private	43,567	349	124.83
	Murambi	GOB/Sogestal Ngozi	183,726	814	225.71
	Rugabo	GOB/Sogestal Ngozi	222,145	1493	148.79
	Ruhama	GOB/Sogestal Ngozi	29,273	308	95.04
	Gitwa	Sogestal Ngozi	219,538	746	294.29
	Rwintare	Sogestal Ngozi	101,289	456	222.13
	Rutanga	Sogestal Ngozi	147,648	639	231.06
TOTAL			12,141,896.50	51,055.00	220.56

Specialty Coffee

By the end of this reporting period a total of 474.5mT of coffee had been sold by direct sales agreements. This represents 19.6% of Burundi's fully washed sales to date and 7.4% of Burundi's fully washed coffee production for 2011. Buyers of the coffee have diversified this year to include Canada, Norway, Japan, Australia as well as the US, UK and Switzerland. For certain buyers, the price is known. But the conversion ratio of parchment to green, remains only an estimate until milling is completed. Since sales of Burundi's coffee continue, this data, valid at 30 September 2011, must be considered preliminary and will be completed at the end of the calendar year. The table below gives detailed information on direct sales contracts negotiated as of 30 Sept 2011.

SOGESTAL	Acheteur	Pays d'origine	Numero contrat	Nombre de sacs	Quantité (kg)	Prix de base en cts/lb	Prix vente au Kg en \$US	Prix moyen réalisé par la cellule de commercialisatio n en \$US/Kg par appel d'offre des cafés ordinaires	Ecart de prix en \$US/Kg	Valeur totale	Total de la prime au producteur en dollars par lot
Kirundo-M	SUCAFINA	Suisse	SPB-25733	320	19,200	214	4.72	5.58	-0.86	90,583	2,963
	ARMAJARO	Angleterre	CPS14138/0	295	17,700	238	5.25	5.58	-0.33	92,872	
	TGEP Inc	Canada		320	19,200	253	5.58	5.58	0.00	107,092	2,540
	ARMAJARO	Angleterre	CSP14005-0	302	18,120	268	5.91	5.58	0.33	107,060	
	ARMAJARO	Angleterre	CPS14004-0	63	3,780	268	5.91	5.58	0.33	22,334	
	Louis Dreyfus	Suisse	P-11840	960	57,600	254	5.60	5.58	0.02	322,545	
	ARMAJARO	Angleterre	CSP13867-0	300	18,000	291	6.42	5.58	0.84	115,478	
	Intelligentsia C	USA		260	15,600	310	6.83	5.58	1.25	106,615	
Kayanza	SCHLUTER	Suisse	P1251A	318	19,080	307	6.77	5.58	1.19	129,137	12,199
	SCHLUTER	Suisse	P1277A	222	13,320	291	6.42	5.58	0.84	85,454	8,516
	SCHLUTER	Suisse	P1333A	104	6,240	275	6.06	5.58	0.48	37,831	
	SCHLUTER	Suisse	P1251A	320	19,200	307	6.77	5.58	1.19	129,949	12,275
	SCHLUTER	Suisse	P1252A	320	19,200	307	6.77	5.58	1.19	129,949	12,275
	SCHLUTER	Suisse	P1253A	320	19,200	307	6.77	5.58	1.19	129,949	12,275
	SCHLUTER	Suisse	P1254A	320	19,200	307	6.77	5.58	1.19	129,949	12,275
	SCHLUTER	Suisse	P1255A	320	19,200	307	6.77	5.58	1.19	129,949	12,275
CPC	Counter Cultur	USA		220	13,200	300	6.61	5.58	1.03	87,303	
C&AB	Intelligentsia C	USA		50	3,000	310	6.83	5.58	1.25	20,503	
Ngozi				960	57,600			5.58	-5.58		
Kirimiro				160	9,600			5.58	-5.58		
SEGEC	SCHLUTER	Suisse	P1271A	320	19,200	255	5.62	5.58	0.04	107,938	
	SCHLUTER	Suisse	P1320A	320	19,200	265	5.84	5.58	0.26	112,171	
	SCHLUTER	Suisse	P1370A	640	38,400	210	4.63	5.58	-0.95	177,781	
Cafés BPC				175	10,500		9.68	5.58	4.10	101,640	
TOTAL					474,540		6.30		0.19	2,474,082	87,594

Burundi Prestige Cup

As a dry run for the planned 2012 Cup of Excellence, the Burundi Prestige Cup was organized during this reporting period as a key addition to Burundi's marketing and promotion efforts, especially to the targeted specialty coffee niche market. This competition seeks to identify, classify and sell the best coffees in Burundi. In order to garner sector "buy in" and favorize long term sustainability of the activity BAP considered it imperative to implicate all the coffee sector actors in the planning and execution of the activity. To this end an organizing committee for the event was established of 13 members from ARFIC, InterCafe, CNAC, the Coffee Reform Committee, the SOGESTAL, the Dry Millers, ABEC and representatives from the Burundi EAFCA chapter together with cadre from BAP's coffee team. The coffee sector mobilized 121.650.000 FBU (appx. \$98,900 USD) to assist in financing this event.

Technical assistance was provided by BAP and the Alliance for the Cup of Excellence (ACE). Eleven international buyers/roasters from all over the world participated as judges. They were joined by two members of the Burundian national jury for a total of 13 judges for the final round of the competition.

A total of 353 lots from 56 washing stations representing the five SOGESTAL and private operators like WebCor Burundi, CPC, Coprotra, Ets Nduwayezu, SEGEC, C&AB, Ubiza bw'Ikawa, Gashikanwa

Specialty Coffee and APROCO submitted lots for pre-selection. Of these 150 were retained for competition.

The National Jury composed of 14 members, consisted of 4 of 7 cupping trainers, the head of quality control for the Sogestal Ngozi, a cadre with the ARFIC certification lab in Ngozi, four students from the University of Ngozi, and four young A2 ITAB technical school graduates who are currently seeking employment. To this group fell the task of distilling down from 150 lots to 60, the coffees submitted for competition. It is these 60 that were presented to the International jury in order to discern the best coffee in Burundi.

Of the 60 lots presented for international cupping, 24 (40%) were eliminated for potato defect. Fourteen others did not meet the rigorous standards of the international jury, scoring less than 84/100. The remaining 22 lots were considered “winners” and, as such were presented at the special auction. The top ranked coffee (from CWS Kiryama in Kayanza) cupped greater than 90, placing it in the ranks of “presidential” coffees worldwide. A Summary of Prestige Cup results is given below:

The top 22 samples came from 11 washing stations. Eight of these 11 (73%) are BAP partners. These eight stations provided 18 of the 22 lots in competitive range (82%). These eight washing stations provided 70% of the weighted volume of coffee presented for sale at Saturday’s Auction.

Eight of the top 10 lots were produced by washing stations in the province of Kayanza. Nine of the top ten lots were produced at BAP partner washing stations

SEGEC is a new owner/operator this campaign

Rank in competition	Score	Propriétaire (Owner of lot)	Station de lavage (washing station)
1	90.12	Sogestal Kayanza	Kiryama
2	89.31	Sogestal Kayanza	Kiryama
3	89.08	Sogestal kayanza	Kinyovu
4	88.85	Segec	Mpanga
5	88.77	Sogestal Kayanza	Kiryama
6	88.58	Sogestal Kirimiro	Gasave
7	88.54	Sogestal Kayanza	Kiryama
8	88.27	Sogestal Kirundo Muyinga	Ngogomo
9	88.19	Sogestal Kayanza	Kinyovu
10	86.42	Sogestal Kayanza	Kiryama

Average per pound sales price of green coffee during the auction was \$4.25

Top price was \$7.30 per pound of green

27.8 mT of coffee was sold from these 22 lots at Saturday’s auction, yielding an estimated \$118,262.43 in revenues

At least \$86,069.80 of this will revert directly to the farmers who produced these lots

Washing Stations in competitive range (top 22 lots) were from the following enterprises

Enterprise	Province	# of CWS	Estimated volume of green coffee in competitive range (kg)
SOGESTAL Kayanza	Kayanza	5	12,870
SOGESTAL Kirundo-	Muyinga	2	6,692.40

Muyinga			
WebCor Burundi	Kayanza/Ngozi	2	4,376
SEGEC	Kayanza	1	2,145
SOGESTAL Kirimiro	Mwaro	1	1,716
Total	5	11	27,799

The major impact of this competition should not be viewed as the price paid for the lots that were auctioned but more that Burundi, as an origin, joins the ranks of the world's specialty coffee elite. The appreciation of the international jury is that Burundi's coffee is complex, pleasing and intricate with a curious mixture of flavors, body, acidity, and mouth feel found nowhere else in the world. A number of the judges contracted for coffees that were not finalists in the competition. We note that seven of the buyers are new to Burundi. Word of mouth from this competition should increase the demand for Burundi's coffee on the specialty and high end commercial markets. It is this important that Burundi make every effort to maintain the intrinsic nature of its coffee and continue efforts to improve overall quality.

WebSite and Radio Emissions

The website for Burundi coffee (www.cafeduburundi.com) was officially launched during this quarter. Hosted by InterCafe it is available for consultation both domestically and internationally. Further, sector actors can collaborate with InterCafe to keep the content updated and dynamic.

BAP's coffee component continued to furnish programming to our Kirundi language radio program Akeza Karigura on Radio Isanganiro. This quarter 4 emissions were developed related to coffee and focused on the following themes: productivity, preparation for the campaign for agronomic upkeep of coffee plantations, and the organization of the Burundi Prestige Cup.

Planned Activities for the next quarter

- Organize workshops with farmers to discuss the results of the first year's productivity demonstrations
- Organize workshops with government technical services and elected representatives to discuss results of demonstrations on coffee productivity and improved methods of extension for coffee
- Continue capacity reinforcement in Best Agronomic practices for Coffee
- Finalize the effort to document coffee production costs
- Assist in the construction of effluent control systems at targeted washing stations
- Installation of eco-pulpers at sites of mini-washing stations
- Assist coffee associations in the development of small grant requests to diversify their income generating activities
- Finalize the MOU with InterCafe for the Coffee Quality Center; begin activities so that this is in operation for the 2012 coffee campaign.

Coffee Success Story 1-Learning from Lead Farmers



minimum production of 3 kg/tree.

Corneille Ntakamurenga is a coffee farmer in the Commune of Matongo, province of Kayanza and a member of the Niyombere farmer's association. He has a plantation of 300 coffee trees. Last year after hearing of the benefits of composting from a lead farmer on his home hillside, Corneille voluntarily started his own compost pit following the instructions of the lead farmer. From his first experiment Corneille was able to apply compost to 50 of his trees. Noting a net difference in their color and vegetative state, he decided to expand his compost experiment this year to another 150 trees. He has reserved 50.000 FBU to purchase manure from his neighbors for his new compost pits and is hoping that this practice will increase his per tree productivity to greater than 2 kg of cherry per tree, a feat he has never previously accomplished. He hopes that through repeated applications of compost he will eventually attain a

Coffee Success Story 2-Young College and Technical School Graduates succeed in expanding their career horizons, joining the ranks of Burundi's elite trained cuppers



Since 2009 BAP, with assistance from the Alliance for Coffee Excellence (ACE) has led a concerted effort to train Burundian cuppers to international standards in order to empower the industry in its negotiations with international buyers and roasters. Coupled with this training effort has been a concerted effort at qualifying and certifying cuppers according to the Q-Grader system in collaboration with the Coffee Quality Institute, the COMPETE program and EAFCA. Not only has BAP identified existing, experienced

industry cuppers from ARFIC, the SOGESTAL and Private Operators, we have also sought to bring in new blood through our partnerships with local universities and the agronomic technical institutes.

We note that historically cupping in Burundi's coffee industry was limited to the national certification labs and focused on physical classification of coffee and the identification of defects. The specialty coffee industry is looking for qualified national cuppers from origin countries with the capacity to differentiate and profile coffee qualities, to capture the complex intricacies of the aroma, taste, mouth feel, body and acidity and to characterize the interplay of these elements for the refined coffee consumer and aficionado.

With BAP support, four students from the agribusiness program at the University of Ngozi and 11 A2 qualified graduates from the Burundian Agronomic Technical Institute (ITAB) in Kirundo participated in multiple training sessions, progressing from the debutante to intermediate levels of cupping, benefitted from one month internships organized in collaboration with the State Coffee certification labs in Bujumbura and Ngozi, and were offered the opportunity to cup with in bound international buyers and roasters. Each of the young trainees benefitted from a minimum of 440 hours of training over 8 sessions. In the end Mlle HORUGAVYE Gilberte a student at the University of Ngozi was awarded her Q Grader certification. Because of this success she has already been guaranteed a position with WebCor Burundi upon graduation and today, benefits from a scholarship from this same company so that she may finish her studies.

In addition, of the 14 members selected for the national jury of the Burundi Prestige Cup, four were students from the University of Ngozi and five others were from ITAB Kirundo. Two members of the national jury were selected to be voting members of the international jury that evaluated and ranked the best Burundi coffees of 2011. One, Alfred Ndikuriyo, is a student at the University of Ngozi. The other voting national jury member, Domitien Bizimana, is an experienced quality control technician currently employed by WebCor.

Dairy

Introduction

Activities during this reporting period focused on the operationalization of the two milk collection centers at Bukéyé and Rutegama. Corollary to this BAP trained technicians in artificial insemination, tracked the distribution of forage legumes and Pennisetum; trained forage producers in proper cutting and pruning techniques, documented the re-diffusion of forage seed from multipliers to other dairy herders, and worked on introduction of improved appropriate technology hay balers and forage cutters. By the end of the reporting period the milk collection infrastructure was installed and calibrated at Bukeye, the management team was hired and trained, and the collection center was preparing to start operations during the month of October. In Rutegama, the majority of the MCC equipment had arrived and cleared customs, the construction of the building designed to house the MCC was continuing, the MCC management team had been hired. What remains is finishing the construction – including the effluent control system and connection to electricity, installation, calibration of the chilling equipment and training of the management team. This MCC should be operational by the end of November 2011.

Activities Realized during the current reporting period

Capacity Reinforcement

During this reporting period dairy associations benefitted from only two themes designed to improve their institutional and organizational viability. These four sessions, held with associations in the Muramvya province, brought together 89 participants, 58% of whom were women and focused primarily on developing association level plans and financial management issues.

Organizational Capacity Reinforcement for Dairy Associations

Theme	Men	Women	Total	# Sessions	Mean pp/s	% pp who are women
Conception of an Association level Development Plan	29	56	85	3	28.33	65.9%
Financial management of the association	2	2	4	1	4	50%
Total	31	58	89	4		58%

During this reporting period a series of nine technical themes were developed by ADC for livestock producers in partner dairy associations. A total of 18 sessions were facilitated with an average participation of 18.9 pp/session. Slightly greater than 47% of all participants were women. Two themes registered only women participants. These were –Improved rations for dairy cattle and Milk Hygiene. The sessions registering the greatest average participation were Hay Baling 38 pp/s; followed by Artificial Insemination and importance of forage crops (25 pp/s each); and cutting of silage (24 pp/s). Least popular themes were: factors influencing milk quality (7 pp/s) and improved rations for dairy cattle (8.75 pp/s). In total 276 dairy farmers from two provinces Muramvya and Bururi participated in these activities.

Technical Themes offered to Dairy Associations during Q4

	Theme	Men	Women	Total	# Sessions	Mean pp/s	% pp who are women
1	Factors influencing milk quality	14	0	14	2	7	
2	Improved rations for dairy cattle	0	35	35	4	8.75	100%
3	Importance of forage crops	18	7	25	1	25	28%
4	Pruning of leguminous forage	6	9	15	1	15	60%
5	Milk Hygiene	0	28	28	3	9.33	100%
6	Nursery preparation for leguminous forage trees	54	18	72	4	18	25%
7	Hay Baling	24	14	38	1	38	36.8%
8	Cutting of Silage	13	11	24	1	24	45.8%
9	Artificial Insemination	18	7	25	1	25	28%
	Total	147	129	276	18	18.9	47.07%

Training of Technicians for Artificial Insemination

In early September 2011 BAP in collaboration with the National Center for Artificial Insemination proceeded forward with the training of 13 technicians from 8 communes of four provinces in artificial insemination. We note that these technicians include both public and private sector operators. The training which lasted 11 days included theory and practical experimentation. BAP's innovation is to train technicians in AI, then permit them to sell this service to farmers in the zones where they are operational.

Participants at the training offered in Artificial Insemination

Province	Commune	Nom et prénom	Employeur	Observation
Muramvya	Bukeye	Hakizimana Adrien	MINAGRIE	
		Niyonzima Clément	MINAGRIE	
		Ntibamfashe Philibert	MINAGRIE	
		Mugabineza Jean prosper	Ferme de Bukeye	
		Yamuremye Aimable		Intern at the farm in Bukeye
	Rutegama	Hakizimana Désiré	MINAGRIE	
		Ndikumana Ladislas	Association Garukira Amatongo	MCC employee Rutegama
Bururi	Mugamba	Gatutsi Eric	Mr Biranyuranwa Bernard	
		Nduwamungu Vincent	Mr Biranyuranwa Bernard	
Ngozi	Ngozi	Bugegene Safia	MINAGRIE	
		Kwizera Célestin	Dondogori Cassien	President of the Ngozi Dairy Collective
	Mwumba	Bizimungu Alexis	MINAGRIE	
	Gashikanwa	Manirakiza Emmanuel	MINAGRIE	
Mwaro	Gisozi	Ndayisaba Claudine	Self	Private sector veterinarian in Mwaro

Improvement and Diversification of Forage Species

Production of Pennisetum

In Bukeye Commune of Muamvya Province, 8 men and 15 women from five hillsides (Kiziguru, Rweteto, Gahaga, Musumba, and Gahaga) have planted 55,450 cuttings of Pennisetum. Nine farmers planted the Pennisetum as a pure culture on a land area of .27 ha. Eight of the Nine also planted a percentage of their Pennisetum to hedrows. In total 22 of the farmers planted the Pennisetum as hedgerows in their fields. These hedgerows extend 1971 meters. By the end of September, this newly planted Pennisetum was not yet at a stage where it could be harvested.

In Rutegama Commune of Muramvya Province, of the 10 men and three women who received and planted Pennisetum during the previous reporting period six (5 men and 1 woman) had begun initial cutting of the forage by 30 September. In total they had harvested 355 kg of this graminiae. We expect to have much better data for the end of the calendar year.

In Ngozi 20 men and 10 women of the dairy collective who planted 47.800 cuttings of Pennisetum during previous reporting periods had already started cutting forage to feed their animals. By the end of September 12.4 mT of this graminaceous forage had already been produced. This is enough to 516 days of feed rations for one 400 kg cow (65% of ration, 24 kg/day).

The Ngozi collective, known as the Union of Livestock raisers “Dukamire Hamwe” is composed of 17 associations. These associations have a total of 364 members 27.2% of whom are women. The collective has a total of 354 cows. The Union has a supply contract with the Nyabisabo dairy in Bujumbura. A listing of the associations, their members and their locality are given in the table below.

	Associations	Members			Hillside	# of cows
		M	W	T		
1	KOMEZUBUMWE	14	4	18	KINYANA	28
2	DUSHIREHAMWE MW'ITERAMBERE	8	6	14	KINYANA	28
3	JIMBERE	11	10	21	MIVO	12
4	TUGARUKIRIKAWA	20	1	21	CIGUMIJE	11
5	URUNANI IWACU	25	2	27	KIRURI	9
6	URUNANI	20	4	24	CAMUGANI	11
7	KORANTUSONZE	11	2	13	MUBUGA	18
8	GIRUMWETE	3	8	11	MUBUGA	4
9	GARUKIRAMAHORO	12	8	20	RWAHIRWA	19
10	DUSOZANYE	13	4	17	NYANZA	13
11	ABAJINAMA	13	6	19	NTAHO	19
12	DUFASHANYE	20	11	31	MUREMERA	15
13	ABAKAMYI	11	1	12	CAMUGANI	80
14	ULUPA	18	7	25	NTAHO	13
15	TUGARUKIRUBWOROZI	35	11	46	MUBUGA	20
16	GARUKIRAMAHORO	8	6	14	RWAHIRWA	19
17	TWIYUNGUNGANYE	23	8	31	MAKABA	35
	TOTAL	265	99	364		354

Redistribution of Pennisetum

During this reporting period two farmers, one in Rutegama and the other in Bukéyé distributed a total of 15.860 pennisetum cuttings to 36 other farmers, nine of whom (25%) were women. On average each farmer received 435 cuttings. This is enough to seed appx ½ ha in forage, but the preferred manner is to plant along contour lines on the hillside slopes, thus preventing soil erosion and beginning the creation of micro-terraces.

Pilots of new forage crops

Unfortunately one of the farmer's experimenting with the new forage species had part of his fields destroyed by flooding. Because of this we lost a season's data on one Soy variety (MakSoy 4n), one sunflower variety (SUNFOLA), Pigeon pea, and forage sorghum. The vetch and alfalfa were harvested and yielded respectively 1 kg and 0.5 kg of seed from the 30 gr used in the trials. The Soy has not yet been harvested and the barley was heading out by the end of the reporting period, suggesting harvest data may be available by the end of the calendar year.

Redistribution of Forage Legumes

Four farmers from three associations- two in Bukéyé and one in Rutegama distributed a total of 9 kg of lablab, 7.5 kg of mucuna, and 1 kg of vetch. Nine people in Rutegama and two in Bukéyé received lablab seed, three people in Rutegama received vetch, one person in Ngozi and two in Bukéyé received mucuna seed. In total the four farmers redistributed seed to 17 others, including four women.

Green Forage Production of Leucaena and Calliandra in the Commune of Rutegama, Province of Muramvya

Hillside	Men	Women	Total	kg green forage	X product/farmer in kg
Munanira	23	4	27	10,830	397.4
Munyinya	8	5	13	595	42.5
Bupfunda	12	2	14	1,190	85
Rutegama	21	5	26	6,540	251.54
Nyarukere	28	13	41	7,143	174.22
TOTAL	92	29	121	26,298	190.132

Data available from farmers on five hillsides in the commune that benefitted from BAP assistance in developing the leguminous forage nursery in 2009, then transplanting it on contour lines to their hillside fields shows that a first cutting of forage by 121 farmers yielded 26.3 mT of green forage or an average of appx 190.13 kg/farmer. The recommended forage feed ration for a dairy cow is 6 kg of green matter per day. Thus the production figure translates to 4,383 days of rations for an improved race dairy cow. Given that each of these farmers also has at least one cow, the average production from the first cut of 190.13 kg is enough green forage to feed one cow for 31.7 days if this is the only ration furnished.

Reproduction of forage legumes from seed produced by the original plantings from 2009

In Rutegama farmers harvested enough seed from their forage legumes to start two new forage nurseries, one of which contains 3000 seedlings of Leucaena and the other that contains 2800 seedlings of Calliandra. These plants should be ready for transplantation during the next reporting period.

In Bukéyé and Ngozi the farmers collected forage seed and have started their own nurseries. In Ngozi the dairy collective's nursery contains 980 plants of Leucaena and 1800 plants of Calliandra. Meanwhile in Bukéyé, the nursery contains 2000 plants of Leucaena and 1500 plants of Calliandra.

The Milk Collection Centers

Bukéyé

All of the equipment necessary to begin milk collection operations has now been installed and calibrated in Bukéyé. Technicians from Snowman's Ltd of Uganda, together with the newly hired MCC management team, Ntazimba dairy technicians and BAP dairy personnel worked together to accomplish this during the last two weeks of September 2011. The center staff was trained in routine upkeep and maintenance, calibration and trouble shooting.

During the installation of the equipment a couple of modifications to the initial concept were needed.

- First, instead of mounting the cooling tank compressor indoors it was necessary to construct a platform and cage to house the compressor where air could circulate freely. If it had been kept inside it is certain that the compressor would overheat and be amortized more quickly. Further it would create a heat source that would require excess energy to the cooling tank to keep the milk at 4 degrees C.
- The second modification was to dig a 12 meter deep x 2 meter wide sink for effluent control. Previously liquid effluents from the dairy farm were permitted to flow through open culverts to fields in the valley below the farm, providing free fertilization to the farmers. The MCC however needs to first treat its effluents because cleaning the system on a daily basis will introduce detergents, light acids and bases to the liquid slurry creating a potential danger for the environment. By creating the sink well the effluents will be held, filtered and sedimented before filtering slowly out through the soil profile.

Training the MCC Management Team

The three person MCC management team along with the technical director for Ntazimba dairy, the dairy manager, the refrigeration technician and the dairy farm's veterinarian all participated in the training with the idea being that a certain redundancy was necessary, thus the effort to cross train the staff in the essential elements of managing the center. Themes developed included milk hygiene, milk testing for quality assurance, tests to be applied to milk at reception, the use, basic maintenance, upkeep, and troubleshooting of the receiving and cooling tanks, as well as the administrative and financial record keeping and management of the center.

Training the Dairy Association Leaders (Orientation to the operation of the MCC)

This training session lasted three days. The DPAE from Muramvya participated in one day of the training and offered counsel and advice both to the management team and the farmers. The communal veterinarian and the community veterinary technicians from Bukéyé, Nyarucamo and Busagana also attended this session. A total of 37 participants, 18 women and 17 , representing 10 dairy associations in the Bukéyé draw zone attended the session. Points covered included milk quality and factors affecting the quality of milk; milk collection; decision point whether to accept or reject milk, the criteria to be used and tests to be performed; animal and human hygiene techniques to practice while milking; the dairy farmer's card and milk register; payment receipts; controlling mastitis; and negotiation of terms and conditions for milk collection and payment between the farm at Bukéyé and the dairy associations from the surrounding hillsides. Opening hours were discussed and the initial milk purchase price was fixed at 550 FBU/liter. Finally the dairy associations elected their committee that will represent the farmers in negotiations with the MCC.

Capacity Reinforcement to the Bukéyé Dairy Farm Operations

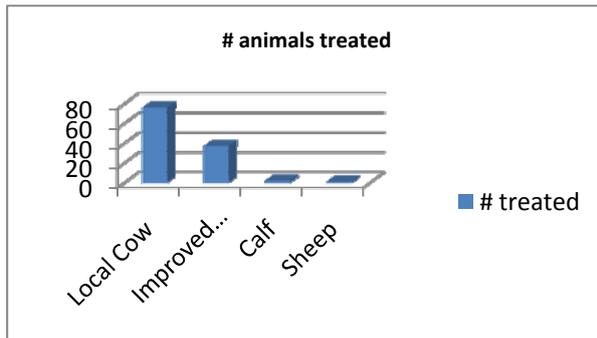
In addition to training centered on the MCC its structure, operations and management, BAP's team also provided advice to the dairy farm and its personnel, particularly in the areas of hygiene, controlling animal health, cleaning of tools, containers, etc; proper hoof and teat care; and overall organization of the farm's personnel for best efficiency.

It is anticipated that the Milk Collection Center will open for operations before the end of October 2011.

MCC Rutegama

Construction in Rutegama began in June. By the end of this reporting period the basic structure of the center had been completed and it remained the finish work for the center. The equipment has arrived in country, the management team has been hired what remains is construction of a septic system and sump well and the connection of the center to the electric grid before we can install and calibrate the collection system and train the personnel similarly to what has recently been completed in Bukéyé.

Community Veterinary Technicians

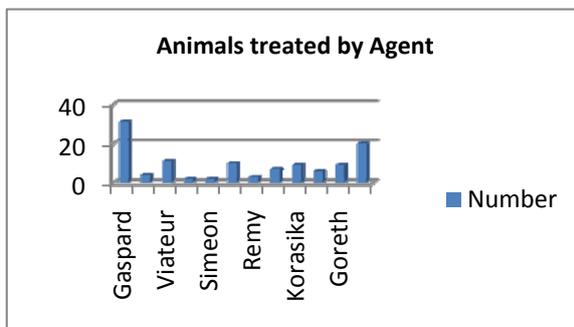
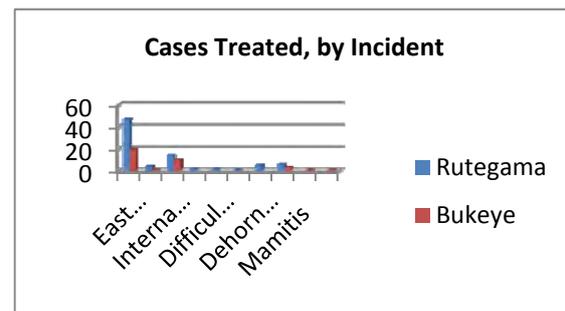


This quarter twelve of the community veterinary technicians (nine from Rutegama and three from Bukéyé) treated a total of 116 animals, including two calves and a sheep.

The most prevalent diseases were East Coast Fever and Internal parasites. Only one case of mortality was registered, but a second animal

with internal parasites had not been cured by the end of the reporting period. Improved race cattle represented 32% of all cases treated, as well as the only case of mortality.

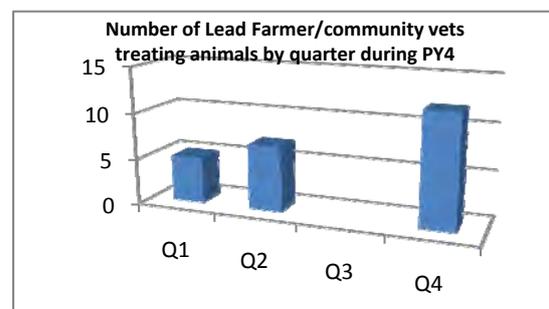
Two of the agents, Gaspard in Rutegama and Marie in Bukéyé were particularly active.



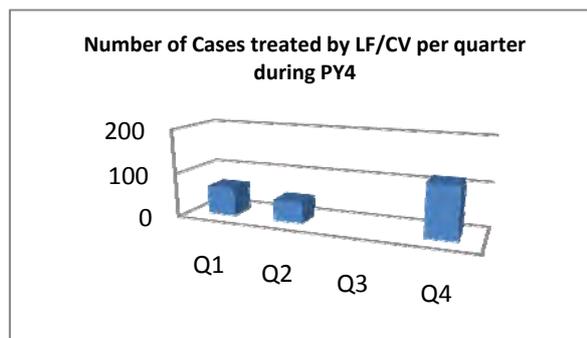
Together, they represent 44% of all cases treated. Gaspard, along with Scholastic runs the veterinary supply boutique in Rutegama which may account for some of his success, as one of the services he offers is not only to sell the product but to assist the owner in using the product to treat their animals. Marie treated two

outbreaks, one of East Coast Fever and the second of internal parasites.

This figure is a presentation showing the number of Lead Farmer/Community Veterinarians (LF/CV) treating animals per quarter during PY4. Data was not collected during Q3, however the trending is positive with more LF/CV providing information during each quarter. Of the original 22 who were trained and equipped with kits, twelve are still treating animals on a regular basis.



Not only has the number of LF/CV treating animals increased but the number of cases treated each quarter is also starting to trending upward as may be seen in the adjacent graph.



Assisting the set up of a dairy input boutique at the MCC

During the recent training for the MCC at Bukéyé the representatives of the livestock associations expressed the urgent need to set up a boutique for the sale of veterinary supplies as part of the MCC package. BAP counts on assisting the MCC to develop a list of key products to be sold and to provide technical assistance in developing management tools and inventory control mechanisms for the future stock.

Planned Activities for Q1 PY 5

- Provide support to National Veterinary Lab in the development of Standard Operating Procedures for milk quality control testing
- Installation and calibration of milk cooling equipment and training for center staff at the MCC Rutegama
- Official Inauguration of MCC
- Milk Productivity tracking for small dairy farmers begins in Muramvya province and with the milk collective of Ngozi
- Training and equipping of new Lead Farmer Community Veterinarians (LF/CV)
- A study tour/exchange visit is arranged to Rwanda for NVL personnel to RARDA
- Technical assistance is offered to improve hygiene at Bujumbura dairies
- Technical assistance is offered to improve the efficiency of cheese production with two artisanal cheese entrepreneurs

Dairy Success Story 1 - Milk Supply

Contracts improve farmer revenues



Figure 1: Suzanne Munzira before her stable

Since 2009 the Burundi agribusiness Program has been assisting the dairy herder's collective "Dukamirehamwe" of Ngozi. This collective is composed of 16 associations with a total of 360 members. BAP's assistance has principally focused on capacity reinforcement to association leaders empowering them to better structure and transparently manage their associations. Further BAP has assisted them in adopting best management practices for dairy and in the development of a supply contract with the Nyabisabo Dairy in Bujumbura.

Each day the association furnishes the dairy with 500 liters of milk, transporting it from Ngozi to Bujumbura in a truck rented expressly for this purpose. The milk is collected from association members at designated points in proximity to their dairy farms.

Mrs Suzanne Munzira is a member of the collective. She resides on the Mureke hillside 13 km from Ngozi. She has 6 head of dairy cows managed under a zero grazing regimen, of which one is presently lactating. Before the collective installed the designated purchasing points in proximity, she sold her milk each day either in Ngozi or at Mubuga – a center 10 km from her hillside. In order to do this she needed to hire an employee and pay them 20.000 FBU/month to transport and sell her milk. The merchants who purchased her milk would regularly reject a percentage of the milk as being of poor quality. Losses due to this rejection resulted in losses estimated at 40.000 FBU/month. Today, she brings her 6 liters of milk daily to the sales point which is situated only 500 meters from her house. She is paid 550 FBU/liter yielding a revenue of approximately 99.000 FBU/month. In addition she has reassigned her laborer from transport and marketing of milk to field work. Valuing his time and efforts and calculating the savings because her milk is no longer rejected as being of poor quality she estimates she has saved 60.000 FBU/month due to her membership in the collective and the collective's contract with Nyabisabo dairy. Her revenue has contributed greatly to the quality of life for Suzanne and her family and has allowed her to pay her children's school fees, including inscription at a private university. Further she has purchased improved seed for her fields and rations for her cattle. Suzanne anticipates that when three or four of her cows begin lactating she will finally be able to diversify her economic activities and invest further in her farm.

Dairy Success Story 2-Improved Forage increases milk production in Rutegama, Province Muramvya



Figure - Alexis Ntirwonza in his stable

With the addition of the legumes, productivity increased by 50% to 4.5 liters per milking or 9 liters/day, increasing his earnings by 25.000 FBU/month. This extra money has been invested in paying his children's school fees and the purchase of improved seed and fertilizer. Convinced that the legumes provide an added value, Alexis has left several of his plants go to seed so that he can increase the density of legumes in his fields.

Alexis Ntirwonza is a dairy farmer on the hillside of Munanira in the commune of Rutegama and a member of the GARUKIRAMATONGO cooperative.

In 2009 he received 300 plants of *Leucaena* and 300 plants of *Calliandra* from BAP that he planted along contour lines in his fields with assistance from the DPAE. A portion of the trees also served as a delimiter for his property from that of his neighbors. When the plants reached maturity he began cutting them and mixing the legumes in with his animal feed once a week. Prior to doing this his cow was producing only 3 liters of milk per milking.



Figure - Calliandra being grown out for seed

Horticulture

Introduction

This quarterly report has been prepared to showcase the the quantitative results collected from the activities around demonstration plots. Other programmatic activities carried out by the horticulture team in support of our goals and objectives for the current workplan are also discussed. The horticulture team is pleased to account for field monitoring results that provide a high level of confidence with respect to the agronomic practices promoted this year.

In carrying out this work we are grateful for the opportunity to cooperate more dynamically with the ADCs who have shown more interest and engagement with horticulture activities in their target communities. The introduction of new practices and technology should be seen as a slow process that required motivated promoters as well as community leaders with credibility in their social environment. A lot of the early success of the demonstration plots is due to this renewed enthusiasm and we expect this to be contagious to more DPAEs in other provinces.

Continued progress toward quantitative results has been on our mind constantly. We believe this goal has been attained during the present quarter, but the future looks even more promising with most provinces aiming at two more harvesting seasons in the remaining project months. To keep good results consistently, particular attention will be placed on the involvement of DPAEs as we consider them the most convenient choice to continue this work in the many geographic areas where they are available.

The results for this quarter are presented in tables, graphs and summaries throughout this report. We have learned during this quarter that demonstration plots are not only about showcasing modern agronomic practices, but also about the positive side effects of increased income generation in high-value agriculture. We present in a few bullet points some individual success stories that attest to the experience around demo plots effects that motivate us and our target farmers to work harder towards more positive results.

Results and Accomplishments

Production results

Table 1 summarizes the preliminary results from demo plots gathered so far for the current season. Overall, it is important to outline the revenue level attained by the organized groups and individuals who have qualified to receive grants for demo plots.

a) Practical training through demonstration plots

To display activities of demo plots to farmers and other partners, open field days took place on some demonstration fields. During these days, the program emphasized on farmer to farmer exchanges as the owner of the demo plot discussed the process and the achievements related to the demo plot practices. The presentations covered topics from use of equipment to helpful techniques and asked questions to the demo plot owner and to the project staff. Table 2 lists the open field days held so far. The demo plots were the major platform to carry out the following activities:

- Planning and monitoring of production and harvesting activities on tomatoes, cabbage, peppers, amaranths, eggplants and onions.

- Trainings on best agronomic practices and technology transfer to different farmer groups and individuals in surrounding communities
- Facilitation of open days to display activities of demo plots to different stakeholders
- Diffusion of the handbook From Farm to Market to the key partners of the program and community leaders
- Conception of the booklet of technical tips to be used on vegetables crops established in demo plots and technical production schedules for the target crops.
- Contact with the DPAEs in order to prepare the takeover of demonstration activities and proven results replication after the program's end
- Emphasis on the use of high quality seeds and seedling nurseries

BAP provided certified seeds for each demo plot as a technological innovation. The seeds were purchased at a local agriculture depot which retails seed from multinational brands and the EAST AFRICAN SEEDS LTD. During farmer training events it was explained that the practice of placing 5, 10 or more seeds per planting was not a recommendable practice when we had seed for which the origin and germination rates were known.

Providing the appropriate agro-ecological conditions for seedling development was the first step towards a successful crop and this was the major motivation to build seedling beds and nurseries. This practice was well adopted with significant learning experience on behalf of the farmer groups and individual growers participating. It consisted of raised beds of 1.20m wide and 15-20cm in height with specific planting distances for each crop. A shelter of 1.50-1.70 m was built to protect seeds beds from direct sunlight and rain splash and local material was used to provide the shade. In specific cases where groups excelled in nursery management, the project rewarded them with a 4*8m tarp with a UV and 70% shade filter to improve their production.

Table 1. Summary Table for BAP Results Q4

Q 4 indicators	Results Accomplished
Increasing productivity through improved agronomic practices	
Number of grants are signed to support the production of major horticulture crops grown under improved agronomic practices	1 grant has been signed (Twitezimbere farmer group)
New farmers are trained in modern agronomic techniques.	1350
Volume of vegetables produced in demonstration plots from project-established nurseries	30.79 T
Volume of vegetables produced from project nursery seedlings planted by groups in surrounding fields	1.97 T
Revenue from vegetables grown in demo plots	7.08 million FBU
Volume of vegetables grown by granted farmer groups	3.543 T
Revenue from vegetables grown by granted farmer groups	719,250 FBU
Associations successfully reinvesting proceeds from horticultural sales to continue operations	7 associations are already reinvesting their revenue into further expansion
Nursery business plans developed	24
Simple irrigation systems are established following the models established in Kenya by the Kickstart company	20 treadle pumps and one lever pump are installed and in operation
Improving Marketability of Products Introducing Best Practices	
Farmer groups/individuals trained on the use of the wooden box to protect their products	12 farmers in 5 associations have been trained
Farmers trained on GAPs and GMPs.	212 farmers in total were trained on GAPs.
Link with Other Institutions and DPAEs to Support Horticultural Expansion	
DPAE rural monitors taking responsibility for horticulture demo plots.	12 DPAE involved in field days, 6 rural monitors engaged
Best agronomic practices replicated with lead farmers	At least 3 best practices replicated 24 times in demo fields
Field days facilitated with farmers with media coverage	6 field days in 5 provinces. Only one radio broadcast. Muramvya and Makamba field days are pending. 177 women and 154 men (total of 331) attended the field days.
Number of extension bulletins in Kirundi and French diffused	A total of 176 demo field guides and product technical recommendations distributed in 17 provinces. DPAEs, ONGs, FIDA, World Bank and CNTA

Table 2. List of open field days carried out from July-September 2011

Province	Buja Rural	Bubanza	Mwaro		Kayanza	Gitega
Commune	Mutimbuzi	Gihanga	Kayokwe		Matongo	Gitega
Host	Abakenyezi twisununure	Canut Harerimana	Francine Ntakarutimana	Imelde Ngendankazi	Turyekamwe	Twungurane ubumenyi
Date	11/08	12/08	1/09	2/09	07/09	15/09
Crop displayed	Tomato	Tomato	Cabbage	Tomato	Cabbage	Cabbage
Attendees (farmers group)	9	8	13	3	5	11
Number of attendees (W= women; M= men)	63(45W/18M)	35(9W/26M)	67(52W/12M)	21(21W/0M)	66(7W/59M)	82(43W/39M)
Extension staff members (DPAE) present	3	3	2	-	2	2
Most appreciated technique(s)	Trellising, raised beds.	Trellising, raised beds	Raised beds, head weight (4,5 kg)	Trellising	Raised beds, treadle pumps	Raised beds, treadle pumps
Request from farmers	More trainings, technical and equipment support	More trainings, technical and equipment support	More trainings, technical and equipment support	More trainings, technical and equipment support	More trainings, technical and equipment support	More trainings, technical and equipment support

Table 3 provides the varieties distributed among the demo plots while Table 4 outlines how much seed was distributed per organized farmer group and participating individuals. Table 5 lists the localities of the nurseries and their GPS coordinates easily checkable in Google Earth (a software available for free).

Table 3. Crop varieties established in demo plots.

Seeds	Variety
Tomato	Floradel and Tengeru
Cabbage	Oxylus F1
Onion	Red creole
Green pepper	California wonder
Egg plant	Kalende
Amaranth	Local variety of amaranthus hybridus (Lenga lenga)

Table 4. Quantity of seeds distributed to different groups

Crop	Province	Commune	Group/individual	Quantity of seeds(g)	# seeds par g
Tomato	Buja Rural	Mubimbi	Evariste	250	250-350
	Buja Rural	Mutimbuzi	Abakenyezi Twisununure	250	250-350
	Bubanza	Gihanga	Canut	250	250-350
	Bubanza	Gihanga	Dukorerehamwe twungurane ubumenyi	250	250-350
	Makamba	Nyanza Lac	Tunganyubuzima	125	250-350
	Bubanza	Gihanga	Twiyungunganye bakenyezi	250	250-350
	Bubanza	Gihanga	Eric	250	250-350
	Bubanza	Gihanga	Dufatanemunda	250	250-350
	Mwaro	Kayokwe	Imelde	250	250-350
	Mwaro	Kayokwe	Claver	250	250-350
	Makamba	Karinzi	Dukorerehamwe	125	250-350
	Gitega	Mutaho	Twitezimbere I	250	250-350
	Kayanza	Muruta	Murimyi w'ikawa gir'ijambo	250	250-350
			Subtotal for tomato	3,000	
Onion	Makamba	Makamba	Dufatanemunda	250	250-300
	Gitega	Gitega	Kazozza keza	250	250-300
	Gitega	Giheta	Turwanyinzara	250	250-300
	Muramvya	Rutegama	Remesha	250	250-300
			Bub total for onion	1,000	
Cabbage	Kayanza	Matongo	Deo	100	300-350
	Kayanza	Matongo	Turyekamwe	100	300-350
	Mwaro	Kayokwe	Francine	150	300-350
	Gitega	Gitega	Twungurane ubumenyi	100	300-350
			Sub total for cabbage	450	
Eggplant	Buja Rural	Kabezi	Clement	250	250
			Sub total eggplant	250	
Green pepper	Kayanza	Matongo	Benoit	250	120-150
			Sub total green pepper	250	
Amaranth	Buja Rural	Kabezi	Girumwete	1.000	N/A
			Sub total amaranth	1,000	
			Grand Total	5,900gr	

Table 5. GPS coordinates of the established nurseries

#	Farmer group	Province	Commune	Hill	Latitude	Longitude	Alt (m)
1	Tunganyubuzima	Makamba	Nyanza-lac	Mugerama	S04°08.903'	E029°51.474'	794
2	Imelde Ngendankazi	Mwaro	Kayokwe	Musama	S03°31.115'	E029°45.011'	1667
3	Dukorerehamwe	Makamba	Mabanda	Karinzi	S04°08.083'	E029°48.158'	1420
4	Murimiywikawa girijambo	kayanza	Muruta	Karunyinya	S02°56.215'	E029°36.005'	1821
5	Claver Baryuwiwe	Mwaro	Kayokwe	Nyagitongati	S03°32.980'	E029°44.903'	1698
6	DTU	Bubanza	Gihanga	Ninga	S03°14.334'	E029°19.195'	810
7	Abakenyezi twisununure	Bujumbura Rural	Mutimbuzi	Muyange	S03°07.439'	E029°51.634'	839
8	Eric Nkuzimana	Bubanza	Gihanga	Village 3, TR6	S03°11.906'	E029°20.898'	931
9	Canut harerimana	Bubanza	Mpanda	Kizina	S03°09.751'	E029°22.864'	877
10	Francine Ntakarutimana	Mwaro	Kayokwe	Musama	S03°30.838'	E029°45.256'	1713
11	Twungurane ubumenyi	Gitega	Gitega	Mirama	S03°21.614'	E029°59.133'	1414
12	Turyekamwe	Kayanza	Matongo	Munyinya	S02°56.131'	E029°38.636'	1680
13	Deo Kamwenubusa	Kayanza	Matongo	Murambi	S03°02.132'	E029°36.615'	1874
14	Dufatanemunda II	Bubanza	Gihanga	Gihanga centre, TR5	S03°13.991'	E029°46.321'	827
15	Turwanyinzara I	Gitega	Giheta	Gasunu	S03°11.588'	E029°18.296'	1351
16	Kazozo keza	Gitega	Gitega	Mirama	S03°21.901'	E029°57.873'	1392
17	Benoit Nsaguye	Kayanza	Matongo	Munyinya	S03°02.134'	E029°36.614'	1759
18	Evariste Ndikumagenge	Buja Rural	Mubimbi	Mageyo	S03°16.025'	E029°24.902'	1469
19	Girumwete	Buja Rural	Kabezi	Migera	S03°34.872'	E029°21043'	811
20	Clement Ndarwarukanye	Buja Rural	Kabezi	Gakungwe	S03°21.611'	E029°59.126'	783
21	Twiyounganyeye Bakenyezi	Bubanza	Gihnaga	Ninga	S03°14.351'	E029°19.194'	808
22	Twitezimbere I	Gitega	Mutaho	Rubagabaga	S03°07.438'	E029°51.633'	1493
23	Remesha	Muramvya	Rutegama	Nyarunazi	S03°22.290'	E029°22.498'	1538
24	Dufatanemunda	Makamba	Makamba	Nyabigina	S04°08.902'	E029°51.476'	1530

b) Discussing and learning about optimum planting density

During training through demo plots the issue of planting densities has been exhaustively discussed. In Burundi, it is common to see vegetables fields without a planned planting density and areas where seeds failed to grow leading to a poor utilization of the planting surface. Through demo plots, emphasis has been placed on understanding each crop density recommendations leading to higher net area planted while ensure maximum utilization plant aeration to minimize pest and disease attacks and facilitate better intake of organic and inorganic fertilizers. Table 6 provides information on the planting density established at the demo fields. Understanding planting densities and using stronger seedlings has been a significant factor of increased yields in the demo field treatments.

Table 6. Crops and recommended densities established in demo plots

Crop	Number of fields	Planting density	Number of rows per raised beds	Average plants per treatment T1/field
Tomato	13	80cmx30cm	2	2083
Cabbage	4	40cmx40cm	3	3,125
onion	4	15cmx15cm	7	22,222
Eggplant	1	80cmx30cm	2	2083
Green pepper	1	80cmx30cm	2	2083
Amaranth	1	20cmx20cm	6	12,500

c) Mixed fertilization

The research and development program of the BAP's coffee sector showed that mixed fertilization using manure and inorganic fertilizer permitted to increase yields. To try this process in formal horticulture essays, the fertilization of different crops utilizing a mixture of animal manure and inorganic fertilizer at planting was practiced. The fraction of inorganic fertilizer brought to the plant at different stages is explained in Table 7 showing the recommended mixture for the five major crops promoted.

Table 7. Recommended applications of mixed fertilizers

Crops	1 st application(Stage)	2nd application(Stage)	3 rd application (Stage)
Tomato	1kgM+2g DAP(Planting)	2g Urea(weeding)	2g NPK(fruit set)
Cabbage	1kg M +2g DAP(planting)	2g urea(weeding)	2g Urea(head formation)
Onion	0,5 kgM+2g DAP(planting)	2g Urea(weeding)	2g KCl (bulbing)
Eggplant	1kg M+2g DAP(planting)	2g Urea(weeding)	2g NPK(fruit set)
Amaranth	1kgM+2g DAP(planting)	2gUrea(weeding)	2gUrea

M: animal manure

DAP: Di ammonium phosphate 18-46-0

Urea: Urea (46-0-0)

NPK: The form that were available is 20-10-10

d) Management of common pests and diseases

Among the main constraints to production of good quality vegetables for small growers is the management of common pest and diseases that attack the vegetables crops at different stages. Table 8 details the recommendations the technical coordinator (TC) recommended concerning the rational use of registered pesticides for these common vegetables enemies.

Table 8. Recommended program for a rational use of pesticides

Pesticides (trade name)	Active ingredient	Target	Dosage per 15 l of water	Frequency of application
Dursban	Chlorpyrifos	Caterpillars, cutworms, grass hoppers,	From 11,5ml or 12 cc	2 treatments at 10-14 days interval
Dimethoate	Dimethoate	Aphids, white flies, thrips, etc	From 12ml or 12cc	2 treatments at 10-14 days interval
Ridomil	Mancozeb+metal axyl	Fungi (mildew, altemaria, Etc..)	30g	2 treatments at 7-14 days interval
Dithane	mancozeb	Fungi as preventive	30 g	2 treatments at 7-14 days interval
Benlate	benomyl	Fungi	30g	2 treatments at 7-14 days interval

After a training session on integrated pest management, chemical control was discussed with particular attention to locally available pesticides. Our main objective has been to advise farmers on how to reduce the cost of treatment by spraying the least amount of times during the life of the crop. One technique advised was the application of fungicides and insecticides at once which is possible due to the compatibility of most of the pesticides sold in local agriculture depots. In cases with heavy pest pressure the highest amount of applications was recorded in a tomato plot. This added up to an average of 900g of fungicides and insecticides applied per month at 7-10 days interval during the growing period of the crop.

e) Mulch

Surface mulch has a major role keeping humidity around the plant root system and in preventing weed growth. Additionally, in the case of tomatoes, it also helps prevent fruit rotting by contacting the soil surface. The farmers group used dried grass as surface mulches and this helped considerably as only one weeding was necessary before the mulch was set up, no herbicides were used and no rotten fruits were reported.

f) Irrigation using treadle pumps

This practice was introduced to allow demo plots managers to experience irrigated plots besides their rain-fed production. BAP supplied treadle pumps that have permitted to reduce considerably the effort and time spent irrigating by hand with water containers. For many farmer groups, the use of a treadle pump was a remarkable innovation and has been well appreciated. The availability of treadle pumps allowed farmers to irrigate their farms at least twice a week, spending less than an hour per day on this chore.

At the moment only 20 treadle pumps were distributed to the farmer groups, some are already requesting information on how to purchase them, particularly on where to source them and at what price. Their interest points out the benefit they have observed in using this tool.

g) Vertical trellising for tomatoes

Growers who have been selected to grow tomatoes have expressed their excitement about vertical trellising of tomatoes. This cultural practice is proven to increase the fructification, ameliorate aeration and therefore reduce the intensity of fungal attacks. It also makes the phytosanitary treatments much more effective and harvesting much easier.

To allow a future adoption of this technique by farmer groups, BAP focused on the use of locally-available materials such as branches of eucalyptus, petioles of palm trees, and waste cords and

twine from worn bed nets. The staking of tomatoes using vertical trellising has been well appreciated by the farmer groups and has been the main attraction during open field days in demo plots. The system helped to increase the productivity as it permitted more flowers to reach the fruit setting stage and exposed higher contact of leaf surface with direct sunlight.

Among the 14 farmer groups that grew tomatoes 13 have used this technique. The Murimyi w'ikawa gir'ijambo farmer group used a simple system of individual sticks per each crop as we found out that the variety planted was not indeterminate. This farmer has opted for not growing this variety anymore. Overall, we have identified major differences on blooming rates in demo plots with trellising and the same variety without trellising used as a control.

In Table 9 we present a quantitative assessment of the impact of trellising done on a random sample of 10 plants in the Treatment (T1) and 10 plants in the Control (T0) in the demo plot. The random sample was selected in a stratified fashion. The first stratum was a random selection of one row in the demo plot. The second stratum was a random selection of 10 plants per row. All rows and all plants within the row had the same probability of being selected. As it can be seen, the impact of trellising on the budding was remarkable with differences from 18 to 31% while at blooming stages a difference of 14 up to 36% were recorded. As discussed earlier, trellising has other advantages to the grower that are not measured in yields but in reduction of labor and increased effectiveness of pesticide treatments and post-harvest losses.

Table 9. Rapid assessment of the impact of vertical trellising on tomato plants.

Association/ Individual	Location Province/ commune	T1 (treatment with trellising, number of buds)	T0 (control, no trellising, number of buds)	Variance (quantity/%)		T1: # flowers	T0 # flowers	Variance (quantity/%)	
				Diff.	%			Diff.	%
DUKOREREHAMWE TWUNGURANE UBUMENYI	Bubanza/ Gihanga	33	27	6	18.18	107	92	60	14.02
TWIYUNGUNYANE BAKENYEZI	Bubanza/ Gihanga	37	26	11	29.73	139	89	63	35.97
HARERIMANA Canut	Bubanza/ Gihanga	36	25	11	30.56	107	92	61	14.02
TUNGANYUBUZIMA	Makamba/ Nyanzalac	22	17	5	22.73	62	47	39	24.19



Fig. 1. Examples of trellising with the use of eucalyptus branches and old mosquito nets.



Fig. 2 : Trellised tomatoes above ground

h) Other cultural practices applied

Among other practices applied to the treatment is the pruning in tomatoes to promote apical bud growth and the removal of old leaves located at the plant base. The suppression of older leaves was done when the crops reached maturation on tomatoes and cabbage since these are hosts for fungus and bacterial diseases. The pruning was done only on two demo plots because the crops grown during the dry season didn't develop many branches to make the pruning necessary.

i) Production data analysis

Data from demo plots

At the time of writing of this report, only 16 out of 24 groups are at the harvesting stage and only 4 have completed their harvest. The data collected on these four groups presented in Table 10 shows important achievements in output compared to the controls where cultural practices were kept under the usual scheme. As expected, we attribute the positive difference in output to the introduction of modern agronomic practices. However, the projected amounts were not met as hypothesized due to a number of factors we explain in our next section.

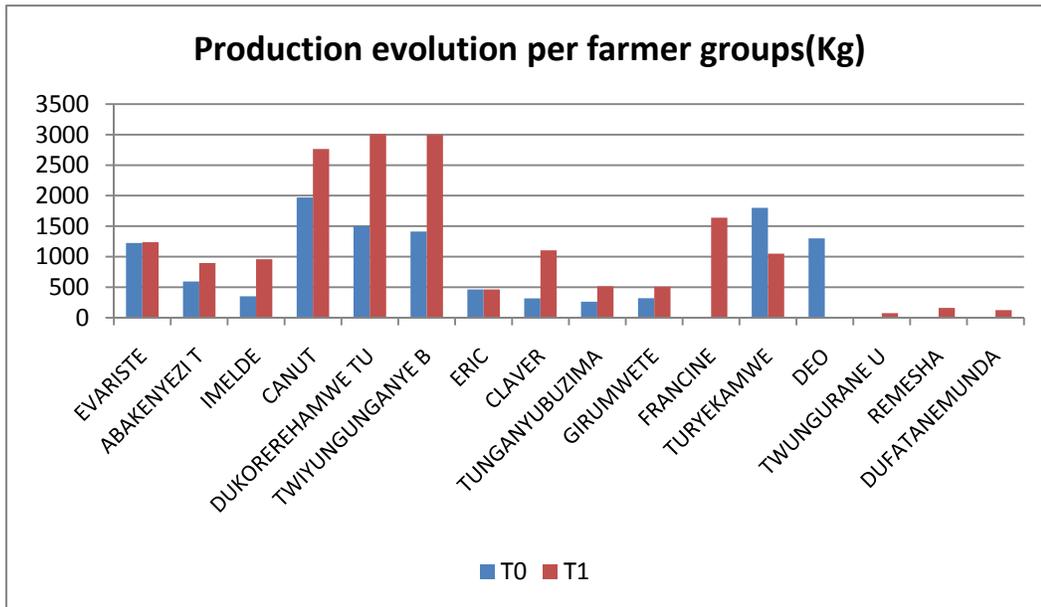
Table 10. Performance of demoplots partners in the quarter

Crop	Owner	Province		T0(Kg)	T1(Kg)	Other fields	TP(kg)	RT0(BIF ('000 FBU))	R T1(BIF ('000 FBU))	Other Fields ('000 FBU)	TR ('000 FBU)
Tomato	Evariste	Buja Rural	Mubimbi	1,225	1,238	-	2,463	423.3	421	-	845
	Abakenyezi Twisununure	Buja Rural	Mutimbuzi	594	798	466	1,956	297	448	233	978
	Canut	Bubanza	Gihanga	1,970	2,765	1,300	6,035	624.1	875.9	350	1,850
	DTU	Bubanza	Gihanga	1,500	3,010	-	4,510	212.8	427.1	-	640
	TB	Bubanza	Gihanga	1,413	3,000	-	4,413	331.7	704.3	-	1,036
	Tunganyubu Zima	Makamba	Nyanza Lac	264	515		779	45.9	83.4	-	129
	Eric	Bubanza	Gihanga	463	463	-	926	219.5	219.5	-	439
	Dufatane Munda	Bubanza	Gihanga	-	125	-	125	-	31.7	-	32
	Claver	Mwaro	Kayokwe	316.5	1105	-	1421.5	63	221		284
	Imelde	Mwaro	Kayokwe	351	958		1309	67.9	185.3	-	253
Onion	Remesha	Muramvya	Rutegama	-	160	-	160	-	80	-	80
Amaranth	Girumwete	Buja rural	Kabezi	321	508.5	-	829.5	96.3	152.5	-	249
Cabbage	TU	Gitega	Gitega	-	76	-	76	-	7.6	-	7.6
	Francine	Mwaro	Kayokwe	-	1640	-	1,640	-	94	-	94
	Turyekamwe	Kayanza	Matongo	1,800	1,050	-	2,850	60	29.0	-	89
	Deo	Kayanza	Matongo	1,300	-	-	1,300	77	-	-	77
TOT							30,793				7,083

T0= Control ; T1 : Treatment ; TP= Total Production; R: Revenue; TR= Total Revenue

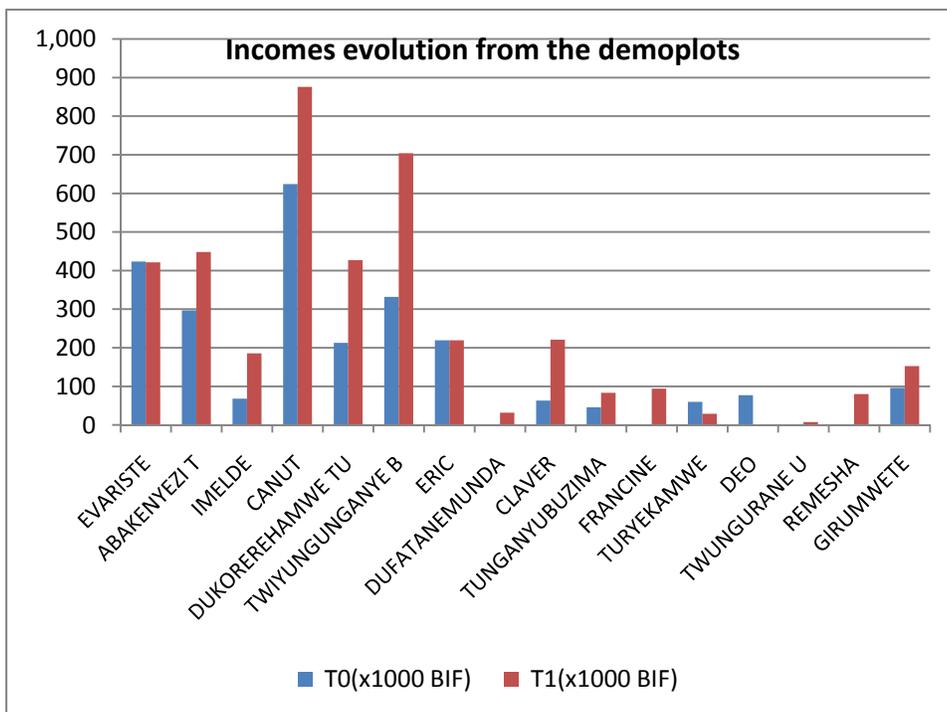
DTU= Dukorere Hamwe Twunguranw Ubumenyi, TB=Twiyungunganye Bakenyezi, TU= Twungurane ubumenyi

Graph 1: Production Evolution per farmer group (Kg)



As can be seen in Table 11, most demonstration plots have achieved their objectives; however, some unsatisfying production results were evaluated and are lessons learned which will be addressed in future seasons.

Graph 2 : Incomes Evolution per farmer group (FBU)



The details are explained as follows:

The trial has been conducted during the dry season 2011C. Even if treadle pumps were available, the drought on some types of soil led to a weak fructification rate for tomatoes.

As BAP provided inputs except mineral fertilizer and pesticides, some farmers applied the same practices to the treatment as well as to the control. As a consequence, there was no significant difference between the yield obtained on the T1 and TO sub plots.

The habit of producing up to a certain volume misguided some farmer groups to stop applying the agronomic protocol in place. They could have harvested bigger yields, but they were happy at a certain point in the development of the crop. The yields were still overly satisfying to them despite the forgone harvest potential.

The limited skill of some farmer groups caused some losses on the treatment, particularly at the level of seedlings production during mineral fertilizer application (seedlings are sensitive to high urea applications). This was reported in Makamba and had minor influence on other locations. The lessons were learned and the doses revised so that this could be avoided in the future.

On September 3 a hail storm destroyed a major part of the yield in the Murimyi w'ikawa girijambo farmer group. Little could be salvaged.

The farmer groups were not used to intense data recording on anything. This affected their ability to collect data on a timely fashion. Despite the insistence and monitoring by ADCs and BAP coordinators some groups just recorded marketed yields and not the production used for self-consumption or damaged by birds. This has led to inconclusive lower yields, but conscience has grown in farmer groups to keep control of everything in future production seasons.

The harvesting data recorded up to now has coincided with a low-price period leading to lower revenues than anticipated. Based on historic price data, we expect that most of the groups that await harvest will enjoy higher prices than recorded so far. This will be confirmed in the following weeks.

Data from grants to farmer groups

Results from BAP Horticultural Grantees

Three farmer groups received grants from BAP for production and marketing of horticultural crops. These farmer groups are ABAZIMYAMURIRO, AGRED and TWITEZIMBERE.

Table 11. Amounts allocated to farmer groups receiving horticultural grants

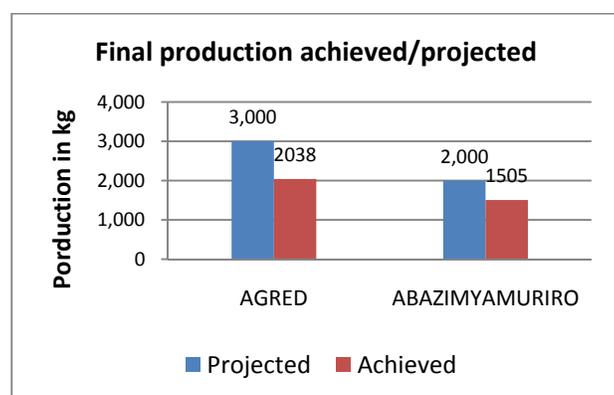
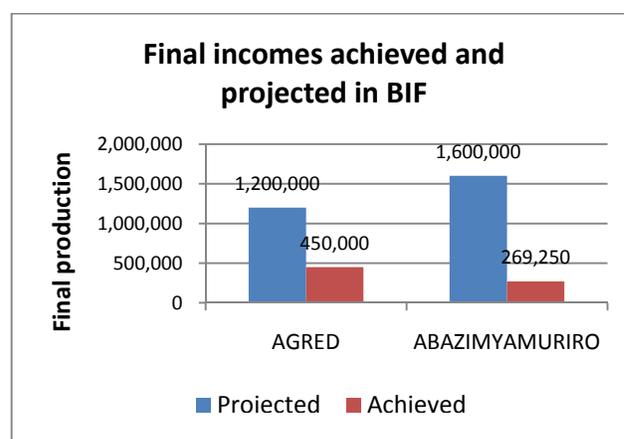
Group	Location (commune/province)	Amount (FBU)	Objectives
AGRED	Kayokwe Mwaro	1,111,500	Production and marketing of tomatoes on 0.15 ha
ABAZIMYAMURIRO	Kayokwe Mwaro	2,611,800	Production and marketing of tomatoes on 0.20ha, maracuja on 0.50ha
TWITEZIMBERE	Mutimbuzi Bujumbura	2,805,560	Production and marketing of green pepper on 0.5ha, hot pepper on 1 ha and tomatoes on 0.5 ha.

AGRED and ABAZIMYAMURIRO farmer groups have completed the tomatoes cropping sub project. The cropping and marketing of maracuja goes on for ABAZIMYAMURIRO farmers group. The stages of fructification, weeding and transplanting are observed according to the date of set up of the maracuja nurseries. All the equipment covered by the in kind grant for the two associations have been delivered. We note that the value of BAP provided “durable equipment” equaled 94% of each grant made to these associations. This equipment, available for future seasons should, with correct production timing, increase the future profitability of production for the members of these associations.

The TWITEZIMBERE farmer group has finished the planting for all the three crops. There has been a little delay in planting because the nurseries set up by the farmer group in early June didn't give good seedlings especially because of the poor quality of soil where the nurseries were set up. The group had to renew the setting up of nurseries in July and transplanted was done in August.

Table 12. Achievements of the grantees

Group	Crop	Production Projected (Kg)	Production Obtained (Kg)	Incomes Projected (FBU)	Incomes Obtained (FBU)	Comments
AGRED	tomatoes	3,000	2,038	1,200,000	450,000	Prices were too low on market, anthracnose attack caused losses
ABAZIMYA MURIRO	tomatoes	2,000	1,505	1,600,000	269,250	Prices on market were too low, attack of anthracnose, projection based on a high price 800 FBU/kg whereas they sold at 100-200 FBU/kg

Graph 3: Final production achieved vs projected**Graph 4: Incomes achieved vs projected**

The production results show that the AGRED farmer group achieved 67.9% of its projected production and 37.5% of its projected incomes.

The ABAZIMYAMURIRO farmer group achieved 75.2% of his projected production but only 16.8% of its projected incomes from tomatoes cropping and marketing.

Effects of the grants on beneficiaries

The two grants permitted the increase of production and incomes for the two farmer groups. In addition, as their own testimony during the radiobroadcast of June 23th on Radio Isanganiro is an evidence, the projects built up their knowledge in agricultural techniques. They are now familiar to some new techniques like improved nurseries, trellising and irrigation with treadle pumps.

The project increased their food security: the ABAZIMYAMURIRO farmer group shared 176 kg of tomatoes, worth 40,000 FBU to feed their own families.

The AGRED farmers group started a micro credit program with 200,000 FBU.

The two farmer groups also reinvested the money in vegetables cropping: They started nurseries of tomatoes and cabbages.

Partnership with other institutions

a) University of Ngozi

In the IDEAS program (Initiatives de Développement Agricole Soutenables) which consists in promoting entrepreneurship for students of the University of Ngozi in order to enable them to initiate projects related to agriculture sector (production, processing, conservation, commercialization, and any service that comes upstream or downstream from production, especially in Agri-business), BAP invited the students to develop concept papers and provided them a concept framework.

Entrepreneurship being a new concept for Burundians in general and the students in particular, a training was organized in BBIN to enable the students to develop concept papers that will be submitted to a competition. The best projects will receive from BAP a small grant for their implementation.

Seven students of the Faculty of Agronomy attended the training which included three sessions: a) First steps to become an entrepreneur (Sept 14th); b) Business concept course (Sept 15th and 16th); c) Business planning (From Sept 26th to 30th).

b) CNTA

BAP has supported the CNTA to develop his grant request for acquiring training equipment and organization of training sessions on canning and solar drying for fruits and vegetables. The project was approved by the selection committee.

Planned horticultural activities for Q1 FY5

- Selection of associations and crops to be grown in demo plots;
- Selection of groups to be granted for horticulture projects;
- Support to farmer groups for the development of grant request;
- Training of farmer groups on harvesting techniques and data registration ;
- Implementation of seedling units;
- Visits for experience sharing between partnering farmer groups for demo plots;
- Monitoring and evaluation of performance of demo plots and seedling units;
- Training on solar drying and food canning;
- Signature of MOUs with DPAEs;
- Second edition and dissemination of the guide on demonstration fields;
- Edition and dissemination of production sheets for main horticultural crops;
- Training of DPAEs extension staff on best agronomic practices;
- Selection of IDEAS projects (University of Ngozi).

Horticulture Success Story 1 - Acquiring more land and improving family well being through improved tomato production and marketing:



Mr. Evariste Ndikumagenge is a vegetable farmer living on the Mageyo hillside of the Commune Mubimbi in Bujumbura Rural. He started cultivating horticultural crops in 1998 and has experience cultivating cabbage, onions, green peppers and tomatoes that he historically sold at the local markets of Kinama, Mubimbi and Mageyo. In 2005 Evariste was involved in a motorcycle accident which left him incapacitated. In 2009, as he was recovering he attempted to enter into a partnership with BAP. He planted green peppers but a severe disease attack devastated his field because he had relapsed and was unable to follow

through on his field activities. An investment of 650.000 FBU yielded only 150.000 FBU in earnings.

This year Evariste hosted a horticultural demonstration field on his property with BAP assistance. He received technical assistance in best horticultural practices for growing of tomatoes- including improved nursery seedling preparation, raised beds and trellising, as well

Trellised Tomatoes



as in record keeping.

From his tomato demonstration plot

Evariste earned 844,689 FBU. He harvested a total of 2.46 mT of good quality marketable tomatoes from 10 ares. There was negligible difference between the production under improved practices and the production using traditional practices because, convinced by the potential of the improved practices he applied the same treatment to his control.

Transporting his harvest using BAP initiated wooden boxes (cageots) Evariste expanded his market creating a link with the

Mutoyi shopping center in Bujumbura, where he was paid 500 FBU/kg. From his demonstration plot he earned a total of 844.649 FBU (appx 343 FBU/kg).

Evariste used the money he gained from his demonstration plot to buy a piece of land of 15mx35m (525 m²) in the commune Mubimbi near the intersection of Mageyo and the NR 6. The investment cost was 500,000 FBU. With 200,000 FBU, he has purchased 5 kg of green bean seed for this new plot, has hired external labor and purchased manure to start early during the 2012A season.

The remaining money (appx 140.000 FBU) Evariste invested in improving living standards for his family, building a kitchen for his house and renovating sleeping quarters for his three boys so they no longer have to sleep in the main room.



Three Happy Brothers

Horticulture Success Story 2- Best Practices improve horticultural production, augment revenue, increase micro credit opportunities and lead to the purchase of a pig:



Abakenyezi Twisununure farmer group in the Mutimbuzi Commune of Bujumbura Rural was created in 2007 by women living in the Kivoga displaced person's resettlement camp. They decided to pool their resources and work collectively to improve the living conditions for the 15 members, 14 of whom are women. Previously the association grew flowers under contract with Christa Flore, earning 200.000 FBU. They have also produced cassava, sweet potatoes rice and maize to improve their daily nutrition. Financing

for these early activities came from member contributions and reinvestment of earnings from the sale of excess production from their fields.

Since 2010, BAP has provided technical assistance to the association including literacy training, development of improved management tools and improved agronomic practices like use of select seed, improved nursery management, planting on raised beds at optimum planting density and trellising.

Application of these techniques yielded a total of 896 kg (or an appx yield of 17.92mT/ha) from the improved practices plot while the traditional practices control only produced 594 Kg (or an appx yield of 11.88mT/ha). This translates to a production increase of 50.8% using improved vs traditional methods of cultivating tomatoes and resulted in a total revenue of 800.000 FBU from the 10 ares under demonstration.



The association used part of their profit from their demonstration plot of tomatoes to buy a pig for 300.000 FBU so they can produce their own animal manure (an input proven to be scarce and expensive during this season).



Another portion (275.000 FBU) has been deposited to an account at the WISE microfinance institution.

The remaining 225.000 FBU was allocated to the extension of their internal micro-credit program to the association members. Money is loaned at 10% interest for each 10.000 FBU/borrowed per month.

The association learned this system from CARE in 2009 and has continued the activity ever since. So far since harvest of the demonstration field, eight members have each taken loans of 10.000 FBU and are using this money to start small business ventures, to pay for school materials and school fees for their children.

Horticulture Success Story 3- Managing Irrigation technology's advantages, saving time and money for women in Gihanga



Twiyungunganye Bakenyezi is a woman's association created in 2005 that is located in Ninga in the commune of Gihanga in Bubanza Province. It is composed of 15 women, twelve of whom are literate. Created to economically empower women so they wouldn't be entirely dependent on their husband's revenue, the association has historically produced tomatoes using traditional practices and used the revenues to provide its members with emergency credit in case of need. Through their efforts in cultivating tomatoes the association had mobilized 176.500 FBU and opened an account at the local CECM micro-finance institution prior to the 2011 C agricultural season. In addition the women have been mobilizing funds, contributing funds (200 FBU/person/wk) each week to their association.

BAP began assistance to the Association in 2009. Through our Community Development Agent (ADC) BAP provided capacity reinforcement in association institutional strengthening: organization, roles and responsibilities of association leaders, elaboration of key legal documents; the development of management tools- petty cash and inventory control; and functional literacy; in addition to technical themes related to the production of tomatoes: nursery management, raised beds, planting density, trellising, irrigation, pest management, harvesting and conditioning.

During the 2011 C season the Association in collaboration with BAP implemented a 10 are demonstration plot for best practices in tomato production using Tengeru 97 variety on land rented by the Association for 20.000 FBU. Improved practices produced 88.5% greater yields than the traditional control. Production under improved practices was 3546 kg (or 70.92mT/ha) vs 1934 kg (or 38.68 mT/ha) for traditional cropping practices. In total the association earned 1.718.000 FBU (average sales price 307.94 FBU/kg) on sales from the demonstration plots alone.



Irrigation on the demonstration fields was performed using a MoneyMaker treadle pump. This technology reduced the number of man hours for irrigation from 448 (7 people x 2 times a day x 2 waterings/wk x 16 weeks in a cropping cycle) to only 48 (3 people irrigating 1 x a week x 16 weeks) and decreased the cost to the association from an estimated 560.000 FBU, using watering cans for irrigation, to 144.000 FBU with the treadle pump. The women found that irrigation with the treadle pump, while efficient, was quite tiring. In order to free up time and labor they decided to hire outside labor

from neighborhood men to irrigate their parcel, thus creating employment for three men during the 16 week production cycle.

With extra time on their hands, in September 2011, the association rented land (75 x 50 m or 3750m²) on the SDRI for 80.000 FBU. In this plot they've planted 2500 m² to Tengeru 97 variety tomatoes, emulating all the best practices from the demonstration field, except trellising for the moment, as they are waiting for harvest on the initial demonstration plot to be complete in order to recycle the trellising material. Harvest of this new "expanded" tomato field is expected in December. The rest of the land area has been planted to a bean/maize intercrop.

The earnings from the initial demonstration field have been put to good use. The association has rented four new fields totaling 2 hectares for 200.000 FBU. They plan to split this into four separate plots of ½ hectare each and plant tomatoes, green pepper, eggplant and tomatoes. The remaining 1.518.300 FBU has been divided as follows: 895.000 FBU on deposit at the CECM; 297.000 FBU reserved for current field activities; 326.300 FBU for production activities on the 2 ha- slated to begin in December 2011. Of the money currently on deposit at the CECM, the association has decided to apply a majority of the funds to the purchase its own land rather than continuing to negotiate rental agreements with landowners during each agricultural cycle.

Cross-cutting Components

Gender and Micro-Enterprise

Introduction

After a slow start in July, activities in this sector took off during the final two months of the reporting period. Not only was there an intensification of capacity reinforcement activities for associations and their members both for institutional capacity reinforcement and improved governance, but also for better management and business practices. The end of the first phase of literacy training found that 80% of those who registered for training became regular participants and greater than 93% of regular participants finished the literacy curriculum and became “neo-literates”. Other activities included working with dynamic associations on the development of income generating activity proposals, identification of pilot sites for the introduction of fuel efficient stoves and kitchen gardens and assisting AFAB with the organization of a regional women’s entrepreneurship workshop.

Details of Activities undertaken in Q4

Institutional and organizational capacity building of associations

This quarter a total of 13 themes were offered for producer associations across the project zone. A total of 913 members participated in these themes, facilitated by ADC. Of these 580 or 63.5% were women. The themes most offered during this quarter were legal documentation (23 sessions) followed by managing organizational conflict and planning of activities (10 sessions each), then leadership functions in an association (9 sessions). Average participation, per session, was highest for organization of associations (22.5 pp/s) followed by the notion of associative governance (15 pp/s) and then documentation of activities (13 pp/s) and organizational management (12.83 pp/s). Women’s participation was greatest for documentation of activities (100%) followed by taking minutes at meetings (90%), the notion of associative governance (80%) and planning of activities (78%).

1. Institutional and organizational capacity building of associations									
Theme	Nbre Prov	Nbre Assn	Nbre CWS	Participation			# Sess	Eff/S	%F
				M	W	T			
Organizing individual producers in an association	4	0	7	145	35	180	8	22.50	19
Association governance	3	4	0	18	26	44	4	11.00	59
The notion of associative governance	1	1	0	3	12	15	1	15.00	80
Leadership functions in an association-organs, posts, roles and responsibilities	6	10	1	25	75	100	9	11.11	75
Rights, roles and responsibilities of association members	1	1	0	4	3	7	1	7.00	43
Conception of legal documentation	5	16	0	53	126	179	23	7.78	70
Organizational management	4	9	0	24	53	77	6	12.83	69
Managing organizational conflict	2	5	0	19	71	90	10	9.00	71
Taking minutes of meetings	1	5	0	5	44	49	5	9.80	90
Learning to document every activity implemented by the association	1	2	0	0	26	26	2	13.00	100
Planning of activities	4	13	0	21	75	96	10	9.60	78
Division of association earnings	1	1	0	6	19	25	2	12.50	76
Internal mobilization of funds	2	1	1	10	15	25	2	12.50	60
TOTAL				333	580	913	83	11.82	68.46

Managing Association Resources

Under this heading 13 different themes were offered during this reporting period. A total of 834 participants attended these sessions. Average participation was 9.21 per session. Women participants averaged 60.8%. The most popular themes were managing equipment and inventory (16 sessions for 18 associations), managing petty cash (15 sessions for 20 associations), and managing association finances (14 sessions implicating members from 10 different associations). The sessions attracting the greatest average number of participants/session were: managing petty cash (11.6 pp/s), division of benefits among association members (11.17 pp/s) and managing equipment and inventory (10.63 pp/s). Women's participation was greatest the following sessions: receipts, purchase orders and cost estimates (82.4%), grant management (80%), division of benefits among association members (73%) and managing petty cash (71.4%). Least subscribed sessions for women in this thematic area were: maximizing production while minimizing costs (40%), managing equipment and inventory (42.9%) and inventory control (45%).

2. Managing Association Resources									
Theme	# Prov	# Assn	# CWS	Participation			# Sess	Mean PP/S	%W
				M	W	T			
Marketing: Who are our clients? How can we satisfy them? Improving salesmanship. Who are our competitors? Determining sales prices.	1	6	0	38	88	126	12	10.50	69.84%
Grant Management	1	1	0	2	8	10	2	5.00	80.00%
Finding Markets	2	2	0	9	18	27	3	9.00	66.67%
Managing Association Finances	3	10	0	35	37	72	14	5.14	51.39%
Managing Equipment and Inventory	5	18	2	97	73	170	16	10.63	42.94%
Maximizing production while minimizing costs	1	1	0	12	8	20	2	10.00	40.00%
Inventory Control	1	1	0	11	9	20	2	10.00	45.00%
Profit and Loss Statement	1	4	0	19	23	42	5	8.40	54.76%
Managing Petty Cash	5	20	1	49	125	174	15	11.60	71.84%
Receipts, Purchase Orders and Cost Estimates	1	2	0	3	14	17	2	8.50	82.35%
Sales Registers, Credit and Production registers	2	5	0	26	43	69	7	9.86	62.32%
Projecting costs for cash flow projections	1	1	0	5	5	10	1	10.00	50.00%
Division of benefits in an association	2	11	0	18	49	67	6	11.17	73.13%
Total				324	500	824	87	9.21	60.79%

Income generating project development

During this reporting period 19 associations in 4 provinces (Bujumbura Rural, Cibitoké, Makamba and Mwaro) held 18 sessions with ADC in the development of income generating activities. In total 124 members participated. Of these 68.5% were women. Average participation per session was 6.89.

Literacy

As can be seen from the table on the following page, 122 literacy centers were operational during this reporting period. Of 2510 members registered for literacy, 2017 (80.4%) actually attended the training regularly. Of these regular participants 1887 (93.6%) completed the coursework by the end of the quarter. Ninety two participants were still undergoing literacy training, while 38 (1.9%) of regular participants had dropped out for one reason or another.

Province	Literacy Ctrs	Registered students	Participants	# of pp who finish the curriculum	# pp still being trained	# pp who abandon literacy
Bubanza	8	123	68	68	0	
Buja Rural	4	118	99	64	35	
Cibitoke	15	483	417	401	0	16
Gitega	9	176	149	149	0	
Kayanza	24	457	328	315	13	

Kirundo	12	244	153	153	0	
Muyinga	8	126	126	104	0	22
Muramvya	10	103	140	140	0	
Mwaro	12	328	250	250	0	
Ngozi	20	352	287	243	44	
Total	122	2510	2017	1887	92	38

BAP plans a second phase of literacy, starting in November 2011 with the training of trainers with centers opening in December. A total of 376 candidates have been identified for training in this second phase. They come from 71 different associations in 9 different provinces. BAP has begun identifying local NGO capable of integrating these literacy trainers and using the experience of the first group of trainers to replicate the experience and expand outreach beyond just BAP client organizations.

Identification of Women's Associations interested in developing income generating activities with BAP assistance

Of the 20 dossiers targeted in our workplan it is anticipated that 7 will concern the production of horticultural crops, 3 will be for modern beekeeping activities; 4 will concern basketry; 4 others will concern small scale sewing activities and 2 will be for the transformation and processing of fruits and/or vegetables. During this reporting period 5 dossiers were under development in Mwaro. By the end of the period two had been finalized for submission while three others were still in the information collection stage.

Identification of pilot associations for activities related to fuel efficient stoves, water harvesting and kitchen garden promotion

BAP has now identified 60 Associations in nine different provinces representing 123 households and 910 direct beneficiaries to participate in this activity which is now being re-dimensioned to only include fuel efficient stoves and kitchen gardens because of time and budgetary constraints.

Province	# of associations identified	# of beneficiaries
Bubanza	4	70
Bujumbura Rural	3	51
Cibitoke	2	41
Gitega	3	30
Kayanza	8	106
Kirundo	8	113
Muramvya	5	142
Mwaro	7	101
Ngozi	20	256
Total (9)	60	910

Other Activities

1. Participation in the analysis of two grant request dossiers, both from Mwaro province, both for principally women's groups wishing to undertake horticultural activities
2. Participation in meetings analyzing assistance requests from AFAB for the organization of a regional conference for women entrepreneurs in Burundi. This activity was planned for the last week of September, but actually occurred from 3 to 5 October 2011. BAP sponsored 30 women from the interior of the country to the conference as well as four women to participate in the associated trade show. While the trade show did not result in a high volume of sales, it did permit the participants to make numerous contacts in the EAC that may serve them further down the road.

Constraints

- Slow down of activities during the month of July 2011 due to financing uncertainties and an obscured horizon for the execution of program activities. Contracts for 9 field agents were converted to one month short term bridge agreements resulting in a demotivation in the field and uncertainty among our clients as to whether planned actions could be realized.
- Cancellation of the recruitment of a CCN gender specialist as assistant to the component leader
- Suspension of activities related to fuel efficient stoves, water harvesting and kitchen gardens after investing 3 intense months of activity identifying pilot associations and members
- Reticence and delays in obtaining baseline data from client associations that are necessary for the development and analysis of grant requests for income generating activities

Recommendations

- It is imperative that our clients undertake income generating activities to reinforce the lessons they have been learning and create or diversify revenue streams in the rural communities
- Accelerate contracting for the second phase of literacy activities
- Privilege the most dynamic associations in targeting assistance so that they may develop successful income generating activities and serve as an example to others in proximity.
- The best manner to preserve lessons learned and taught over the past years is to carry out concrete activities that use the tools provided and exhibit to the associations the worth of continuing the practices.

Principle Activities for Q1 PY 5

- Identification and contracting of a local NGO to continue literacy work started under BAP
- Finalization of Income generating grant request dossiers for dynamic women's associations
- Continue reinforcing organizational, institutional, management and business entrepreneurship skills with rural client associations. Marry these trainings with income generating activities
- Identification and contracting of a local partner to assist in introducing fuel efficient stoves and kitchen gardens with pilot households throughout the project zone
- Introduce a system of community mobilization of funds and solidarity group lending among members of client associations with resources mobilized through their communal income generating activities

Grants and Financial Intermediation

Introduction

The 4th quarter of this project year was spent increasing our pipeline of potential grantees, field visits with potential grantees to discuss proposed activities and document their organizational and economic history, offering technical backstopping in the preparation and financial analyses of proposed activities, collaborating with clients in the development of dossiers for submission under the DCA, and assisting in structuring the community water system grants. The 4th quarter of the fiscal year corresponds with the “C” agricultural season that is mainly dedicated to horticultural production activities in low lying valley bottomlands. Many of the activities in our pipeline are scheduled for either the 2012 “A” or “B” agricultural seasons corresponding to Q1-Q3 of BAP’s PY5.

Activities and Realizations

This quarter BAP approved three grants all under the water and sanitation component. This compares to seven approved grants from five of BAP’s eight components, in the previous quarter and four grants from quarters 1 and 2.

Table: Number of grants approved, by sector and reporting period during PY4

# Grants Approved	S1	Q3	Q4
Coffee	0	3	0
Dairy	1	1	0
Horticulture	2	1	0
Gender	1	1	0
MSME	0	0	0
Water	0	1	3
Total	4	7	3

Table: Value of grants approved, by sector and reporting period during PY4

Value Approved (USD)	S1	Q3	Q4
Coffee	\$ -	\$ 7,506	\$ -
Dairy	\$ 71,868	\$ 108,474	\$ -
Horticulture	\$ 3,051	\$ 2,290	\$ -
Gender	\$ 4,860	\$ 7,195	\$ -
MSME	\$ -	\$ -	\$ -
Water	\$ -	\$ 19,255	\$ 112,455
Total	\$ 79,779	\$ 144,720	\$ 112,455

26 grants are pending this quarter – 10 from the coffee sector, 1 dairy, 9 horticulture, 4 beekeeping, and 2 soap and bread making. No grants were rejected this quarter.

Technical Assistance to New Grantees and Finalizing Dossiers

Approved Grants

This quarter, BAP signed a standard grant agreement with the African Promotion Company (APROCO) in support of their project to complete the installation of a new private coffee washing station in Muyinga Province, and to construct waste water effluent control and sanitation infrastructure. The activity received USAID approval in Q3. BAP held a post award meeting with the President and Treasurer of APROCO to review the terms and conditions of their standard grant agreement including requesting the cash advance, submitting receipts and financial and progress reporting requirements. Shortly after signing, the first disbursement to procure imported material (PVC pipes) was made.

Three grants were approved and agreements developed with the Communal Regideso for three of the four community drinking water systems which were completed under the BAP water and sanitation component in PY3. As originally designed, the systems are being formally transferred to the local community under an in-kind grant and managed by the water management committees who received BAP sponsored WASH (Water Sanitation and Hygiene) training led by the local NGO AVEDEC in PY3.

Pending Grants

Among the ten pending grants under the coffee sector, five (Coopérative KAWANZIZA, Cooperative MBONERAMIRYANGO-KORANE, Cooperative Kazoza n'ikawa, Cooperative Dusangirijamboare and Coopérative Nkamwayacu) in their final stages of completion or are ready for review by BAP's evaluation committee. The budgets for the 3 mini-washing stations underwent revision earlier this quarter after a July field visit by BAP's National Coffee Coordinator and DCOP. Despite the fact that water usage and therefore liquid effluents will be significantly reduced with the use of Penagos machines, each station is in close proximity to a river, marais and/or farmland, thus BAP's water specialist designed a modified version and accompanying budget of the effluent treatment systems currently being promoted at larger washing stations.

Sogestal Kirimiro submitted a grant request this quarter to construct waste water effluent control systems at two government owned washing stations of Tekka and Butemba. Under a partnership agreement signed between Intercafe and BAP in PY3, ARFIC has allocated 40 million FBU of its annual budget to co-finance the construction of effluent control structures at government owned stations. The dossier from Coopérative Nkamwayacu will be presented to the BAP evaluation committee in early November 2011.

The Burundi Bio-Agricultural Community first submitted their request for assistance to increase dairy production through making veterinary inputs (bovine inoculations and vaccines etc.) available in their commune in Q1 of PY4. However, the success of their business plan depended on the installation of a milk pasteurization machine which was on order. BBAC was advised to resubmit their request after the machine arrived and was brought online. BAP received the resubmitted dossier on 15 August and is currently under review.

BAP conducted field visits to eight new grantees under the horticulture sector including 5 women's associations from Mwaro Province and 3 producer associations from Makamba (see table below). As described from the previous quarter's report, the women's associations were beneficiaries of BAP capacity reinforcement training in literacy, crop diversification and community mobilization of funds. Using these skills they are now seeking technical and financial assistance to expand their production and increase revenues for the group. Three of the associations moved through the project development phase quickly and have presented dossiers for evaluation. The dossiers of the remaining two are still under development.

- Association Tugwizumwimbu originally sought assistance to grow tomato however this crop is currently widely grown by neighboring farmers. To increase their chance of making a profit, the association switched to egg plant and cabbage which has consistent demand in the provincial market. The activity will be timed to harvest in December of this year when supply is historically low.
- Association Dushirehamwe – proposed to exploit 1.5 ha of rented land to grow pineapple, 1 ha to grow passion fruit, and seek additional land to grow cabbage and eggplant. After the assessment they determined it would not be technically and financially feasible to run all 4 projects at the same, so the dossier was revised to focus on eggplant (¼ ha) and on cabbage (¼ ha)
- Association Turemeshamnye – intended to grow 1 ha of pineapple and ½ ha of onions however the cost of production for both of these crops was too high for this group. The association opted to begin with growing onions on a ½ ha

The *Centre National de Technologie Alimentaire (CNTA)* has completed its grant request to promote and diffuse a prototype solar dryer. The grant comes under BAP's partnership agreement with CNTA, signed in April 2011, to collaborate on establishing mechanisms for diffusing new technologies for preserving fruits and vegetables, and reducing post-harvest losses as drawn from BAP technology trials in PY 3. BAP expects to submit the final dossier to USAID for concurrence early in Q1 of PY5.

Four grant requests from beekeeping associations in Muyinga and Mwaro Provinces are under BAP review with two of the grants; Association Twiteho ibidukikije and Programme d'Appui au Développement Social (PADS) - nearing finalization. The grant request from the Association Twumvikane is also nearing completion while the dossier for AFCD is waiting a scheduled field visit by the BAP MSME component leader.

Financial Intermediation

During PY3 InterBank Burundi (IBB) approved seven credit dossiers under the DCA totaling 1.180 billion Burundian Francs (see table 5 below). As of this quarter the total amount disbursed is 1.080 billion BIF. In August 2010, IBB approved a loan to Turame Community Finance (TCF) in the amount of 200 million FBU of which it drew down 100 million FBU for a line of credit for its beneficiaries. TCF postponed drawing on the remaining 100 million as it was in the process of repaying a capital loan from another donor. TCF intends to re-apply for the remaining 100 million during fiscal year 5.

As of this reporting period, seven additional credit dossiers have been approved under the DCA during PY4 (Table 4) for the following beneficiaries: Murambi coffee, Cooperative MUSEMA (CODEMU), Cooperative

NYARURAMA (CODENYA), Cooperative NKAMWAYACU, Federation of Coffee Growers of Mumirwa-muco W'IKAWA; Imbo Coffee Company and Mossi CINTIJE, a private operator.

Total approved loan value is 606.4 million FBU. The total amount disbursed to date is 501.2 million FBU the difference being due to the cooperatives CODEMU, CODENYA and Mr. CINTIJE withdrawing less than the approved amount IBB.

Table 1. COFFEE

N	Requesting Organization	Project Location	Project Activity	Total Cost (Fbu)	Beneficiary Contribution (Fbu)	%	Financing Requested (Fbu)	%	Financing Requested (USD)
1	Coopérative KAWANZIZA	SDL Kagombe	Protection of coffee farm against erosion	12,032,000	7,492,000	62%	4,540,000	38%	\$ 3,632
2	Cooperative MBONERAMIRYANGO-KORANE	Commune Giheta/ Province Gitega - SDL KIRIMIRO	Installation of a mini-coffee washing station	71,607,350	22,910,350	32%	48,697,000	68%	\$ 38,958
3	Cooperative Kazoza n'ikawa	Commune Matongo/ Province Kayanza - SDL Bwayi	Installation of a mini-coffee washing station	59,441,600	10,635,600	18%	48,806,000	82%	\$ 39,045
4	Cooperative Dusangirijambo	Commune/Province Kayanza - SDL Karinzi	Installation of a mini-coffee washing station	77,277,950	28,062,950	36%	49,215,000	64%	\$ 39,372
5	Sogestal Kirimiro	Muramvya - SDL Teka	Waste water effluent control structures & block latrines	35,029,470	24,093,970	69%	10,935,500	31%	\$ 8,748
6	Sogestal Kirimiro	Gitega - SDL Butemba	Waste water effluent control structures & block latrines	35,029,470	24,093,970	69%	10,935,500	31%	\$ 8,748
7	Sogestal Kirundo - Muyinga	Commune Mwakiro/ Province Muyinga	Upgrading the waste water effluent control infrastructure and adding rain water collection system	8,958,700	3,998,700	45%	4,960,000	55%	\$ 3,968
8	Coopérative Nkamwayacu	Commune Butehinda/ Province Muyinga - SDL Wingoma	Waste water effluent control structures & block latrines	24,934,750	12,441,950	50%	12,493,500	50%	\$ 9,995
9	SOGESTAL Kayanza	Kayanza - SDL Gatere	Waste water effluent control structures & block latrines	26,734,250	14,598,250	55%	12,136,000	45%	\$ 9,709
10	SOGESTAL Kayanza	Kayanza - SDL Mutumba	Waste water effluent control structures & block latrines	28,789,350	16,685,350	58%	12,104,000	42%	\$ 9,683
10	Total			379,834,890	165,013,090		214,822,500		\$ 171,858

Table 2. HORTICULTURE

N	Requesting Organization	Project Location	Project Activity	Total Cost (Fbu)	Beneficiary Contribution (Fbu)	%	Financing Requested (Fbu)	%	Financing Requested (USD)
1	Association TUGWIZUMWIMBU	Commune KAYOKWE, province MWARO	Culture d'aubergines (¼ ha) et de choux (¼ ha)	2,417,110	1,273,670	53%	1,143,440	47%	\$ 915
2	Association DUSHIREHAMWE	Commune KAYOKWE, province MWARO	Cultures des oignons (½)	2,486,104	1,301,820	52%	1,184,284	48%	\$ 947
3	Association TUREMESHANYE	Commune KAYOKWE, province MWARO	Culture des choux (¼ ha), oignons (¼ ha)	2,638,660	1,432,720	54%	1,205,940	46%	\$ 965
4	Association TWIZERANE	Commune KAYOKWE, province MWARO	Culture de tomates (½ ha)	-	-		-		\$ -
5	Association TWIYUNGUNGANYE	Commune KAYOKWE, province MWARO	Culture des oignons (½ ha)	-	-		-		\$ -
6	Association TUNGANYUBUZIMA	Commune Nyanza Lac, MAKAMBA	Culture des tomates (¼ ha) et aubergines	5,360,874	2,989,660	56%	2,371,214	44%	\$ 1,897
7	Association DUFATANEMUNDA	Commune/Province MAKAMBA	Culture d'ails (½ ha)	5,369,910	2,742,920	51%	2,626,990	49%	\$ 2,102
8	Association DUKORERHAMWE	Commune Mabanda/ Province MAKAMBA	Cultures de tomates (½ ha)	5,883,684	2,852,820	48%	3,030,864	52%	\$ 2,425
9	Centre National de Technologie Alimentaire (CNTA)	Bujumbura Mairie	Developement d'un prototype sechoir	62,928,000	461,000	1%	62,467,000	99%	\$ 49,974
9	Subtotal			87,084,342	13,054,610		74,029,732		\$ 59,224

Table 3: DAIRY

N	Requesting Organization	Project Location	Project Activity	Total Cost (Fbu)	Beneficiary Contribution (Fbu)	%	Financing Requested (Fbu)	%	Financing Requested (USD)
1	Burundi Bio Agricultural Community (BBAC)	Colline MUHWEZA, Commune et province MURAMVYA	Augmentation de la production laitière par la mise en place de boutique d'intrants vétérinaire	31,328,000	19,350,000	62%	11,978,000	38%	\$ 9,660
1	Subtotal			31,328,000	19,350,000		11,978,000		\$ 9,660

Table 4: MSME

N	Requesting Organization	Project Location	Project Activity	Total Cost (Fbu)	Beneficiary Contribution (Fbu)	%	Financing Requested (Fbu)	%	Financing Requested (USD)
1	Association Twiteho ibidukikije	Commune et Province Muyinga	Projet d'apiculture moderne	13,314,000	4,311,000	32%	9,803,000	74%	\$ 7,202
2	Programme d'Appui au Développement Social (PADS)	Commune Gashoho et Province Muyinga	Projet d'apiculture moderne	21,190,000	9,600,000	45%	11,590,000	55%	\$ 9,347
3	Union des associations apicoles de Mwaro (Union TUGWIZE UMUTSAMA)	Commune Kayokwe et Province Mwaro	acquisition of modern bee keeping equipment	10,131,000	2,966,000	29%	7,165,000	71%	\$ 5,732
4	Association Groupement de Production Agro Pastorale (GPAP)	Colline NYAGATOVU, Commune GASHOHO, Province MUYINGA	Promotion de l'apiculture moderne	13,201,480	3,179,500	24%	10,021,980	76%	\$ 8,018
5	Association Twumvikane	Commune Rugombo et Province Cibitoke	Projet de fabrication de savons	6,205,000	3,550,000	57%	2,655,000	43%	\$ 2,124
6	Association des Familles Chrétiennes pour le Développement (AFCD)	Commune Buganda et province Cibitoke	Projet de boulangerie de pain à base de patate douce et la farine de blé	9,668,000	2,859,000	30%	6,809,000	70%	\$ 5,447
6	Subtotal			73,709,480	26,465,500		48,043,980		\$ 37,870

Table 5.

LOANS APPROVED UNDER DCA AUTHORITY - INTERBANK BURUNDI
as of 30 September 2011 (Millions)

Beneficiary Name	Loan Start Date	End Date	Business/Sector	City/Region	Purpose Of Loan	Local Currency Amount	Total Principal Disbursement (as of 03/31/2011)	Interest Rate	Principal Repayment (09/30/2011)	Number of Days in Arrears (09/30/2011)
Loans Approved in PY3										
Industrie Alimentaire de Buterere (I.A.B.)	30-Apr-09	30-May-13	Agro-industry	Bujumbura	Equipment for transforming milk, fruit juice and mineral water	BIF 369.00	BIF 369.00	15.50%	BIF 144.60	NIL
MANWANGARI Jean Baptiste	9-Sep-10	31-Mar-11	Agriculture(rice)	Bujumbura Rural	Agriculture of rice	BIF 20.00	BIF 20.00	17.00%	Repaid	NIL
SOGESTAL NGOZI	31-Mar-09	30-May-12	Agriculture - Coffee	Ngozi	Coffee Factory	BIF 289.30	BIF 289.30	16.00%	BIF 133.16	NIL
Laiterie NYABISABO	20-Oct-10	6-Jun-16	Dairy	Bujumbura	Milk processing industry	BIF 170.00	BIF 170.00	14%	BIF 17.57	NIL
TURAME COMMUNITY FINANCE*	Oct-10	Sep-11	Microfinance	Bujumbura	Small loan	BIF 200.00	BIF 100.00	14%	Repaid	NIL
ADECAP	9-Sep-10	10-Aug-15	Livestock farming	CIBITOKÉ province	Livestock farming & milk collection	BIF 50.00	BIF 50.00	14%	BIF 5.93	60 days
HATUNGIMANA Japhet	15-Oct-10	15-Oct-13	Livestock farming	Bujumbura Rural	Livestock farming	BIF 82.00	BIF 82.00	16%	BIF 13.40	NIL
Total						BIF 1,180.30	BIF 1,080.30		BIF 434.66	
Loans Approved in PY4										
MURAMBI COFFEE	17-Mar-11	8-Aug-13	Coffee	MURAMVYA province	Coffee washing station	BIF 55.00	BIF 55.00	14%	-	30 days
Coopérative MUSEMA	Apr-11	Apr-12	Coffee	Kayanza province	Cherry purchase	BIF 90.72	BIF 61.73	16%	-	NIL
Coopérative NYARURAMA	Apr-11	Apr-12	Coffee	Kayanza province	Cherry purchase	BIF 90.72	BIF 19.49	16%	-	NIL
Coopérative NKAMWAYACU	May-11	May-12	Coffee	Muyinga province	Cherry purchase	BIF 200.00	BIF 200.00	16%	-	NIL
Fédération des caféiculteurs de MUMIRWA-MUCO W'IKAWA	May-11	May-12	Coffee	Bujumbura province	Cherry purchase	BIF 100.00	BIF 100.00	16%	Repaid	NIL
Imbo Coffee Company-ICC	May-11	May-12	Coffee	Bubanza Province	equipment purchasing for CWS	BIF 50.00	BIF 50.00	17.25%	BIF 25.00	60 days
CINTIJE Mossi	May-11	May-12	Agriculture	Bujumbura province	Agriculture-rice	BIF 20.00	BIF 15.00	17.25%	BIF 3.33	30 days
Total						BIF 606.40	BIF 501.20		BIF 28.33	

Table 6.

Turame Community Finance: Loan disbursement from DCA Line of Credit											
Beneficiary Group	Members		Average Loan Amount by Member (000)	Loan Amount	Disbursement dates	Reimbursement situation/Group	Beneficiary Location	Products Type	Activities Financed		
	Men	Women									
1.ABAHIRWE	4	39	BIF 207.7	BIF 8,930,000	4-Aug-10	Repaid	Bujumbura Mairie	Community Bank	Small trade		
2.AKARUSHO	0	5	BIF 480.0	BIF 2,400,000	4-Aug-10	Repaid	Bujumbura Mairie	Solidarity Group	Small trade		
3.DUFATANE	0	5	BIF 716.0	BIF 3,580,000	10-Aug-10	Repaid	Bujumbura Mairie	Solidarity Group	Small trade		
4.DUKEREBUKE	14	23	BIF 193.5	BIF 7,160,000	11-Aug-10	Repaid	Bujumbura Mairie	Community Bank	Small trade		
5.DUTERAME	5	46	BIF 193.5	BIF 9,870,000	10-Aug-10	Repaid	Bujumbura Mairie	Community Bank	Small trade		
6.ABADAHEMANA	2	26	BIF 146.4	BIF 4,100,000	10-Aug-10	Repaid	Cibitoke province	Community Bank	Small trade		
7.ABAGENZI II	4	1	BIF 600.0	BIF 3,000,000	12-Aug-10	Repaid	Bujumbura Mairie	DESG*	Small trade		
8.ABAKUNZI	0	5	BIF 500.0	BIF 2,500,000	19-Aug-10	Repaid	Bujumbura Mairie	Solidarity Group	Small trade		
9.ABANYAMWETE	4	28	BIF 71.9	BIF 2,300,000	23-Aug-10	In repayment	Mabanda commune	Community Bank	Small trade		
10.BEHO	4	5	BIF 533.3	BIF 4,800,000	17-Aug-10	terminé	Bujumbura Mairie	Solidarity Group	Small trade		
11.BENUMUGISHA	18	22	BIF 182.3	BIF 7,290,000	17-Aug-10	terminé	Nyanza-lac	Community Bank	Small trade		
12.BORA	2	4	BIF 645.0	BIF 3,870,000	16-Aug-10	terminé	Bujumbura Mairie	Solidarity Group	Small trade		
13.DUKORANIBANGA	9	20	BIF 203.4	BIF 5,900,000	18-Aug-10	In repayment	Nyanza-lac commune	Community Bank	Small trade		
14.DUKORE	0	8	BIF 522.5	BIF 4,180,000	25-Aug-10	terminé	Bujumbura Mairie	Solidarity Group	Small trade		
15.DUSAHIDIANE	1	6	BIF 442.9	BIF 3,100,000	24-Aug-10	terminé	Bujumbura Mairie	Solidarity Group	Small trade		
16.FARAJA	15	23	BIF 180.5	BIF 6,860,000	24-Aug-10	terminé	Bujumbura Mairie	Community Bank	Small trade		
17.FIDELE	0	6	BIF 826.7	BIF 4,960,000	10-Aug-10	terminé	Bujumbura Mairie	Solidarity Group	Small trade		
18.GLORIA	1	9	BIF 487.0	BIF 4,870,000	12-Aug-10	terminé	Bujumbura Mairie	Solidarity Group	Small trade		
19.HEZAGIRA	2	4	BIF 716.7	BIF 4,300,000	24-Aug-10	In repayment	Bujumbura Mairie	DESG	Small trade		
20.HURUMA	4	26	BIF 201.0	BIF 6,030,000	19-Aug-10	terminé	Bujumbura Mairie	Community Bank	Small trade		
TOTALS	89	311	BIF 402.5	BIF 100,000,000							

* Direct Entry Solidarity Group

Planned Activities for Q1 PY5

- Collaborate with component leaders and ADC to identify and provide timely technical assistance to qualified partners wishing to undertake income generating activities using grant subsidies
- Field visits to clients requesting grants to document baseline data
- Field follow up with grantees to document execution of grant and DCA financed activities
- Provide technical assistance and advising to clients in the development and/or orientation of their financing requests for small grants, DCA, or other potential financing partners (MFI, Commercial lenders, larger grant disbursing agencies (ex ADF)etc..)
- Facilitation of meetings of BAP's grant review committee

Community Water, Sanitation and Environmental Mitigation

INTRODUCTION

The activities under BAP's Water and Sanitation component in Quarter 4 focused on bringing to conclusion activities begun in project year 3 under water earmark funding. This includes conducting the formal handover of 3 of the 4 community drinking water systems, disseminating the results of waste water exiting effluent the water and monitoring the performance of the waste water effluent control systems installed at 9 BAP pilot coffee washing stations.

The community drinking water system in Kayenzi was received definitively this quarter. The construction work for the system in Kigoganya resumed in September after BAP completed negotiations with subcontractor Planning the Future Company on the re-design and costing of required additions to the system. BAP signed a modification to the purchase order with (PFC) increasing the ceiling by 57%. Construction is projected to be completed by December 2011.

The water BAP ADCs held planning meetings with the water management committees from each of the completed systems to discuss their roles and responsibilities in managing and maintaining their systems upon hand over. The communities have demonstrated their willingness to take charge of their systems by electing representatives to liaise with the various partners on the system and collecting and depositing water use fees in local bank accounts.

BAP received water quality results this quarter from a chemical analysis completed earlier in the year on the mitigating effects of the BAP promoted effluent control infrastructure model on pollution levels in waste water exiting washing stations. Fifty seven (57) samples of wastewater from a total of 17 washing stations were analyzed and the results obtained. BAP is highly encouraged to receive evidence that waste water treated by effluent control structures promoted by the program, contained significantly reduced levels of harmful chemicals, and normalized the pH of waste water entering the environment.

In collaboration with the Gender sector, household information was collected in support of rain water catchment and improved cooking stove construction activities for 77 recipients in 10 households in Rutegama, Muramvya Province.

Activities and Realizations

Construction of Community Drinking Water Systems, Grant Agreements with Communities

AEP Kayenzi

Construction of the water supply system Kayenzi was definitively received in July 2011 by a technical commission composed of representatives from the commune of Muyinga, the municipal water authority, DAI / PAIR (DCOP and Water component leader), PAIHAR and SECOG. The final length of the network is 5,848 m with two spring sources and 6 water storage tanks with a capacity of 85m³. The

system will serve a population of 9.300 people, of which three thousand are students from two primary schools (Rusengo and Kayenzi) and the communal college. The system will also provide access to clean drinking water to the communal health center of Kayenzi. Water quality testing conducted on the system's two sources confirmed that it meets the drinking water standards of the World Health Organization (see annexes1 & 2).

AEP Kigoganya

BAP and construction engineer Planning the Future Company ended drawn out negotiations this quarter on the type and costing of a new motorized pump to replace the ram pump originally planned for this system. A revised construction calendar was submitted and shows total construction time of four months. BAP's ADC facilitated meetings with the community around the Kigoganya system to explain the delay and ensure them that the project is back on track. Re-energized community members mobilized to dig 2,600 m of trenching for the placement of water distribution pipes this quarter.

System Management and Development of Grant Agreements

This quarter BAP worked closely with members of the water management committees and the municipal water authorities to discuss roles and responsibilities in managing and maintaining the new system. Over a series of meetings facilitated by BAPs ADCs, community members voiced concerns over potential corruption if the municipal water authority had sole control over the water user fees. By openly and objectively discussing their concerns the committees reached an agreement with the municipality that would allow them to manage the bank account, monitor the system and conduct basic repairs as identified.

The municipal water authority will receive monthly reports on the operational status of the system, minor maintenance completed and the status of the bank account, including current balance and brief reporting on how the funds were used. The MWE will check the veracity of the reports, provide technical advice on major interventions and make a technician available for repairs when required skills are not available within the community.

AEP Kayenzi

With the recent completion of the definitive reception of the Kayenzi system, the water management committee has just begun collection of water use fees from users this quarter. The fee is a fixed rate of 1,000 FBU per household per year. To inspire confidence and encourage the community to contribute user fees, the Kayenzi water management committee made the first contribution of 10,500 FBU which they have on deposit at COOPEC Muyinga.

AEP Kinyovu

The beneficiaries of the Rukoma/ communities of the hills are committed to join forces for the sustainability of structures. Recommendations on the financial participation of households to pay the

water fee were made during a meeting. Among these recommendations there that are already operational include:

- i. The creation of a fund for maintenance of the network with its power will come from user fees (amounting to 95 750 BIF is already collected);
- ii. Opening a current account at the Coopec for deposits and withdrawals and inform the board of the municipal water account management through reporting;
- iii. Election Monitoring Committee for managing the account. The committee consists of members which each point of water is represented.

Mr. Misago Ildefonso was elected as the focal person to represent the community with various partners on all matters relating to the network. The NCE Matongo through its president in the person of Mr. Severin Nsabimana, the agreement of no objection that the supply can be directly managed by the community was given. The

AEP Kigoganya

The design of the mixed gravity-pump fed system at Kigoganya calls for water to be supplied through 5 tap stands and kiosks which will be points of sale for drinking water. BAP encouraged the water management committee to consider how it will manage and maintain the infrastructure once it is operational. The committee is currently considering 2 options 1) contract out the operation of the system to a private individual who would report to the water management committee, or 2) operate the system themselves. If the option to contract a private operator is chosen, he/she will be selected through a transparent bidding process and will be obligated to report to the water management committee.

Gasoline to run the motor pump will be a significant expense in the operation of the system thus BAP advised the water management committee to begin collecting user fees in preparation. To date 50,000 FBU has been collected and deposited in an account at COOPEC Gasorwe.

AEP Murima

The focal point is the Director of the Kayenzi Health Center Mrs. Nyandwi Immaculate. Her role is to collect data and disseminate information on the operation of the network, train and make available health center staff as resources to the water users on proper hygiene and sanitation and collaborate with the water point committee. The water management committee ensures the maintenance and security of the system as well as the 3 repaired tap stands at the health center.

A summary of preparative activities undertaken by each of the water management committees is presented in the table below.

System	Water Use Fees Collected to Date	Account Location	System Focal Point
AEP Kinyovu	95,750 FBU	COOPEC Matongo	Mr. MISAGO Ildephonse
AEP Kayenzi	10,500 FBU	COOPEC Muyinga	Mr. MUHANA Thacien
AEP Murima	NA	NA	Mrs. NYANDWI Immaculée
AEP Kigoganya	50,000 FBU	COOPEC Gasorwe	TBD

Treatment of Effluents and Water Quality Testing Results

The 2011 coffee campaign was the first year that the effluent control infrastructures were fully operational at BAP pilot stations. These stations recorded a production of 2,134,313 pounds of coffee cherry which equates to approximately 32,015 m³ of water used in processing and 917,755 kg of coffee pulp produced.

Table 1: Cherry collected during the 2011 coffee campaign

Nº	Station	Quantity of Cherry Received (kg)	Quantity of Treated Water (m ³)	Quantity of Treated Pulp (Kg)	Quantity of Mucilage Produced (Kg)
1	Ruhororo	832,303.5	12,484.6	357,890.5	41,615.2
2	Kinyovu	374,914.0	5,623.7	161,213.0	18,745.7
3	Buhorwa	289,418.0	4,341.3	124,449.7	14,470.9
4	Gitwa	219,537.5	3,293.1	94,401.1	10,976.9
5	Rutanga	147,647.5	2,214.7	63,488.4	7,382.4
6	Rwintare	101,289.0	1,519.3	43,554.3	5,064.5
7	Butegana	112,051.5	1,680.8	48,182.1	5,602.6
8	Gahahe	26,375.5	395.6	11,341.5	1,318.8
9	Nkaka	30,776.5	461.6	13,233.9	1,538.8
10	Total	2,134,313.0	32,014.7	917,754.6	106,715.7

To evaluate the impact of effluent control infrastructure on the reduction of pollution entering the environment around coffee washing stations, BAP collaborated with African Water Research Laboratory to conduct a chemical analysis of waste water exiting effluent control structures and waste water exiting a coffee washing station with no treatment infrastructure in place. During PY 3 Bap collected baseline water samples from 17 coffee washing stations, nine with BAP designed effluent control systems, three

with alternatively designed wastewater treatment systems and five control washing stations where no environmental mitigation has occurred.

Table 2: Coffee Washing Stations submitting Waste Water Samples

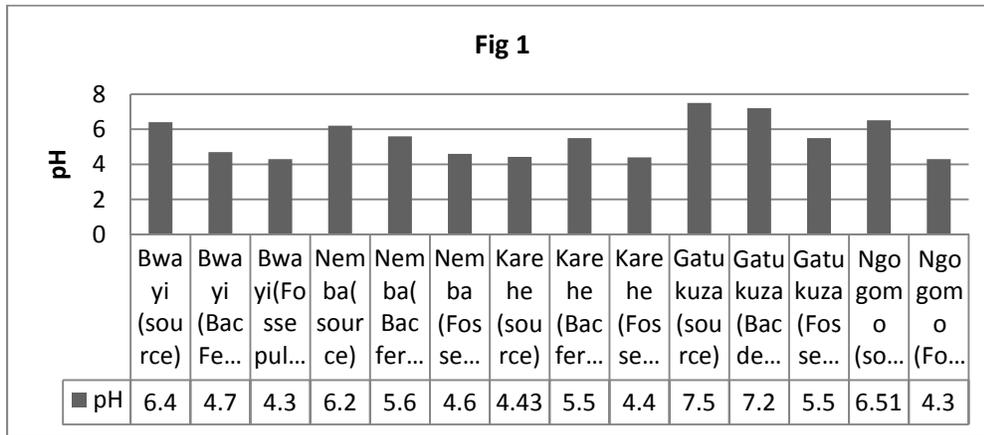
N°	Désignation	Localité	Nom de la station	Propriétaire
1	Stations sans aucun traitement	Kayanza	Bwayi	Arfic/Sogetal Kayanza
			Nemba	Webcor
		Ngozi	Gatukuza	Privé
			Karehe	COPROTRA
		Muyinga	Ngogomo	ARFIC/Sogetal Kayanza
2	Stations ayant déjà initiées un modèle de traitement	Muyinga	Nyamasaka	ARFIC /Sogetal Muyinga_Kirundo
			Kagombe	ARFIC/Sogetal Muyinga_Kirundo
		Kayanza	Buziraguhinda	CPC
3	Stations équipées des ouvrages de traitement des effluents	Kayanza	Gahahe	WEBCOR
			Butegana	WEBCOR
			Kinyovu	Sogestal Kayanza
			Ruhororo	Association Ubwiza bw'Ikawa
		Muramvya	Buhorwa	Sogestal Kayanza
		Ngozi	Rutanga	Sogestal Ngozi
			Rwintare	Sogestal Ngozi
			Gitwa	Sogestal Ngozi
			Nkaka	WEBCOR

Results

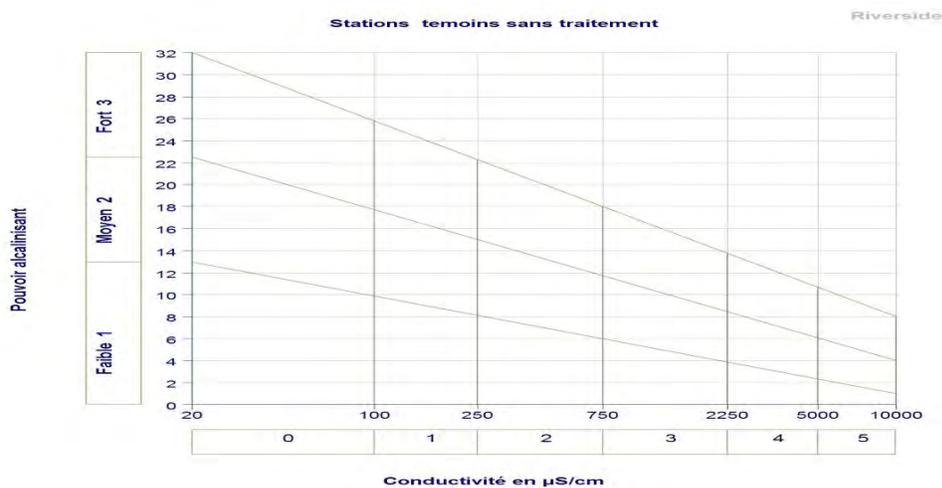
Waste water samples were analyzed against physico-chemical parameters (pH, conductivity and suspended solids), presence of major elements (magnesium, potassium and sodium), trace elements (iron and manganese) and anions (chlorides, carbonates, sulfates, nitrates and nitrites). The analysis yielded the following observations:

Control Group - Untreated waste water

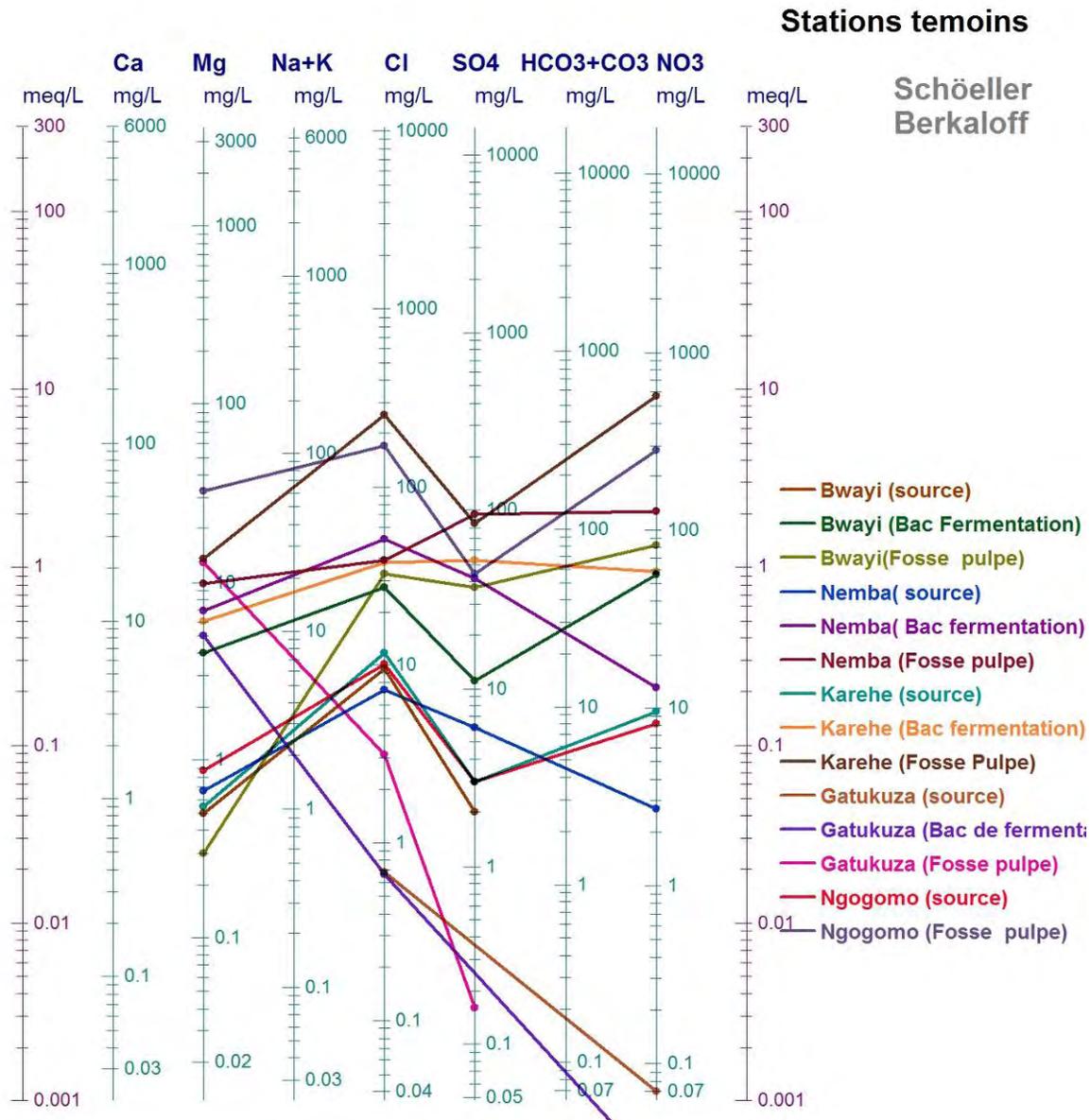
The pH levels of waste water from washing stations Bwayi, Nemba, and Gatukuza and Ngogomo varied between 5.5 and 4.3 which represents a sharp drop in pH value from neutral to strongly acidic (pure water is neutral at a pH of 7.0 and 77°). The impact of such highly acidic water entering the environment can be corrosion of metals, burning of vegetation and suffocation of fauna.



Conductivity is a general measure of water quality and is indicated by the total amount of dissolved salts (mineralization). A high conductivity indicates significant levels of ions harmful to human health and corrosivity of water. Adverse effects on health are possible at a value of 3400µS/cm (see diagram 2)



The trend analysis results is that the conductivity increases in water in pulp pits (fosse a pulp). The presence of nitrates and phosphates indicate pollution. Values rise rapidly in waste water from the fermentation reservoir and the pulp pits; values range from less than 10 mg/l (spring water) before the campaign to the range of 60 to 600 mg / l (waste water) during the campaign for nitrates. Values for sulfates range from 2-6 to 30-100 mg / l. The Shoëller-Berkaloff diagram below shows the major trends of the different samples by water source.



Stations with Alternatively Designed Effluent Controls

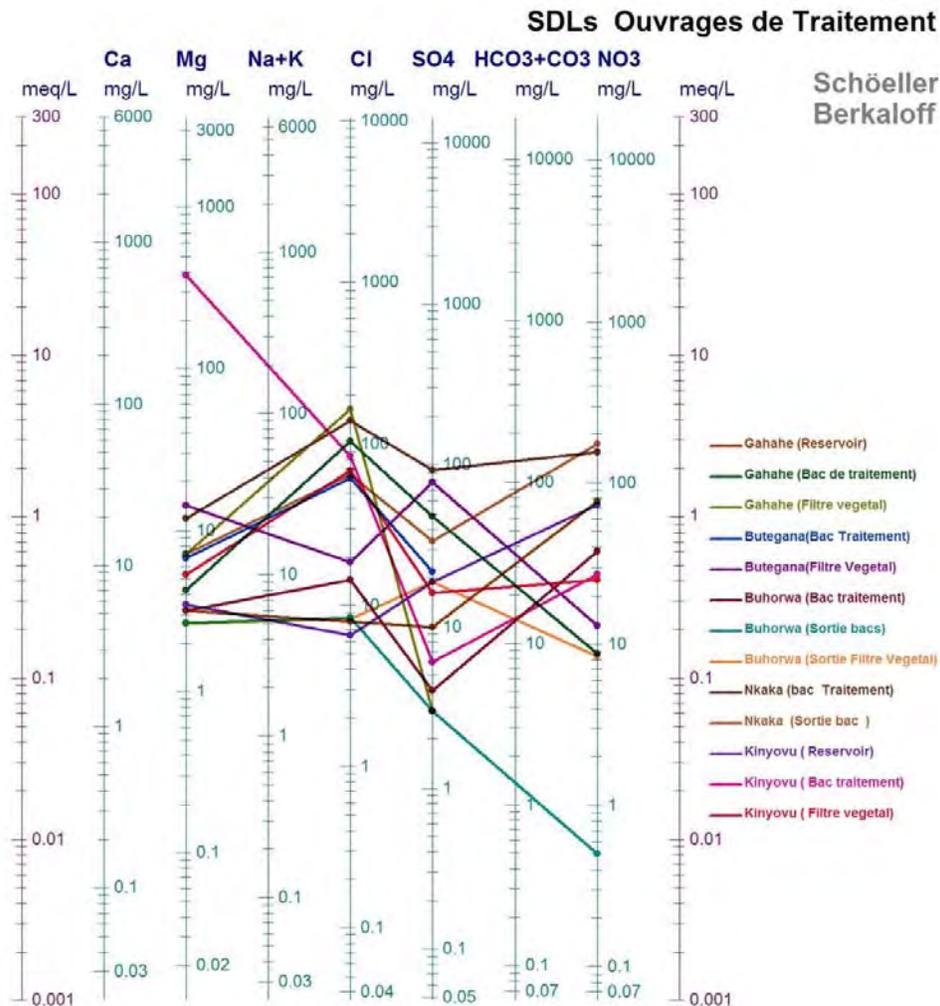
Alternatively designed systems were initiated at stations Kagombe, Nyamasaka Buziraguhinda. After depulping, mucilage water and pulp are immediately separated. The pulp is collected in an open air pit and waste water piped through a treatment system. The trending results show no discernable difference compared to the stations with no treatment systems. The pH values vary between 4.6 and 6.5. The conductivity values of the waste water varied between 130 and 2740 μ S/cm reflecting high mineralization and salinity. Chlorides exist in almost all the water at concentrations between 70 and 700

mg / l. The concentration of 10 mg / l ortho-phosphate is an acceptable limit for direct discharge into the environment. The test results are captured in the table below:

Tableau de présentation des résultats d'analyse des eaux SDLs avec Traitement. (T.4)

N°	Dénomination	Unites	Buziraguhinda bac de fermentation	Buziraguhinda puit filtrant	Buziraguhinda bac de sortie	Nyamasaka fosse pulpe	Nyamasaka bac de fermentation	kagombe fosse a pulpe	kagombe Fosse	kagombe Bac de fermentation
1	pH		5.8	5.1	5.2	4.7	6.5	4.6		4.8
2	Turbidité	NTU	172	102	122	353	9.62	994	368	443
3	Matières en suspension	mg/l	6077	4022	5314	1199	22	1239	552	1038
4	Conductivité	µS/cm	214	237	286	2740	130	2740	512	852
5	Sulfure	mgS ²⁻ /l	1.109	0.85	0.448	0.247	0.25	1.71	0.47	0.31
6	Orthophosphate	mg PO ₄ ³⁻ /l	5.77	7.72	10.48	137.5	0.25	79.5	30	27.5
8	Magnésium	mg Mg/l	15.9	14.48	15.23	19.09	4.19	16.57	7.34	10.96
9	Sulfates	mg SO ₄ ²⁻ /l	256	221	258	-	85	25	38	22
10	Chrome hexavalent	mg Cr 6+/l	0.89	0.27	0.24	1.66	0.13	0.37	0.69	1.16
11	phosphore	mg P/l	1.88	2.52	3.42	45.00	-	25.50	9.75	9.00
12	Ammonium	mg NH ₄ ⁺ /l	2.17	1.24	3.39	26.57	1.20	5.69	9.52	2.07
13	Cuivre	mg Cu/l	1.62	0	0.09	0.90	4.48	0	-	-
14	Fer	mg Fe /l	3.89	0.86	4.02	23.38	3.43	8.39	3.27	7.79
15	Fluorure	mg F ⁻ /l	0.15	0	0.99	9.74	-	2.58	11.26	7.51
16	Manganèse	mg Mn/l	2.8	5.1	7.7	30.00	7.50	17.50	7.50	7.50
17	Nitrates	mg NO ₃ ⁻ /l	81	114	114	15.00	50.00	-	30.00	22.50
18	Nitrites	mg NO ₂ ⁻ /l	270	330	420	400.0	85.0	50	200	175
19	DBO5	mg o/l	972	416	492	876	1048	889.00	953.00	970.0
20	DCO		1760	732	895	1308	1812	1,292.0	1,148	1,386

Stations with BAP Promoted Effluent Control Infrastructures



The table above demonstrates the major trends of the BAP sponsored systems:

1. The pH of water at the outlet of the treatment system for stations Butegana, Buhorwa and Kinyovu reached 6. These are stations that used lime for raising the pH of the water before discharging it into the environment.
2. Nitrates are reduced in waste water exiting a vegetal filter as in the case of Buhorwa, Gahahe and Butegana stations particularly when the vegetal filter is used correctly.

3. The concentration of chloride ions is slightly above the limit value of 50mg/litre for treatment tanks and vegetal filters at Gahahe and Kinyovu.
4. The conductivity values vary between 66 and 390 μ S/cm reflecting the overall low degree of mineralization and salinity.
5. Chlorides exist in almost all water at levels of 7 and 165 mg / l. The concentration of ortho phosphates varies from 5 to 20 mg / liter. Most of the ortho-phosphate values do not reach the acceptable limit of a direct discharge to the receiving environment.
6. Exceptions are those of stations Rutanga, Gitwa and Rwintare who did not follow the operating instructions of the effluent control infrastructure during the 2011 campaign. The results recorded in suspended solids concentrations are above the acceptable limit of direct discharge (50 mg / l) and concentration for indirect discharge (600 mg / l). The recorded values vary between 225 and 4293 mg / liter.

The above parameters were improved due to the use of 80 kgs of lime once per week in the last two bins of the purification reservoirs. Further improvements are made through the separation, purification and filtration process. It is important to design these systems carefully taking into consideration the large amount of water required to process with the McKinnon depulper.

Pollutants such as nitrates, nitrites and ammonia are reduced due to absorption by the plants in the vegetal filter. However, the waste water must be given sufficient treatment time the vegetal filter to ensure the loss of nitrogen and phosphorus to acceptable levels. Finally, reducing the amount of water used by the coffee washing station through the practice of re-circulating water can also reduce pollutants entering the environment.

Conclusions

Coffee washing stations that treat their waste water with BAP promoted effluent control infrastructure and follow the proper operating procedures, can expect to reduce pollution levels to acceptable limits for direct discharge into the surrounding environment.

Coordination with Other BAP Components

Capacity Reinforcement and Women's Leadership

This quarter, 10 households from the association Garukiramatongo of Rutegama Commune in Muramvya Province were added to those previously identified in quarter 3s as a pilot group for rain water catchment and improved cook stove technologies. The proposed rainwater harvesting activity could be of great interest since they are agro-pastoralists and each household has at least one cow. The training phase of the artisans and the choice of a service provider organization should follow to carry out the activity, but unfortunately there were budgetary constraints and time to implementation and evaluation, given that we are already in the last years of the program.

Coffee and Financial Intermediation

BAP's current work plan calls for the installation of 6 new waste water effluent control systems at coffee washing stations. African Promotion Company (APROCO) signed a standard grant agreement with BAP in August and construction activities are in progress.

Three dossiers - Cooperative Nkamwayacu, SDL Teka and SDL Butemba – have been completed and submitted for review to BAP's evaluation committee. SOGESTALS Kayanza is seeking a grant of to build effluent treatment and sanitation infrastructure at SDL Gatara. The water sector and coffee team will collaborate to complete the dossier during the last week of October 2011.

Site visits were conducted in collaboration with the coffee sector team to the sites of the mini coffee washing stations Karinzi, Mpemba and Korane. The objective was to assess work already achieved and identify the location of a modified waste water treatment construction. The water component sector leader developed a master blue print at scale 1: 200 for the Mpemba station. The three sites will each install PENAGOS machines which generally require 90% of the water required using McKinnon machines.

CONSTRAINTS

1. The dossiers presented by our partners reach a state where it still lacks substantial information why after the first review for clarification of questions are asked and the partners have delays in response.
2. PAIHAR has continued to be noticed by its absence. The final reports of supply works already approved are not yet arrived, the negative or affirmative if he wishes to continue with the work of the supply is still Kigoganya given.
3. The analysis of wastewater has taken much longer, it was necessary to seek the appropriate tool (software for diagrams) and learned to use it.

RECOMMENDATIONS

1. Working with committees of the water points of the network of water supply to stop Kigoganya of management strategies for water kiosks;
2. Assist grant recipients for the treatment of effluents around the coffee washing stations in the five years for active participation in the collection of local materials and the enforcement of the works
3. Stop control strategies and supervision of field work and accompanying measures for the work to be done around the six stations of the program year and the three mini stations.
4. Upgrade works to the limit values of physico-chemical parameters are met.

ACTIVITIES PLANNED FOR Q1PY5

1. Supervise and control the work of the supply Kigoganya;
2. Identify and train and / or retrain local artisans on the modules for building systems for collecting rainwater and improved stoves;
3. Maintain control and monitoring of development works and construction of sewage treatment works on the six new stations and three mini washing stations.

Burundi Business Incubator

Introduction

The fourth quarter of PY4 for the Burundi Business Incubator was characterized by the effective start up of the Shika Business Plan Competition in collaboration with BidNet, an intensification of training activities, acceptance of the BBIN as a Business Edge franchisee with the International Finance Corporation (IFC), the beginning of mentoring services to pre-incubatee clients and a number of team building sessions for the management team of the BBIN. Further, during the quarter the BBIN increased its staff – adding an accountant and another intern, but the DAI CCN coordinator Frank Kagimbi, also announced his resignation from the team effective 14 October 2011, as he seeks to open his own training company in Burundi.

Activities undertaken during Q4

Shika

In an effort to increase visibility and augment the number of pre-incubatee clients, BBIN, with additional financing leveraged through BidNet launched a business plan competition, the result of which will lead to new incubatees at the center. Several founding members have sponsored scholarships for prize winning candidates. In the initial round 196 entrepreneurs submitted business ideas for consideration. From these, following a rigorous review process, 15 were chosen to follow through on their ideas, first receiving training in business planning, then being integrated as pre-incubatees into the BBIN permitting them to benefit from advising and mentoring services. With the 15 Shika contestants, the BBIN now counts a total of 17 enterprises currently undergoing pre-incubation.

Incubation Requests

The BBIN has received three requests for incubation one from a software company, one from a company specializing in financial audits and fiscal advice and the third which bills itself as a Financial Intermediation services company.

Enterprise	Product	Profile
Open-IT	Installation and Sale of health infrastructure maintenance software	A Burundian IT Specialist with experience in sales and hardware setup and maintenance in partnership with a Belgian medical doctor
Uwaly Consulting	Audit and Accounting firm targeting private enterprise clients	Financial auditor with years of experience in France who has returned to Burundi
SIOB	Financial Intermediation	Lawyer by training, has worked as an upper level executive in Burundi's banking sector

All three companies are currently having their business plans reviewed by the BBIN management team, have received some mentorship and business advising and are in the process of revising their original concepts and plans so that these may be submitted to the BBIN selection committee for appreciation. In addition a strategic retreat was organized for three pre-incubation clients in order to assist them in defining their vision and the tangible objectives for the coming period. Participating in this retreat were Open IT, Inspires U and Soma Edition. If all goes well, these three companies should see their candidatures reviewed before the end of the 2011 calendar year.

Training Courses

Training Courses for Clients

In total seven training sessions covering five different training modules were offered during Q4. As can be seen in the following table, 104 paying customers participated 31% of whom were women. The course most offered this quarter was business planning. One of these was a dedicated session for Shika candidates, one was primarily a targeted audience of NGO workers who mentor SME under the aegis of IRC and the third contained a mix of university students and entrepreneurs.

Modules	# of repetitions during Q4	Men	Women	Total
Steps	1	10	3	13
Business Concepts (BCC)	1	10	7	17
Business Planning	3	31	13	44
7 Secrets that every entrepreneur should know	1	15	7	22
Coaching for Business Plan Development	1	6	2	8
Total	7	72	32	104

The Steps course is an introductory course for participants interested in entrepreneurship. The curriculum is designed to assist them in understanding what it means to be an entrepreneur and the skills an entrepreneur will need to have in order to be successful.

The Business Concepts course covers the basic principles and elements of business and the business environment. The curriculum as developed assists entrepreneurial oriented clients in defining a business concept and in understanding the basic diagnostic tool kit necessary to refine an idea (or a series of ideas) into a valid business concept.

The Business Planning Course is designed to assist entrepreneurs with a defined concept in understanding the basic elements of a business plan. With the tools in hand the entrepreneurs are expected to draft or refine business plans to assist in providing a road map to success in their chosen field and product line(s). This quarter one session was contracted by an NGO for their personnel who assist PME. Another session was targeted to competitors involved in the Shika competition and the third included a mixed group of University students and private entrepreneurs.

Training for the BBIN Management Team

Capacity reinforcement for the management team during this reporting period included sessions designed to improve their business English; sessions in accounting; sessions in team building and calendar management; and sessions in entrepreneurial aptitudes and comportment. We note that the first two courses are particularly targeted at BBIN support personnel to assist them in a) collaborating with clients; b) communicating with interested parties seeking information from within the EAC; and c) to assist the staff in managing the service receipts and petty cash boxes.

Business Edge

During this reporting period BBIN was selected as a franchise partner for Business Edge in Burundi by the International Finance Corporation. A license was procured and eight trainers were certified as trainers of others in specific material during a week-long training session held in early September. The BBIN is now waiting on the list of modules available in French and expects to offer their first paid training courses for interested clients using the Business Edge curriculum in November 2011.

New Staff Recruitment

During this reporting period, BBIN Recruited an accountant and a second administrative assistant. In addition to the intern recruited uniquely to focus on Shika activities, an accountant was hired to assist the DAF in her work and a second administrative assistant was engaged to ensure high quality service to clients.

Commercial Leasing

Four new Commercial clients rented space at the BBIN during this reporting period-These include a lawyer, an audit firm, and two Information Technology firms. Rent from these new clients will add 1.760.000 FBU in revenue for BBIN each month. This money, housed in a blocked savings account will serve to partially capitalize BBIN at the end of the present grant.

Regional Travel

In the context of Shika and under financing from BidNet, the BBIN director and his deputy travelled to Kigali during this reporting period to attend a networking conference. A regional event for winners of the Shika competition is planned for March 2012.

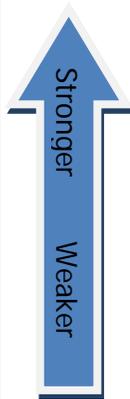
Marketing

Focus this quarter was placed on the development of new marketing tools including a roll up stand defining the different services of the BBIN; new flyers (brochures) targeted on attracting clients to the Business Service Center, two articles o the BBIN published in local newspapers- le RENOUVEAU and IWACU as well as interviews with pre-incubatees on the television and paid spots for the Shika competition. BBIN also sponsored a regional meeting of youth from Burundi, Rwanda and RDC and presented its center, its activities and its services during the encounter.

Benchmarking BBIN performance with other Incubators

BBIN began a process of auto-evaluation during this reporting period as well as a series of team building exercises designed to strengthen the management team's structure and internal functioning. The initial benchmarking exercise considered four categories for evaluation: facilities management; incubator governance; financial management and outreach/marketing.

Generally speaking, BBIN's stakeholders indicated that the BBIN falls within the mid-range with regard to its adherence to internationally accepted good practices with Facilities Management ranked highest of the ten categories and Graduation ranked lowest.

	Key Area	Average	Median	Peer Average
	Facilities Management	4.27	4.00	3.73
	Governance	4.07	4.00	3.90
	Incubator Finances	3.95	4.00	3.62
	Marketing & PR	3.60	4.00	3.53
	Selecting Clients	3.49	3.50	3.65
	Measuring Impact	3.50	3.00	3.33
	Staffing	3.42	3.00	3.95
	Serving Clients	2.97	3.00	3.71
	Environmental Impacts	2.96	3.00	3.23
	Graduation	2.69	3.00	3.30

However, as noted earlier, not only were there a number of "Not Applicable" responses, most notably in the categories of Graduation and Measuring Impact, but several respondents also offered comments which provide more insight into their numeric choices. For example, in the Graduation and Measuring Impact categories, one respondent who ticked numeric answers also commented that "there are no cases yet" which makes it difficult to judge the BBIN's performance with respect to these practices. In other instances, respondents answered positively although noting that something may not have "happened yet, but it is planned." This is obviously due to the age of the BBIN which has been accepting clients for less than a year compared to the average peer incubator which has been accepting clients for the past eight years.

This is also why, most probably, the mode, i.e., the number that was repeated most often for all answers, indicates that thirty percent (30%) of the time, the BBIN's stakeholders ticked No. three, "Hard to Decide." Perhaps this is because there is a lack of sufficient information (some stakeholders are more intimately involved in the day-to-day operations of the BBIN and therefore privy to more information than others) or perhaps there is a lack of experience with a particular matter for respondents to make definitive decisions.

It is notable that while BBIN exceeded the average peer incubator in four of the good practices categories; it lagged behind its peers in the remaining six categories. Of particular note are the areas of Staffing and Serving Clients where the difference in scores between the BBIN and its peers is

somewhat greater than in the other areas. Staff knowledge and experience in business incubation practices, would, of course, be expected to be below average given the staff's level of experience. For example, the BBIN's Manager has around one year of business incubation experience compared to his peers which have four years experience in their present positions and six years experience as incubation program managers overall. Still, building BBIN's staff capacity to better serve clients are priority areas. Moreover, as staff gain knowledge and experience, it can be expected that other areas will improve as well, particularly Measuring Impact and Marketing & PR since these two areas require quite specific knowledge and skills.

Financial Status (as of 30 Sept 2011)

	Jan 31, 11	Feb 28, 11	Mar 31, 11	Apr 30, 11	May 31, 11	Jun 30, 11	Jul 31, 11	Aug 31, 11	Sep 30, 11
ASSETS									
Current Assets									
Other Current Assets									
Total 30 - Inventory	6,006,054.00	5,865,008.00	6,125,863.00	5,757,851.00	5,604,139.00	6,307,990.00	6,258,377.00	6,372,593.00	5,894,280.00
Total 4091 - Prepaid Insurance	567,000.00	283,500.00	0.00	472,500.00	283,500.00	0.00	567,000.00	236,250.00	0.00
Total 4092 - Prepaid Current Assets	64,167.00	58,334.00	52,501.00	46,668.00	40,835.00	35,002.00	29,169.00	23,336.00	17,503.00
Total 414 - Effets a recevoir	0.00	0.00	0.00	1,783,547.00	3,567,094.00	5,350,641.00	7,134,188.00	8,917,735.00	27,979,216.00
Total Other Current Assets	6,637,221.00	6,206,842.00	6,178,364.00	8,060,566.00	9,495,568.00	11,693,633.00	13,988,734.00	15,549,914.00	33,890,999.00
Accounts Receivable									
411 - Accounts Receivable	120,000.00	1,645,420.00	4,671,030.00	1,734,162.00	1,826,252.00	4,169,470.00	4,345,900.00	9,772,120.00	15,257,430.00
Total Accounts Receivable	120,000.00	1,645,420.00	4,671,030.00	1,734,162.00	1,826,252.00	4,169,470.00	4,345,900.00	9,772,120.00	15,257,430.00
Cash at bank and in hand									
437 - Advance Receivable	3,284,994.00	6,712,781.00	6,989,929.00	0.00	0.00	0.00	0.00	0.00	0.00
50 - Cash									
Total 55 - Cheques et coupons a encaisser	2,240,460.00	8,577,160.00	1,052,980.00	164,710.00	1,221,330.00	2,459,752.00	1,122,632.00	4,342,152.00	3,951,052.00
561 - Compte Bancaires									
5612 - IBB Compte Courant en FBU	0.00	0.00	0.00	29,409,723.00	20,815,739.00	1,546,505.00	22,796,079.00	16,354,659.00	2,465,638.00
5613 - IBB Compte Epargne vente BBIN	12,070,940.00	13,897,060.00	24,988,460.00	39,348,408.00	51,762,928.00	63,907,288.00	79,931,288.00	88,791,698.00	99,587,428.00
5614 - IBB Compte Epargne Caution	20,328,000.00	20,328,000.00	24,680,000.00	25,098,000.00	26,016,000.00	26,016,000.00	26,916,000.00	26,916,000.00	26,916,000.00
5615 - IBB-BBIN SHIKA	0.00	0.00	0.00	0.00	0.00	26,230,511.00	26,230,511.00	26,230,511.00	22,569,898.00
Total 561 - Compte Bancaires	32,398,940.00	34,225,060.00	49,668,460.00	93,856,131.00	98,594,667.00	117,700,304.00	155,873,878.00	158,292,868.00	151,538,964.00
Total 57 - Petty Cash	113,600.00	56,640.00	0.00	88,600.00	109,300.00	83,300.00	230,950.00	83,930.00	1,353,620.00
Total 50 - Cash	34,753,000.00	42,858,860.00	50,721,440.00	94,109,441.00	99,925,297.00	120,243,356.00	157,227,460.00	162,718,950.00	156,843,636.00
Total Cash at bank and in hand	38,037,994.00	49,571,641.00	57,711,369.00	94,109,441.00	99,925,297.00	120,243,356.00	157,227,460.00	162,718,950.00	156,843,636.00
Total Current Assets	44,795,215.00	57,423,903.00	68,560,763.00	103,904,169.00	111,247,117.00	136,106,459.00	175,562,094.00	188,040,984.00	205,992,065.00

Current Liabilities									
Accounts Payable									
401 - Accounts Payable	2,708,612.00	5,944,145.00	5,949,702.00	4,484,234.00	2,900,863.00	5,295,074.00	6,789,776.00	7,840,553.00	14,572,749.00
Total Accounts Payable	2,708,612.00	5,944,145.00	5,949,702.00	4,484,234.00	2,900,863.00	5,295,074.00	6,789,776.00	7,840,553.00	14,572,749.00
Other Current Liabilities									
42 - Salaries payable	0.00	0.00	0.00	411,942.00	6,322,158.00	636,567.00	636,567.00	6,309,100.00	4,115,796.00
Total 429 - Bonus Payable	0.00	0.00	0.00	1,783,547.00	3,567,094.00	5,350,641.00	7,134,188.00	8,917,735.00	10,701,282.00
Total 432 - Tax Account	363,539.00	345,971.00	398,677.00	294,966.00	398,677.00	403,513.00	403,513.00	424,465.00	440,011.00
Total 45 - Contribution INSS	212,843.00	422,665.00	641,550.00	171,485.00	390,370.00	609,255.00	828,140.00	1,084,512.00	1,369,316.00
462 - Deposits Payable	20,328,000.00	24,180,000.00	25,998,000.00	25,998,000.00	26,916,000.00	27,816,000.00	27,816,000.00	31,296,000.00	32,436,000.00
468 - Somme avancee									
4681 - Petty Cash	113,600.00	56,640.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4682 - Subvention (Grant) BAP	0.00	0.00	0.00	24,608,196.00	10,337,250.00	-4,621,406.00	16,252,730.00	856,259.00	0.00
4683 - Subvention Bidnet	0.00	0.00	0.00	0.00	0.00	26,230,511.00	26,230,511.00	26,230,511.00	16,402,898.00
4684 - Subvention Entreprise Burundais	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,000,000.00
Total 468 - Somme avancee	113,600.00	56,640.00	0.00	24,608,196.00	10,337,250.00	21,609,105.00	42,483,241.00	27,086,770.00	21,402,898.00
475 - Regularisation passif									
4751 - Advance Customer Payments	8,247,000.00	2,784,000.00	1,050,000.00	1,546,000.00	1,896,000.00	1,696,000.00	810,000.00	1,276,000.00	1,576,000.00
Total 475 - Regularisation passif	8,247,000.00	2,784,000.00	1,050,000.00	1,546,000.00	1,896,000.00	1,696,000.00	810,000.00	1,276,000.00	1,576,000.00
Total Other Current Liabilities	29,264,982.00	27,789,276.00	28,088,227.00	54,814,136.00	49,827,549.00	58,121,081.00	80,111,649.00	76,394,582.00	72,041,303.00
Total Current Liabilities	31,973,594.00	33,733,421.00	34,037,929.00	59,298,370.00	52,728,412.00	63,416,155.00	86,901,425.00	84,235,135.00	86,614,052.00
NET CURRENT ASSETS									
	12,821,621.00	23,690,482.00	34,522,834.00	44,605,799.00	58,518,705.00	72,690,304.00	88,660,669.00	103,805,849.00	119,378,013.00
TOTAL ASSETS LESS CURRENT LIABILITIES	12,821,621.00	23,690,482.00	34,522,834.00	44,605,799.00	58,518,705.00	72,690,304.00	88,660,669.00	103,805,849.00	119,378,013.00
NET ASSETS	12,821,621.00	23,690,482.00	34,522,834.00	44,605,799.00	58,518,705.00	72,690,304.00	88,660,669.00	103,805,849.00	119,378,013.00
Capital and Reserves									
	6,637,221.00	6,206,842.00	6,177,764.00	5,803,919.00	5,360,874.00	4,299,192.00	3,485,246.00	2,430,279.00	17,503.00
	1,961,340.00	1,961,340.00	1,961,340.00	1,961,340.00	1,961,340.00	1,961,340.00	1,961,340.00	1,961,340.00	1,961,340.00
	4,223,060.00	15,522,300.00	26,383,730.00	36,840,540.00	51,196,491.00	66,429,772.00	83,214,083.00	99,414,230.00	117,399,170.00
Shareholder funds	12,821,621.00	23,690,482.00	34,522,834.00	44,605,799.00	58,518,705.00	72,690,304.00	88,660,669.00	103,805,849.00	119,378,013.00

The BBIN had the pleasure of welcoming a new partner during the quarter: Bidnet, a member of the UED alliance in Burundi. The BBIN ASBL, as an independent Burundian institution, decided to include BidNet as a partner so that it could conduct Burundi's first national business plan competition.

This partnership led to a grant award in late June, which is recognized in the balance sheet as the account 5615 IBB-BBIN SHIKA, and the offsetting liability 4683 Subvention BidNet. The BBIN has been using these funds to conduct the SHIKA business plan competition.

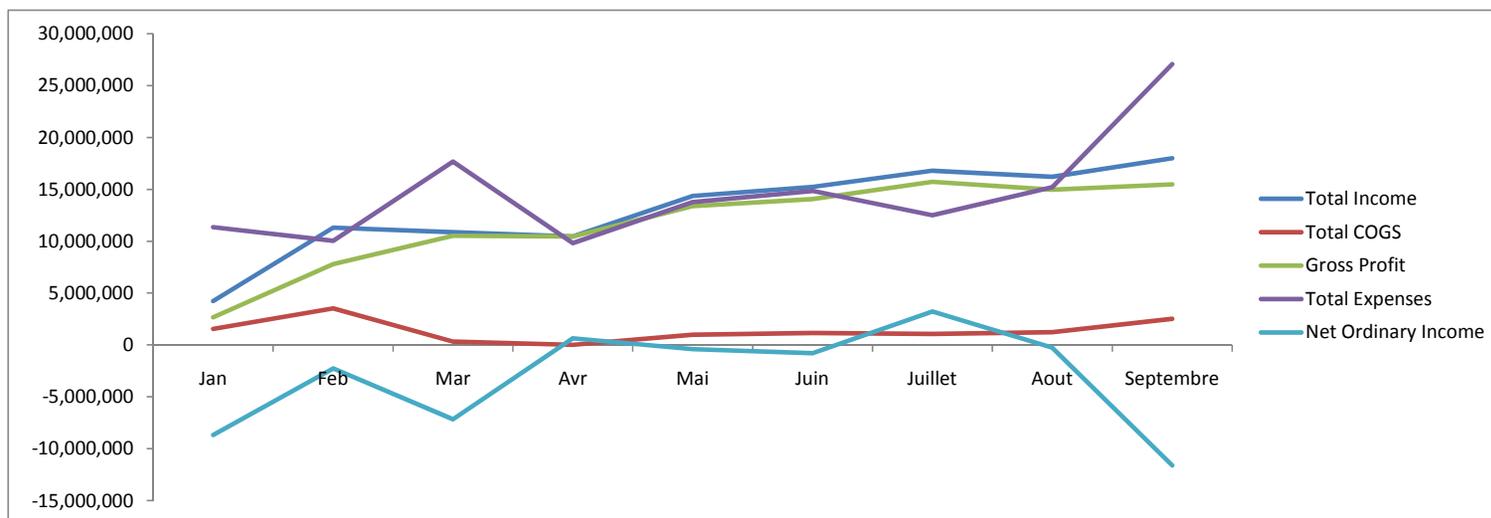
The BBIN also received local support for the Business plan competition in the form of a five million FBU award from a BBIN founding member. This money was given to the BBIN to be used to help finance SHIKA activities, and was included on the Balance Sheet in September by depositing the sum on the asset account 5615 IBB-BBIN SHIKA and the offsetting liability 4684 Subvention entreprises burundaises.

The reason the money was recognized in September is because that is the month the BBIN accountant's recognized all current expenditures and cash inflows related to SHIKA. The reasons are multiple, including the complexity of now having two donor agencies involved in such a new endeavor. This has had the following impact on BBIN finances.

- 1) Expenses the BBIN incurred related to SHIKA were all recognized in September. This means that expenses relating mainly to marketing and the SHIKA intern hired to assist BBIN staff for June, July, August, and September were ALL recognized during the same month.
- 2) The operational income has dropped significantly to -11,586,656.00. This is directly caused by the BBIN recognizing 9,827,613 FBU, or nearly four months of SHIKA expenses, in the month of September.
- 3) Account Receivables has increased significantly because the BBIN needs the BidNet coordinator to be in country in order to receive money for services rendered. BBIN is working with BidNet to change this set up.

It should be noted that BidNet reimburses all expenses incurred by the BBIN during SHIKA, so total Net Income in September is still equal to total revenue. Also, the BBIN charges BidNet for services rendered to SHIKA participants, such as pre-incubation and trainings. Therefore, if all expenses are reimbursed and the BBIN charges for service, the BBIN will make a profit from SHIKA.

This will be apparent in October and November, where the BBIN will received money from BidNet to pre-incubate SHIKA finalist, while incurring very little costs. At that time, Operational income will be more in line with results observed in previous months.



By the end of this fiscal year the BBIN had accumulated net assets of capital and reserves worth 119.378.013 FBU or approximately \$92,000 USD. With average monthly operating expenses running approximately 14.697.383 FBU, since January 2011 BBIN has accumulated enough reserves to cover 8 months of operations at current levels were donor subsidies to terminate today.

BBIN Success Story-Translating Business Concepts into Contracts



M. Cedric Daniel Ngaza is a student at Hope University, pursuing his second degree. He has an entrepreneurial mindset but has had trouble translating his ideas into functioning businesses because he wasn't sure where to start. One day while at his local coffee shop Cedric saw an announcement for the "Shika" Business Plan Competition through the Burundi Business Incubator. He submitted a concept note for the competition, that was not retained as the business idea was unfocused. Even though his idea was not accepted, when the BBIN called him about a course entitled: The Seven Secrets every Entrepreneur should Know, Cedric responded enthusiastically. Following this first course, it was suggested he participate in a Business Concepts course to assist him in targeting which of his numerous ambitious ideas might best be transformed into a successful enterprise. At the conclusion of the Business Concepts course Cedric had decided to focus on a communications and promotion company. With his partners, he:

- Evaluated the services to be offered
- Identified potential clients and performed a summary needs assessment
- Segmented his market into clients who were capable of paying for his services
- Developed an action plan to visit prospective clients offering services in website design, strategic development and consultancy services in marketing and promotion
- "Sizzles" is Cedric's new company has already received contracts from 2 organizations- the Mwezi Gisabo Foundation and ACVE to design publicity kits, including brochures, and to assist in the organization of a day of publicity for the foundation.

Cedric recognizes that without careful guidance from BBIN he probably would not have been able to focus his business ideas into a company, nor sell that company's services to others in Burundi's marketplace.

Conclusion

This final quarter of PY4 has been a period of intense activity for the program. We are extremely pleased with the success registered by the Burundi Prestige Cup event and appreciate the support we have received both from the US Ambassador to Burundi and the Minister of Agriculture, as well as from the diverse members of the national organizing committee. We close the quarter with one milk collection center poised to open and another in the final stages of preparation. The intensity of horticultural activities, the appreciation of our clients for both the coffee and horticultural demonstration activities, the interest in our results being exhibited by administration officials in the provinces, bodes well for the future. We need to step up the pace of our small grants program and further diversify credit to the agro-industry sector being disbursed through the DCA. We note that there appear to be major unresolved institutional constraints that limit the effectiveness of Burundi's microfinance institutions. The BBIN continues to expand its services and by the end of the quarter had a number of new pre-incubatee clients, as well as a new franchise for training products with Business Edge of the IFC. The BBIN revenues are in line with projections and the cash reserves being accumulated should assist them in their post grant institutional viability.

We thank USAID Burundi for its continued support and are looking forward to consolidating our impact through our final year of project operations.

Annexes

1. Rapport de Performance sur les Indicateurs internes PY IV
2. Dairy Annexes
3. Horticultural Annexes related to Demonstration Plots



USAID | **BURUNDI**
FROM THE AMERICAN PEOPLE

Programme pour la Promotion de l'Agro-Industrie Et des Entreprises Rurales (PAIR)

**Unité de suivi et
évaluation**

Rapport de performance sur les indicateurs internes PY IV

Par l'unité de suivi et évaluation

Bujumbura, septembre 2011

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Sommaire exécutif

Le programme pour la Promotion de l'Agro-Industrie et des entreprises Rurales (PAIR) est un programme financé par USAID et exécuté par l'ONG DAI (Development Alternatives Inc.). C'est un programme de 5 ans et se trouve actuellement vers la fin de la quatrième année. Dans le cadre de ses activités de suivi et évaluation, le programme a développé un plan de suivi des performances (PMP : Performance monitoring plan) qui constitue un guide important pour mesurer certains indicateurs clés du projet. Ainsi dans ce PMP, il a été retenu quelques indicateurs dits indicateurs internes pour mesurer l'évolution des objectifs du projet. La fréquence de mesure des indicateurs internes est annuelle et se situe chaque fois vers la fin de l'année fiscale.

C'est dans ce cadre que le programme vient de réaliser au cours du mois d'août 2011, une troisième collecte des données en vue de savoir le comportement des indicateurs et par là des objectifs du projet. Cette recherche a couvert 10 provinces sur les 12 dans lesquelles intervient le programme. Elle a touché 542 ménages partenaires du programme dont 237 ménages du secteur café, 186 ménages du secteur horticole et 119 ménages du secteur laitier. Il convient de noter que les thèmes transversaux comme le genre et l'eau et l'assainissement ont été touchés à travers les principaux secteurs.

Au terme de l'analyse des données, il sied de dégager quelques résultats de l'étude en les comparant avec ceux de l'année dernière. En effet, dans le domaine du genre et renforcement des capacités des organisations des producteurs, le programme a introduit l'alphabétisation au profit des membres des associations féminines pour renforcer la gouvernance et le développement. Lors de l'étude, il a été constaté que le pourcentage des chefs de ménage qui affirment avoir suivi des séances d'alphabétisation a augmenté en passant de 1,7% à 6%. Cette activité a été fortement appréciée par les bénéficiaires directs et les bénéficiaires indirects car ils affirment que cette activité contribue à l'amélioration de la gouvernance dans les associations. Dans le secteur élevage, les éleveurs qui affirment que le taux de mortalité des animaux a baissé depuis qu'ils sont partenaires du programme PAIR sont 88,5% dans la province de Muramvya et 65,9% dans la province de Ngozi. La différence entre les deux provinces peut s'expliquer par le temps d'encadrement car dans la province de Muramvya, le programme est présent depuis trois ans alors qu'il n'est qu'une année et demi dans la province de Ngozi.

Le niveau de certains indicateurs internes simples a au cours de l'année IV augmenté. Tel est le cas de l'indicateur « **% des personnes impliquées dans les chaînes de valeur qui affirment que leur revenu a augmenté et qui le démontrent par des exemples** » dont le niveau de l'indicateur qui était de 26,7% au cours de l'année III est passé à 34,2% dans l'année IV, c'est le cas de l'indicateur « **% des partenaires du programme qui affirment que les conditions environnementales ont été respectées lors de l'exécution des activités du programme et qui donnent des exemples** » dont le niveau était 79,3% au cours de l'année III est de 86,3% dans l'année.

Pour un des indicateurs, le niveau n'a pas changé significativement. Ainsi pour l'indicateur « **% des partenaires du programme qui pensent que le projet a contribué à l'augmentation des opportunités économiques en milieu rural** », le niveau qui était de 85,3% au cours de l'année III du programme reste seulement à 86,5% au cours de l'année IV.

Pour les indicateurs internes composites, certains critères ont connu une évolution positive. Ce sont certains critères du revenu, certains critères sur les techniques et technologies et certains critères de protection de l'environnement. Le tableau résumant le niveau actuel des internes du programme se trouve à la page 33 de ce rapport.

0. Introduction

Le Programme pour la Promotion de l'Agro-industrie et des entreprises Rural (PAIR) a mis en place un système de suivi et évaluation qui constitue une référence importante sur toutes les activités de suivi et évaluation. Dans ce dernier plan, il a été développé des indicateurs internes relatifs aux objectifs du projet. En termes de fréquence, il a été retenu que la collecte des données pour mesurer la performance des indicateurs internes se fait une fois par an vers la fin du quatrième trimestre de l'année fiscale. Ainsi, au cours de cette année fiscale, un travail de collecte des données vient d'être réalisé pour mesurer la performance de ces indicateurs et constitue le troisième travail de ce genre au cours des trois dernières années successives du programme. Ces indicateurs mesurent le niveau de la contribution de l'objectif global à la croissance économique du pays et les niveaux des objectifs spécifiques du projet. Ainsi l'objectif global du projet est le suivant :

« Augmenter et diversifier les opportunités économiques en milieu rural à travers des actions de promotion de l'agro-industrie, qui ajoutent de la valeur et qui favorisent la croissance économique accélérée d'une manière durable en respectant et améliorant les conditions environnementales »

Les indicateurs retenus pour mesure cet objectif sont :

Indicateur 1 : % des partenaires du programme qui pensent que le projet a contribué à l'augmentation des opportunités économiques en milieu rural

Indicateur 2 : % des partenaires du programme qui affirment que les conditions environnementales ont été respectées lors de l'exécution des activités du programme et qui donnent des exemples

Cet objectif global est sous-tendu par les objectifs spécifiques suivants :

Objectif 1 : Appuyer le secteur privé et les entreprises paysannes à augmenter leurs revenus en milieu rural par la différenciation et la diversification de leur production

Indicateur : Revenu annuel moyen déclaré par les entreprises privées et paysannes

Objectif 2 : Diversifier les opportunités économiques des clients du programmes (organisations des producteurs, sociétés privées et fournisseurs de services)

Indicateur : Nombre d'activités génératrices de revenu nouvelles réalisées par le programme pour le compte de ces clients

Objectif 3 : Renforcer les maillons de chaînes de valeur dans les filières porteuses, susceptibles à accroître les revenus des partenaires, soit des cultivateurs, soit des entreprises de transformation, de l'exportation, et/ou de distribution, soit des fournisseurs des intrants et autres services ;

Indicateur : % des personnes impliquées dans les chaînes de valeur qui affirment que leur revenu a augmenté et qui le démontrent par des exemples

Objectif 4 : Accroître l'adoption de nouvelles techniques et technologies porteuses qui rendent les filières plus efficaces en réduisant leurs coûts et en même temps augmentant le volume et la qualité des produits ;

Indicateur : % des bénéficiaires du programme qui ont adopté au moins une technique et au moins une technologie qui rendent les filières plus efficaces en réduisant leurs coûts et en même temps augmentant le volume et la qualité des produits

Objectif 5 : Promouvoir l'utilisation des techniques et technologies contribuant à la gestion durable des ressources naturelles et la protection de l'environnement, y compris la biodiversité

Indicateur : % des bénéficiaires du programme qui utilisent au moins une technique et au moins une technologie contribuant à la gestion durable des ressources naturelles et la protection de l'environnement, y compris la biodiversité

La collecte des données a été réalisée dans 10 provinces d'intervention du programme et a couvert les 3 secteurs en l'occurrence le secteur café, le secteur horticulture et le secteur laitier. Les thèmes transversaux du projet notamment le genre et renforcement des capacités des organisations des producteurs, les crédits et les subventions ainsi que l'eau et l'assainissement ont été également couverts par l'étude.

I. Résultats de l'étude

I.1. Quelques caractéristiques des ménages enquêtés

La répartition des ménages ayant participé à l'enquête par sexe et par province montre qu'au total 542 ménages ont été touchés par l'étude dans 10 provinces parmi lesquels 122 ménages sont sous la responsabilité de la femme. Les provinces de Muramvya, Ngozi et Kayanza enregistrent beaucoup de ménages qui ont participé à l'étude. Ce sont les provinces de Muramvya et de Mwaro qui ont beaucoup de ménages dont le chef est une femme et qui ont pris part à l'étude.

Tableau 1 : Les Répartition des ménages par sexe et par province

Province	Masculin		Féminin		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	34	8,1	15	12,3	49	9,0
Bujumbura	16	3,8	12	9,8	28	5,2
Cibitoke	19	4,5	2	1,6	21	3,9
Gitega	47	11,2	14	11,5	61	11,3
Kayanza	71	16,9	17	13,9	88	16,2
Kirundo	17	4,0	4	3,3	21	3,9
Muramvya	77	18,3	22	18,0	99	18,3
Muyinga	38	9,0	2	1,6	40	7,4
Mwaro	19	4,5	22	18,0	41	7,6
Ngozi	82	19,5	12	9,8	94	17,3
Total	420	100,0	122	100,0	542	100,0

La répartition des participants par secteur montre que le secteur café enregistre 237 participants soit 43,7% de tous les participants, le secteur horticole a enregistré 186 participants soient 34,3%, le secteur laitier 119 participant soient 22,0% de tous les participants. C'est le secteur horticole qui enregistre plus de ménages dont la femme est chef de ménage soit 63 sur les 123 ou 51,6% de toutes les participantes. L'interprétation de ces informations est que les femmes sont apparemment plus attirées par le secteur horticole que les autres secteurs notamment le secteur café et le secteur laitier car c'est un secteur qui demande moins d'investissement que les deux autres secteurs.

Tableau 2 : Répartition des participants par secteur (café, lait, horticulture)

Secteur	Masculin		Féminin		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Café	206	49,0	31	25,4	237	43,7
lait	91	21,7	28	23,0	119	22,0
horticulture	123	29,3	63	51,6	186	34,3
Total	420	100,0	122	100,0	542	100,0

Concernant l'occupation primaire et l'occupation secondaire, les données du tableau ci-dessous montrent que 89,5% des ménages partenaires du programme ont comme occupation primaire l'agriculture. Par contre, 40,6% des ménages n'ont aucune activité secondaire tandis que 30,1% des ménages considèrent qu'ils ont l'élevage comme occupation secondaire. A ce niveau, il importe de noter que même les manages appuyés par le programme dans le secteur élevage considèrent ce secteur comme secondaire par rapport à l'élevage ce qui renforce ce qui est déjà connu qu'en milieu rural et dans les petites exploitations familiales, l'élevage soutient l'agriculture et que les deux sont complémentaires.

Tableau 3 : Occupation primaire et secondaire du chef de ménage

Occupation	occupation primaire		Occupation secondaire	
	Effectifs	%	Effectifs	%
Agriculture	485	89,5	31	5,7
Elevage	5	0,9	163	30,1
Commerce	14	2,6	28	5,2
Prestation de service	16	3,0	6	1,1
Vente de main d'œuvre	6	1,1	25	4,6
Artisanat	2	0,4	10	1,8
Aucune	4	0,7	220	40,6
Autre	10	1,8	59	10,9
Total	542	100,0	542	100,0

Dans la zone d'action du projet, les données du tableau ci-dessous montrent que 33,4% des chefs de ménage n'ont pas été à l'école, 28,6% ont un niveau de formation primaire complet et 26,9% ont un niveau de formation primaire non complet, 7,2% ont un niveau de formation secondaire non complet, 3,1% ont un niveau de formation secondaire complet tandis que ceux qui ont été au-delà du secondaire ne sont que 0,7%. Les chefs des ménages ont suivi d'autres formations notamment l'enseignement religieux, les écoles de métier et les cours d'alphabétisation. Au cours de cette année fiscale, le pourcentage des chefs de ménage qui ont suivi les cours d'alphabétisation est de 6,0% alors qu'il était de 1,7% au cours de l'exercice fiscal 3. Cette différence peut être attribuée aux activités d'alphabétisations organisées par le programme pour le compte des associations partenaires. Par rapport justement à cette activité d'alphabétisation, les données collectées montrent que c'est une activité appréciée par les partenaires car elle renforce la bonne gouvernance au niveau des associations.

Tableau 4 : Le niveau d'instruction du chef de ménage

Niveau d'instruction	Effectifs	%
jamais été à l'école	181	33,4
primaire non complet	146	26,9
primaire complet	155	28,6
secondaire non complet	39	7,2
secondaire complet	17	3,1
au delà du secondaire	4	0,7
Total	542	100,0
Autre éducation		
Aucune formation	330	60,8
cours d'alphabétisation	33	6,0
école de métier	22	4,0
enseignement religieux	157	28,9
Total	542	100,0

I.2. L'eau et l'assainissement

Dans le domaine de l'eau et de l'assainissement, les données du tableau ci-dessous montrent que la source aménagée reste la principale source d'approvisionnement pour 68,5% des ménages partenaires du programme, elle est suivie par la borne fontaine comme principale source d'approvisionnement en eau pour 21,2% des ménages. La province de Muramvya est celle qui a plus de ménages qui ont accès à l'eau par la voie de la source aménagée (87,9% des ménages) et la province de Bujumbura est la première au niveau de l'accès à l'eau potable par la voie des bornes fontaines selon les informations fournies par les chefs de ménages ayant participé à l'étude.

Tableau 5 : Principale source d'approvisionnement en eau de boisson

Province	source naturelle, rivière, lac, fleuve, ruisseau		Borne fontaine		source aménagée		eau de pluie		autre		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	7	14,3	27	55,1	13	26,5			2	4,1	49	100,0
Bujumbura			20	71,4	8	28,6					28	100,0
Cibitoke			3	14,3	18	85,7					21	100,0
Gitega	10	16,4	9	14,8	42	68,9					61	100,0
kayanza	12	13,6	26	29,5	50	56,8					88	100,0
Kirundo			8	38,1	12	57,1	1	4,8			21	100,0
Muramvya	9	9,1	3	3,0	87	87,9					99	100,0
Muyinga	4	10,0	3	7,5	33	82,5					40	100,0
Mwaro	1	2,4	6	14,6	34	82,9					41	100,0
Ngozi	8	8,5	10	10,6	74	78,7			2	2,1	94	100,0
Total	51	9,4	115	21,2	371	68,5	1	0,2	4	0,7	542	100,0

Concernant l'éloignement des ménage par rapport aux points d'eau, on constate que globalement, 54,0% des ménages mettent entre 1 à 30 minutes pour aller puiser et revenir chez eux et au même moment, il y a 30,1% des ménages qui prennent entre 31 minutes et 1 heure de temps pour arriver au point d'eau et revenir chez eux. C'est dans la province de Kayanza où les ménages sont plus nombreux à mettre peu de temps pour atteindre le point d'eau. Quand on sait que les données ont été collectées dans la zone de cette province où il a été construit les infrastructures hydrauliques par le programme, ces informations prouvent que la contribution du programme à ce niveau est significative.

Tableau 6 : Temps mis pour aller puiser l'eau et revenir

Province	1 à 30 minutes		31 à 1 heure		plus d'1 heure		eau sur place		NSP		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	32	65,3	10	20,4	6	12,2	1	2,0			49	100,0
Bujumbura	13	48,1	8	29,6	3	11,1	2	7,4	1	3,7	27	100,0
Cibitoke	7	33,3	11	52,4	3	14,3					21	100,0
Gitega	43	70,5	13	21,3	3	4,9			2	3,3	61	100,0
Kayanza	66	75,0	13	14,8	6	6,8	2	2,3	1	1,1	88	100,0
Kirundo	5	23,8	12	57,1	4	19,0					21	100,0
Muramvya	41	41,4	42	42,4	15	15,2	1	1,0			99	100,0
Muyinga	12	30,0	13	32,5	14	35,0	1	2,5			40	100,0
Mwaro	22	53,7	13	31,7	3	7,3			3	7,3	41	100,0
Ngozi	51	54,3	28	29,8	12	12,8	3	3,2			94	100,0
Total	292	54,0	163	30,1	69	12,8	10	1,8	7	1,3	541	100,0

Concernant l'accès aux toilettes au niveau des stations de lavage, 56,6% des ménages qui vendent le café au niveau des stations de lavage affirment qu'ils ont un accès facile aux toilettes. La province de Kayanza arrive largement en tête avec 94,2 % des personnes qui affirment qu'ils ont un accès facile aux toilettes. Ceci prouve que sur les stations de lavage de la province Kayanza appuyées par le programme PAIR, les producteurs du café ont un accès facile aux toilettes plus que dans les autres provinces grâce aux toilettes construites par le programme. Il reste à voir si cela a apporté un changement sur leurs conditions de vie particulièrement au niveau de l'environnement et de la santé. Cette situation pourrait être éclaircie par des informations qualitatives supplémentaires.

Tableau 7 : Accès aux toilettes aux stations de lavage par province

Province	Non		Oui		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	7	46,7	8	53,3	15	100,0
Cibitoke	17	81,0	4	19,0	21	100,0
Gitega	10	43,5	13	56,5	23	100,0
Kayanza	3	5,8	49	94,2	52	100,0
Kirundo	17	89,5	2	10,5	19	100,0
Muramvya	18	90,0	2	10,0	20	100,0
Muyinga	15	38,5	24	61,5	39	100,0
Ngozi	18	34,0	35	66,0	53	100,0
Total	105	43,4	137	56,6	242	100,0

Au niveau de l'accès à l'eau potable au niveau des stations de lavage du café, les données du tableau ci-dessous montrent que c'est dans la province de Muyinga où il y a plus de producteurs (64,1%) affirmant qu'ils ont un accès facile à l'eau potable au niveau des stations de lavage. Il suit la province de Kayanza avec 57,7% des producteurs qui affirment avoir accès au niveau des stations de lavage. Les provinces où les producteurs ont accès plus difficile à l'eau potable sont les provinces de Kirundo et les provinces de Gitega.

Tableau 8 : Accès à l'eau potable aux stations de lavage par province

Province	non		oui		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	10	66,7	5	33,3	15	100,0
Cibitoke	18	85,7	3	14,3	21	100,0
Gitega	20	87,0	3	13,0	23	100,0
Kayanza	22	42,3	30	57,7	52	100,0
Kirundo	20	95,2	1	4,8	21	100,0
Muramvya	14	70,0	6	30,0	20	100,0
Muyinga	14	35,9	25	64,1	39	100,0
Ngozi	34	64,2	19	35,8	53	100,0
Total	152	62,3	92	37,7	244	100,0

Concernant l'appréciation du niveau de propreté au niveau des stations de lavage, les données montrent que c'est dans la province de Kayanza où il y a 34,6% des producteurs affiliés aux stations de lavage pilotes qui affirment que le niveau de propreté est très bonne. Sur ce critère précisément, la province de Kayanza est suivie par la province de Ngozi avec 26,4% des producteurs qui apprécient de très bon le niveau de propreté au niveau de la station de lavage. Il importe de signaler que ces dans ces provinces où le programme a effectué l'assainissement de certaines des stations de lavage qui se traduit par ce niveau de satisfaction car les autres provinces où le programme n'a pas appuyé dans la construction des infrastructures d'assainissement peuvent constituer dans une certaine mesure un témoin pour cette activité.

Tableau 9 : Appréciation de la propreté au niveau des stations de lavage du café par province

Province	Bonne		Très bonne		Mauvaise		Très mauvaise		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	11	73,3			4	26,7			15	100,0
Cibitoke	5	23,8	4	19,0	11	52,4	1	4,8	21	100,0
Gitega	12	52,2			10	43,5			22	100,0
Kayanza	27	51,9	18	34,6	7	13,5			52	100,0
Kirundo	10	47,6			11	52,4			21	100,0
Muramvya	10	47,6	2	9,5	9	42,9			21	100,0
Muyinga	20	51,3	8	20,5	10	25,6	1	2,6	39	100,0
Ngozi	32	60,4	14	26,4	6	11,3	1	1,9	53	100,0
Total	127	52,0	46	18,9	68	27,9	3	1,2	244	100,0

Concernant l'amélioration de l'accès à l'eau potable par rapport à il y a une année, les données du tableau 10 montrent que les provinces de Mwaro, Bujumbura et Kayanza viennent en premier lieu de ceux qui affirment que l'accès à l'eau potable s'est amélioré avec respectivement 63,4%, 60,7% et 57,5% des producteurs qui l'affirment. Ces informations peuvent être interprétées de deux façons. D'une part, dans les provinces de Mwaro et de Bujumbura, d'autres intervenants peuvent avoir facilité l'accès à l'eau potable aux producteurs partenaires et dans la province de Kayanza, ces informations peuvent être le résultat de l'adduction du programme faite au profit des producteurs partenaires du programme.

Tableau 10 : Amélioration de l'accès l'eau potable par rapport à il y a une année

Province	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	17	34,7	32	65,3	49	100,0
Bujumbura	17	60,7	11	39,3	28	100,0
Cibitoke	9	42,9	12	57,1	21	100,0
Gitega	21	35,0	39	65,0	60	100,0
Kayanza	50	57,5	37	42,5	87	100,0
Kirundo	10	47,6	11	52,4	21	100,0
Muramvya	43	43,4	56	56,6	99	100,0
Muyinga	16	40,0	24	60,0	40	100,0
Mwaro	26	63,4	15	36,6	41	100,0
Ngozi	43	46,7	49	53,3	92	100,0
Total	252	46,8	286	53,2	538	100,0

Au niveau de la propreté à la maison et aux points de vente des produits horticoles, ce sont les provinces de Mwaro, Bujumbura et Kayanza encore où on rencontre plus de producteurs qui disent que la propreté s'est améliorée avec respectivement 95,1%, 88,9% et 81,3% qui répondent par l'affirmative. Les provinces où le niveau d'amélioration de la propreté est faible sont la province de Bubanza, Muyinga et Cibitoke avec respectivement 34,7%, 40,0% et 42,9% des personnes qui répondent par l'affirmative.

Tableau 11 : Amélioration de la propreté à maison et au lieu de vendre des produits (café, légumes et lait)

Province	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	36	73,5	13	26,5	49	100,0
Bujumbura	24	88,9	3	11,1	27	100,0
Cibitoke	9	42,9	12	57,1	21	100,0
Gitega	35	64,8	19	35,2	54	100,0
Kayanza	61	81,3	14	18,7	75	100,0
Kirundo	13	61,9	8	38,1	21	100,0
Muramvya	58	59,8	39	40,2	97	100,0
Muyinga	27	67,5	13	32,5	40	100,0
Mwaro	39	95,1	2	4,9	41	100,0
Ngozi	66	75,0	22	25,0	88	100,0
Total	368	71,7	145	28,1	513	100,0

I.3. L'élevage

I.3.1. Les animaux élevés dans la zone d'action du projet

Les données sur les animaux d'élevage dans la zone d'action montrent que globalement, il y a beaucoup de ménages qui n'ont pas d'animaux. Les ménages qui ont au moins une vache sont 35,2%, ceux qui ont un mouton sont 24,3%, ceux qui ont au moins une chèvre sont 43%, Ceux qui ont au moins un porc sont 20,1%, ceux qui ont au moins un lapin sont 27,1% et ceux qui ont au moins la volaille (poule, canard, dinde, etc) sont 33,3%. Le nombre d'animaux par ménage est plus élevé pour les caprins et moins élevé pour les porcins.

Tableau 12 : Les animaux d'élevage

Types d'animaux d'élevage	Possession d'animaux	Ménages ayant au mois un animal par type d'animaux	Nombre moyen d'animaux par ménage
Bovins	0 bovin =321 (59, 2%)	35,2%	0,91
	1 bovin=175(32, 2%)		
	2 bovins= 68 (12, 5%)		
	3 bovins=23 (4, 2%)		
	4 bovins=12 (2, 2%)		
	5 bovins=9 (1,6%)		
	Plus de 5 bovins=12 (2,2%)		
Ovins	0 vin=493 (90,9, 7%)	24,3%	0,52
	1 ovin= 21 (3, 8%)		
	2 ovins= 34 (6,2%)		
	3 ovins= 29 (5, 3%)		
	4 ovins=2 (0, 7%)		
	5 ovins=1 (0,1%)		
	Plus de 5 ovins=6 (2,3%)		
Caprins	0 caprin = 294 (54,2%)	43,0%	1,56
	1 caprin=27 (4,9%)		
	2 caprins=79 (14,5%)		
	3 caprins= 37 (6,8%)		
	4 caprins = 31 (5,7%)		
	5 caprins= 31(5,7%)		
	Plus de 5 caprins=24 (4,4%)		
Porcins	0 porcine=236 (78,7%)	20,1	0,35
	1 porcine= 59(10,8%)		
	2 porcins= 34 (6,2%)		
	3 porcins= 8(1,4%)		
	Plus de 3 porcins=6 (1,1%)		
Lapins	0 lapin= 227 (75,6%)	27,1	1,67
	1 lapin= 47 (8,6%)		
	2 lapins= 53 (9,7%)		
	3 lapins= 12 (2,2%)		
	4 lapins= 9 (1,6%)		
	5 lapins= 17 (3,1%)		
	Plus de 5 lapins= 9 (1,6%)		
Volaille	0 volaille = 197 (65,7%)	33,3	1,96
	1 volaille= 63 (11,6%)		
	2 volailles=47 (8,6%)		
	3 volailles = 38 (7,0%)		
	4 volailles = 12 (2,2%)		
	5 volailles = 18 (3,3%)		
	Plus de 5 volailles = 3 (0,5%)		

I.3.2. Les raisons de la vente des animaux d'élevage

Concernant les raisons de la vente des animaux, les données du tableau 13 montrent ci-dessous montrent que la raison majeure de la vente est pour les besoins familiaux et cela pour 92,1% des ménages qui ont vendu des animaux au cours des 12 derniers mois c'est-à-dire l'achat des vivres, la scolarisation des enfants, le paiement des soins de santé, etc. Les autres raisons sont l'âge de l'animal, la maladie de l'animal, la crainte du vol et autres (célébration des fêtes, paiement amande au tribunal, etc.)

Tableau 13 : Les raisons de la vente des animaux

Affectation de l'argent issu de la vente des animaux	Effectifs	%
Age de l'animal	49	19,1
Besoins familiaux (santé, scolarisation des enfants, achat des vivres, etc.)	236	92,1
Crainte de vol	27	10,5
Maladie de l'animal	45	17,5
Autres	18	7,0

I.3.3. Les soins des animaux d'élevage

Par rapport aux soins des animaux d'élevage, les données du tableau 14 montrent que dans l'ensemble, les animaux sont soignés par le vétérinaire pour les bovins, les ovins, les caprins et les porcins. Par contre, pour les animaux de basse cour, 48,3% des ménages affirment qu'ils ne font pas soigner les lapins et les cobayes et pour les poules, 31,8% des ménages font recours au guérisseur traditionnel. Après le vétérinaire, c'est le chef du ménage qui semble intervenir en deuxième position pour assurer les soins des animaux.

Tableau 14 : Les soins des animaux d'élevage

Qui soigne les animaux d'élevage ?	Bovins		Ovins		Caprins		Porcins		Lapins/cobayes		Volaille	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Chef ménage	16	5.0	31	23.7	13	7.7	7	6.5	5	4.2	49	15.9
Vétérinaire	257	80.8	87	66.4	126	74.6	84	77.8	41	34.7	68	22.1
Ambulant soignant	9	2.8	6	4.6	16	9.5	5	4.6	3	2.5	3	1.0
Guérisseur traditionnel	31	9.7	5	3.8	3	1.8	4	3.7	4	3.4	98	31.8
Personne	3	1.1	2	1.5	6	3.6	8	7.4	57	48.3	71	23.1
Autre	2	0.8	0	0.0	5	3.0	0	0.0	8	6.8	19	6.2
Total	318	100,0	131	100.0	169	100.0	108	100.0	118	100.0	308	84.1

I.3.4. Type d'élevage et les objectifs de l'élevage

Les données du tableau ci-dessous révèlent que le type d'élevage dépend du type d'animal au sein des ménages partenaires du programme. En effet, le pâturage traditionnel reste prédominant chez les bovins, les ovins et les caprins. Pour les porcins et les lapins, c'est la stabulation permanente qui est pratiquée dans beaucoup de ménages alors que c'est la stabulation semi-permanente chez les volailles qui prédomine. Cependant, la stabulation permanente vient en deuxième position pour les bovins, la stabulation semi-permanente arrive en deuxième position pour les ovins et le pâturage amélioré pour les caprins.

Tableau 15 : Type d'élevage par animal

Type d'élevage	Bovins		Ovins		Caprins		Porcins		Lapins		Volaille	
	Effectifs	%										
Stabulation permanente	77	35.6	27	17.1	23	8.0	56	51.8	87	55.8	68	29.4
Stabulation semi-permanente	31	14.4	32	20.3	14	4.9	39	36.1	62	39.7	89	38.5
Pâturage traditionnel	108	50.0	89	56.3	208	72.5	9	8.3	0	0.0	56	24.2
Pâturage amélioré	0	0.0	6	3.8	25	8.7	4	3.7	6	3.8	9	3.8
Autre	0	0.0	4	2.5	17	5.9	0	0.0	1	0.6	9	3.8
Total	216	100.0	158	100.0	287	100.0	108	100.0	156	100.0	231	100.0

Pour les vaches, les ovins, les caprins et les porcins, l'objectif le plus importants selon les chefs des ménages est la production du fumier. Par contre, l'objectif le plus important pour les lapins et la volaille est la production de la viande, certainement parce que ces animaux sont moins chers et peuvent être facilement abattus au sein des ménages pour avoir de la viande. Les objectifs qui viennent en deuxième position sont la production du lait pour les bovins et la source de revenu pour les autres animaux en l'occurrence les ovins, les caprins, les porcins, les lapins et les volailles.

Tableau 16 : Les objectifs les plus importants de l'élevage

Objectif le plus important de l'élevage	Bovins		Ovins		Caprins		Porcins		Lapins		Volaille	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Fumure	106	49.0	79	50.0	178	62.0	45	41.7	24	15.4	13	5.6
Production du lait	66	30.5	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0
Production de la viande	11	5.09	9	5.7	23	8.0	27	25.0	77	49.4	99	42.9
Source de revenu	23	10.648	46	29.1	67	23.3	18	16.7	46	29.5	65	28.1
Epargne	10	4.6296	23	14.6	19	6.6	18	16.7	9	5.8	54	23.4
Total	216	100	158	100.0	287	100.0	108	100.0	156	100.0	231	100.0

Avec des différences au niveau des fréquences certes, le principal problème rencontrés par les éleveurs des vaches, des ovins, des caprins, des porcins et des lapins est le manque de pâturages. Pour la volaille, c'est plutôt un problème d'intrant en termes d'aliments et de médicaments. Les autres problèmes essentiels rencontrés

sont le cout des médicaments pour les bovins, les ovins et les caprins, le non accès aux soins vétérinaires pour les lapins et les volailles.

Tableau 17 : Les principaux rencontrés dans le domaine de l'élevage.

Les principaux problèmes de l'élevage	Bovins		Ovins		Caprins		Porcins		Lapins		Volaille	
	Effectifs	%										
Coûts des médicaments	46	21.3	35	22.2	48	16.7	15	13.9	17	10.9	13	5.6
Non accès aux soins vétérinaires	34	15.7	30	19.0	18	6.3	13	12.0	33	21.2	42	18.2
Non disponibilité des intrants	11	5.1	32	20.3	23	8.0	15	13.9	34	21.8	68	29.4
Mévente des produits	39	18.1	13	8.2	25	8.7	18	16.7	13	8.3	37	16.0
Manque de pâturage	76	35.2	38	24.1	146	50.9	41	38.0	47	30.1	59	25.5
Faiblesse d'encadrement technique	10	4.6	10	6.3	27	9.4	6	5.6	12	7.7	12	5.2
Total	216	100.0	158	100.0	287	100.0	108	100.0	156	100.0	231	100.0

Les données du tableau 18 ci-dessous montrent que beaucoup de ménages paient moins de 5.000 Fbu pour les soins des animaux par trimestre. Toutefois, il y a aussi un nombre important de ménages qui dépensent plus de 20.000 Fbu par trimestre. Ces données peuvent être interprétées de deux manières : les ménages qui dépensent moins de 5.000 Fbu sont probablement les ménages qui ont des animaux de races locales qui sont plus rustiques alors que ceux qui dépensent plus de 20.000 Fbu sont les propriétaires des vaches de races améliorées qui sont plus productives mais qui sont vulnérables aux maladies.

Tableau 18 : Niveau de paiement des soins pour les animaux

Païement des soins	Effectifs	%
Moins de 5000 Fbu	41	34.5
Entre 5000 et 10000 Fbu	18	15.1
Entre 10000 et 15000 Fbu	17	14.3
Entre 15000 et 20000 Fbu	8	6.7
Plus de 20000 Fbu	35	29.4
Total	119	100.0

Selon les participants à l'étude du secteur laitier, le taux de mortalité a baissé depuis qu'ils ont commencé à travailler avec le programme PAIR pour 80,7% des chefs de ménages. En analysant les données par province, les éleveurs de la province de Muramvya des communes de Bukeye et Rutegama sont plus nombreux à affirmer que le taux de mortalité de leurs animaux a baissé depuis qu'ils sont partenaires du programme PAIR (88,5% des chefs de ménages). Ces informations prouvent que l'étude approche la réalité de terrain étant donné que c'est dans la province de Muramvya où plusieurs actions visant les soins des animaux ont été menées depuis bientôt 3 ans. Par contre, dans la province et la commune de Ngozi, les actions sont jusqu'ici peu nombreuses et récentes.

Tableau 19 : Baisse du taux de mortalité selon les participants à l'étude et par province

Province	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Muramvya	69	88.5	9	11.5	78	65.5
Ngozi	27	65.9	14	34.1	41	34.5
Total	96	80.7	23	19.3	119	100.0

I.4. Le système culturale

I.4.1. Les cultures principales et le milieu de plantation

Les données du tableau ci-dessous montrent que la principale culture pratiquée reste de loin le haricot. Par ordre d'importance les autres cultures les plus importantes sont la patate douce, le café, le manioc, le maïs, la banane, les légumes et les fruits.

Tableau 20 : Les principales cultures

Cultures	Effectifs	%
haricot	524	96.7
maïs	291	53.7
patate douce	401	74.0
bananes	291	53.7
manioc	314	57.9
café	327	60.3
fruits	131	24.2
légumes	253	46.7

Concernant le milieu de culture, les données y relatives collectées montrent que toutes les cultures mises à part les légumes sont généralement cultivées sur les collines. Les cultures qui sont le plus cultivées dans les marais sont les légumes pour 63,1% des ménages et la patate douce pour 18,2% des ménages. Les cultures qui sont cultivées le plus dans les marais et sur les collines sont le maïs, la patate douce, le haricot et les légumes.

Tableau 21 : Cultures principales et milieu de plantation

cultures principales	colline		marais		colline et marais		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
haricot	339	64.7	29	5.5	156	29.8	524	100.0
maïs	142	48.8	37	12.7	112	38.5	291	100.0
patate douce	176	43.9	73	18.2	151	37.7	401	100.0
bananes	278	95.5	1	0.3	11	3.8	291	100.0
manioc	286	91.1	2	0.6	26	8.3	314	100.0
café	322	98.5			3	0.9	327	100.0
fruits	120	91.6	4	3.1	7	5.3	131	100.0
légumes	44	17.5	159	63.1	49	19.4	252	100.0

I.4.2. Mode d'accès aux terres

Pour toutes les cultures, le mode d'accès aux terres et pour toutes les cultures restent de loin l'héritage. Les autres modes d'accès aux terres des cultures sont l'achat et la location. L'achat est plus important pour les terres où on plante le manioc, les fruits et la patate douce.

Tableau 22 : Types d'accès au terrain par culture

Cultures	Héritage		Achat		Location		Prêt		Autre		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Haricot	432	81.8	44	8.3	49	9.3	3	0.6			528	100.0
Mais	182	73.9	23	9.3	38	15.4	2	0.8	1	0.4	246	100.0
Patate douce	306	67.0	95	20.8	49	10.7	7	1.5			457	100.0
Bananes	256	84.2	35	11.5	13	4.3					304	100.0
Manioc	242	57.2	113	26.7	66	15.6	2	0.4			423	100.0
Café	286	75.0	88	19.2	6	1.3			1	0.2	456	100.0
Fruits	104	62.2	44	26.3	18	10.8	1	0.6			167	100.0
Légumes	154	51.5	46	15.3	98	32.7	1	0.3			299	100.0

I.4.2. Décision de plantation des cultures et l'implication dans la vente

Concernant la décision de planter telle ou telle autre culture, les informations du tableau ci-dessous montrent que les cultures où c'est le chef du ménage qui prend le plus la décision de planter la culture sont le café pour 71,4% des ménages, la banane pour 62,2% des ménages et les fruits pour 55,7%. La femme du ménage prend l'initiative de planter la patate douce pour 23,9% des cas et les légumes pour 18,3%. Il y a plus de concertation pour les plantes comme le manioc, le haricot et le maïs.

Tableau 23 : Décision de planter la culture par les membres du ménage

Cultures	chef ménage		femme ménage		les deux		tous les membres du ménage		autre		na		Effectifs	%
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%		
haricot	223	42.6	60	11.5	222	42.4	15	2.9			4	0.8	524	100.0
maïs	107	36.8	43	14.8	128	44.0	12	4.1	1	0.3			291	100.0
patate douce	132	32.9	96	23.9	157	39.2	15	3.7			1	0.2	401	100.0
bananes	181	62.2	17	5.8	83	28.5	9	3.1	1	0.3			291	100.0
manioc	108	34.4	49	15.6	145	46.2	11	3.5			1	0.3	314	100.0
café	232	71.4	14	4.3	64	19.7	3	0.9	9	2.8	3	0.9	325	100.0
fruits	73	55.7	12	9.2	36	27.5	4	3.1	6	4.6			131	100.0
légumes	98	38.9	46	18.3	70	27.8	10	4.0	27	10.7	1	0.4	252	100.0

Au niveau de la décision de vente de la récolte, le chef du ménage prend la décision de planter les cultures comme le café et la banane, qui sont des plantes qui normalement apportent un revenu substantiel aux ménages ruraux burundais. La femme participe le plus à la vente de la patate douce et le maïs. Il y a concertation dans vente entre le chef du ménage et son épouse pour les cultures comme le maïs et le manioc.

Tableau 24 : Décision de vente la récolte

Culture	chef ménage		femme ménage		les deux		tous les membres		autre		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
haricot	83	26.1	90	28.3	112	35.2	11	3.5	22	6.9	318	100.0
maïs	48	24.6	61	31.3	70	35.9	4	2.1	12	6.2	195	100.0
patate douce	56	18.9	160	54.1	62	20.9	8	2.7	10	3.4	296	100.0
bananes	113	44.7	51	20.2	80	31.6	5	2.0	4	1.6	253	100.0
manioc	48	21.1	68	30.0	92	40.5	8	3.5	11	4.8	227	100.0
café	113	35.5	23	7.2	92	28.9	83	26.1	7	2.2	318	100.0
fruits	47	41.2	26	22.8	26	22.8	6	5.3	9	7.9	114	100.0
légumes	65	28.3	66	28.7	52	22.6	17	7.4	30	13.0	230	100.0

I.4.3. L'agroforesterie

Selon le Centre international de recherche en agroforesterie, CIRAF, la foresterie est définie comme : « *L'agroforesterie est un système dynamique de gestion des ressources naturelles reposant sur des fondements écologiques qui intègre des arbres dans les exploitations agricoles et le paysage rural et permet ainsi de diversifier et de maintenir la production afin d'améliorer les conditions sociales, économiques et environnementales de l'ensemble des utilisateurs de la terre.* »

Au cours de cette étude, il a été demandé aux participants à l'étude de citer les arbres agro forestiers qui ont été plantés dans les différentes parcelles sous cultures et le tableau ci- montre qu'une bonne partie des parcelles ne contiennent aucun arbre agro forestier. Pour les parcelles qui ont des plantes agro forestières, la majorité des parcelles ont des arbres forestiers (22,4%) et 9,9% ont des arbres fruitiers

Tableau 25 : l'agroforesterie

Agroforesterie	Effectifs	%
Aucune	1176	46.0
Arbre fruitier	254	9.9
Arbre forestier	573	22.4
Arbustes fruitiers	38	1.5
Plantes forestières	113	4.4
Arbres légumineuses	228	8.9

Par rapport à la protection du sol, les données du tableau 26 montrent le dispositif de protection du sol le plus utilisé est la mise en place des courbes de niveau, suivi par l'installation des haies vives. Il est à noter qu'il y a des parcelles où il n'y a aucun dispositif de protection du sol.

Tableau 26 : Protection du sol

Protection du sol	Effectifs	%
Aucune	512	20.0
haies vives	1100	43.0
courbes de niveau	1407	55.0
Autres	31	1.2

Au niveau de la préparation du sol, le mécanisme de loin le plus répandu est le houage pour plus de 86% des parcelles. Le mode de préparation qui suit directement est le billonnage pour 10,7% des parcelles.

Tableau 27 : Préparation du sol

Préparation du sol	Effectifs	%
Aucune	7	0.3
Billonnage	274	10.7
Houage	2203	86.1
Brulis	19	0.6

Par rapport aux techniques de fertilisation, les informations collectées montrent que la technique de fertilisation la plus usitée par les partenaires du programme est la fertilisation en utilisant la fumure organique. Par ordre d'importance, les autres techniques de fertilisation sont le compostage, la fumure minérale, le paillage et l'enfouissement. Il importe de noter qu'il y a une bonne partie des parcelles qui ne reçoivent aucun fertilisant.

Tableau 28 : Fertilisation du sol

Fertilisation	Effectifs	%
Aucune	503	19.7
Compostage	382	17.3
Paillage	196	7.6
Enfouissement	84	3.3
Fumure organique	683	26.7
Fumure minérale	172	9.2
Rotation des cultures	87	2.7

Concernant la protection des plantes, les données du tableau ci-dessous montrent que pour les cultures vivrières comme le haricot, la banane, la patate douce et le maïs, les ménages n'appliquent généralement pas de produits phytosanitaires. Par contre, il y a beaucoup de ménages qui font l'application des produits chimiques sur le café, sur les légumes et sur les fruits.

Tableau 29 : Produits phytosanitaires

Culture	aucun		organique		produits chimiques		les deux		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
haricot	355	69.3	22	4.2	86	16.8	9	1.7	512	100.0
maïs	168	59.3	18	6.3	83	29.3	9	3.1	283	100.0
patate douce	318	81.1	6	1.5	38	9.6	1	0.2	392	100.0
bananes	222	78.4	30	10.6	16	5.6	1	0.3	283	100.0
manioc	242	79	3	0.9	37	12	0	0	306	100.0
café	31	9.5	4	1.2	277	85.4	11	3.3	324	100.0
fruits	61	48.4	10	7.9	44	34.9	8	6.3	126	100.0
légumes	46	18.4	9	3.6	171	68.4	21	8.4	250	100.0

Les données sur l'irrigation montrent que cette technique agricole est essentiellement appliquée sur les légumes et sur les fruits. Pour les autres cultures, elles bénéficient de l'eau de pluie ce qui dit qu'elles dépendent beaucoup de la clémence des conditions climatiques.

Tableau 30 : Irrigation

Culture	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
haricot	31	6.1	475	93.9	506	100.0
maïs	39	13.9	242	86.1	281	100.0
patate douce	23	5.9	365	94.1	388	100.0
bananes	1	6.1	279	93.9	280	100.0
manioc	2	0.7	299	99.3	301	100.0
café	18	5.7	299	94.3	317	100.0
fruits	49	39.2	76	60.8	125	100.0
légumes	218	87.6	31	12.4	249	100.0

Concernant le mode d'irrigation par culture, les données montrent qu'en analysant les données en faisant référence aux légumes qui sont les plus arrosées par ailleurs, le mode d'irrigation le plus utilisé est l'utilisation de l'arrosoir, suivi par les légumes et la pompe à pédale. Pour les fruits, c'est aussi l'arrosoir qui est plus utilisé.

Tableau 31 : Type d'irrigation par culture

Culture	sceau		arrosoir		goutte a goutte		périmètre irrigue		pompe à pédale		pompe a essence		autre		Total	
	effectifs	%	effectifs	%	effectifs	%	effectifs	%	effectifs	%	effectifs	%	effectifs	%	effectifs	%
haricot	11	33.3	3	9.1			5	15.2	3	9.1	2	6.1	9	27.3	33	100.0
maïs	16	40.0	6	15.0			6	15.0	3	7.5	2	5.0	7	17.5	40	100.0
patate douce	7	31.8	2	9.1	1	4.5	7	31.8		0.0		0.0	5	22.7	22	100.0
bananes	1	50.0		0.0		0		0.0		0.0		0.0	1	50.0	2	100.0
manioc	1	25.0		0.0		0		0.0		0.0		0.0	3	75.0	4	100.0
café	2	10.5	12	63.2	1	5.3		0.0	2	10.5		0.0	2	10.5	19	100.0
fruits	21	40.4	18	34.6	1	1.9		0.0	7	13.5		0.0	5	9.6	52	100.0
légumes	62	28.1	97	43.9	11	5.0	1	0.5	33	14.9	6	2.7	11	5.0	221	100.0

1.5. Le revenu des ménages partenaires du programme

Par rapport à l'ancienneté des partenaires du programme, les données du tableau 12 montrent que le programme travaille avec 33,1% des ménages depuis deux ans, avec 22,2% des ménages depuis 3 ans et 14,7 des ménages participants à l'étude depuis quatre ans. Cette ancienneté pourrait justifier certains effets globaux qui sont constatés au cours de cette étude.

Tableau 32 : Partenaires du programme depuis quand ?

Province	moins d'une année		1 année		2 années		3 années		4 années		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza			4	8,9	17	37,8	15	33,3	9	20,0	45	100,0
Bujumbura	4	14,3	8	28,6	9	32,1	4	14,3	3	10,7	28	100,0
Cibitoke	2	9,5			5	23,8	7	33,3	7	33,3	21	100,0
Gitega	19	32,2	9	15,3	21	35,6	7	11,9	3	5,1	59	100,0
Kayanza	20	23,0	17	19,5	26	29,9	16	18,4	8	9,2	87	100,0
kirundo			4	23,5	2	11,8	5	29,4	6	35,3	17	100,0
Muramvya	6	6,1	20	20,2	29	29,3	33	33,3	11	11,1	99	100,0
Muyinga	2	5,3	2	5,3	11	28,9	18	47,4	5	13,2	38	100,0
Mwaro			12	34,3	15	42,9	2	5,7	6	17,1	35	100,0
Ngozi	10	11,4	26	29,5	26	29,5	8	9,1	18	20,5	88	100,0
Total	63	12,2	102	19,7	161	31,1	115	22,2	76	14,7	517	100,0

Concernant l'ancienneté dans la filière, les données du tableau ci-dessous montrent que 39,2% des participants qui ont répondu à la question affirment qu'ils ont entre 2 et 5 ans d'expérience dans la filière, 24,6% des participants ont entre 5 et 10 ans les filières tandis que 24,8% des répondants ont une expérience de plus de 10 ans dans les trois filières en l'occurrence la filière café, la filière laitière et la filière horticole.

Tableau 33 : Dans la filière depuis quand ?

Province	moins d'un an		entre 2 et 5 ans		entre 5 ans et 10 ans		plus de 10 ans		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Bubanza	1	2.0	25	51.0	10	20.4	13	26.5	49	100.0
Bujumbura	7	25.9	10	37.0	8	29.6	2	7.4	27	100.0
Cibitoke			3	14.3	6	28.6	12	57.1	21	100.0
Gitega	15	25.0	21	35.0	12	20.0	12	20.0	60	100.0
Kayanza	20	23.0	38	43.7	9	10.3	20	23.0	87	100.0
Kirundo			3	14.3	12	57.1	6	28.6	21	100.0
Muramvya	7	7.1	48	48.5	28	28.3	16	16.2	99	100.0
Muyinga			9	22.5	15	37.5	16	40.0	40	100.0
Mwaro			12	29.3	17	41.5	12	29.3	41	100.0
Ngozi	11	12.1	41	45.1	15	16.5	24	26.4	91	100.0
Total	61	11.4	210	39.2	132	24.6	133	24.8	536	100.0

Les données sur le revenu annuel moyen par secteur prouvent que le revenu annuel moyen des ménages partenaires se situe globalement entre 100.000 Fbu et 500.000 Fbu pour 42,9% des ménages. Dans le secteur café et le secteur laitier c'est dans cette fourchette de revenu qu'on trouve une grande partie des ménages avec

respectivement 55,8% et 40,6% des ménages. Par contre, dans le secteur horticole, une grande partie des ménages (30,1%) estime qu'ils ont revenu inférieur à 50.000 Fbu.

- **Revenu annuel moyen déclaré par les entreprises privées et paysannes**

Tableau 34 : Revenu annuel moyen par secteur

Revenu annuel moyen	Secteur café		Secteur lait		Secteur horticulture		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Moins de 50000 fbu	30	12.9	23	21.7	46	30.1	99	20.1
Entre 50000 et 100000 fbu	44	18.9	18	17.0	29	19.0	91	18.5
Entre 100000 et 500000 fbu	130	55.8	43	40.6	38	24.8	211	42.9
Entre 500000 et 1000000 fbu	21	9.0	15	14.2	22	14.4	58	11.8
Plus d'1 million	8	3.4	7	6.6	18	11.8	33	6.7
Total	233	100.0	106	100.0	153	100.0	492	100.0

Par rapport à l'augmentation du revenu des ménages partenaires depuis qu'ils ont commencé à travailler avec le programme PAIR, les données du tableau ci-dessous montrent que dans l'ensemble, 34,2% des ménages affirment que leur revenu a augmenté. En analysant cette même information par secteur, on constate que dans le secteur café, les ménages qui affirment que leur revenu a augmenté sont 35,6%, dans le secteur horticole, ils sont 34,6% alors que dans le secteur laitier, ils sont seulement 30,7%.

- **% des personnes impliquées dans les chaînes de valeur qui affirment que leur revenu a augmenté et qui le démontrent par des exemples**

Tableau 35 : Augmentation du revenu par secteur

Secteur	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Café	84	35,6	152	64,4	236	100,0
Lait	35	30,7	79	69,3	114	100,0
Horticulture	63	34,6	119	64,8	182	100,0
Total	182	34,2	350	65,6	532	100,0

Par rapport à la question de proportion d'augmentation du revenu, une grande partie des participants estime que leur revenu a augmenté deux fois. Les ménages qui estiment que leur revenu a augmenté de deux fois sont 68,6% dans le secteur café, 51,4% dans le secteur laitier et 50,0% des ménages dans le secteur horticole. Les ménages dont le revenu a augmenté au moins une fois sont aussi assez nombreux. Ils sont 33,9% dans le secteur, 28,6% dans le secteur laitier et 22,1% dans le secteur du café.

Tableau 36 : Proportion d'augmentation du revenu

Secteur	1 fois		2 fois		3 fois		plus de 3 fois		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Café	19	22,1	59	68,6	8	9,3			86	100,0
Lait	10	28,6	18	51,4	7	20,0			35	100,0
Horticulture	21	33,9	31	50,0	7	12,9	2	3,2	61	100,0
Total	50	27,3	108	59,0	22	12,6	2	1,1	182	100,0

Concernant l'affectation du revenu, les données du tableau 17 montrent qu'une partie importantes des ménages (85,4%) affecte leur revenu dans l'achat des vivres ce qui démontre une autosuffisance alimentaire encore faible au niveau des ménages partenaires du programme. Le revenu est également affecté par ordre d'importance à l'achat des vêtements, le paiement des services sociaux, l'investissement mais aussi la participation aux fêtes sociales.

Tableau 37 : Affectation du revenu

Utilisation revenu	Effectifs	%
Achats des vivres	463	85,4
Achats des vêtements	379	69,9
Paiement des services sociaux (éducation, santé)	246	45,3
Investissement (achat des animaux d'élevage, commerce, etc.)	175	32,2
Participation aux fêtes sociales	167	30,8
Autres	89	16,4

Par rapport à la question d'avoir un compte dans une institution de micro finance ou dans une banque, 88,9% des participants affirment que les associations auxquelles ils appartiennent ont des comptes ce qui est plus moins important car cela permettra d'améliorer la gouvernance dans les associations. C'est dans le secteur laitier où il y a plus de participants qui affirment que leurs associations ont des comptes (89,9%), dans le secteur café, ils sont 89,9% et dans le secteur horticole, ils sont 84,4%.

Tableau 38 : Avoir un compte au sein de l'association

Secteur	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Café	213	89,9	24	10,1	237	100,0
Lait	112	94,1	7	5,9	119	100,0
Horticulture	157	84,4	29	15,6	186	100,0
Total	482	88,9	60	11,1	542	100,0

Dans l'ensemble, les participants à l'étude sont 85,9% à dire que les organisations au sein desquelles ils sont membres ont des comptes dans les Institutions de Micro finance (IMF). Ceux qui affirment qu'ils ont des comptes dans les autres établissements bancaires sont très peu nombreux (4,1% dans les banques commerciales, 7,5% dans les banques de développement).

Tableau 39 : Un compte dans quel établissement bancaire

Secteur	IMF		banques commerciales		banque de développement		autres		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Café	184	88.5	8	3.8	13	6.3	3	1.4	208	100.0
Lait	87	78.4	9	8.1	6	5.4	9	8.1	111	100.0
Horticulture	130	87.8	2	1.4	16	10.8			148	100.0
Total	401	85.9	19	4.1	35	7.5	12	2.6	467	100.0

Bien que les associations aient des comptes dans différents établissements bancaires, les données du tableau ci-dessous montrent que la majorité des membres (86,1%) affirment qu'ils n'ont pas encore pris de crédit non pas parce qu'ils ne veulent pas mais parce que les conditions d'accès sont difficiles. Cela traduit la faible capacité des institutions financières burundaises à aller vers les clients afin de contribuer plus efficacement à la croissance économique du pays.

Tableau 40 : Crédit au sein des associations partenaires

Secteur	Oui		Non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Café	44	19.6	181	80.4	225	100.0
Lait	9	7.8	107	92.2	116	100.0
Horticulture	19	10.7	158	89.3	177	100.0
Total	71	13.7	446	86.1	518	100.0

Par contre, en analysant les déclarations des participants à l'étude par rapport à la question de l'épargne, on remarque qu'il y a un grand nombre de personnes qui affirment avoir épargné ce qui montre que les dépôts existent dans les IMF's et dans les différents établissements bancaires. Cette situation constitue un sérieux handicap au développement national car les déposants existent mais en retour le niveau de crédit reste largement faible.

Tableau 41 : Epargne au niveau des associations

Secteur	le mois passé		le trimestre passé		année passée		Ne sait pas		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Café	18	13,7	31	23,7	79	60,3	3	2,3	131	100,0
Lait	12	14,8	20	24,7	47	58,0	2	2,5	81	100,0
Horticulture	31	28,2	44	40,0	34	30,9	1	0,9	110	100,0
Total	61	18,9	95	29,5	160	49,7	6	1,9	322	100,0

- **% des partenaires du programme qui pensent que le projet a contribué à l'augmentation des opportunités économiques en milieu rural**

Il a été demandé aux participants à l'étude de savoir si selon eux et par rapport aux activités du projet, le programme contribue à l'augmentation des opportunités économiques. Les informations du tableau ci-dessous montrent que 86,5% des chefs de ménages pensent que le programme contribue à l'augmentation des opportunités économiques. En analysant l'information par secteur, on remarque que dans c'est dans le secteur horticole où il y a plus de chefs de ménages (92,2%) qui pensent que le programme contribue à l'augmentation des opportunités économiques certainement grâce à l'appui matériel offert par le programme aux producteurs de ce secteur. Dans le secteur café, la fréquence semble relative faible par rapport aux autres secteurs parce que les appuis concernent surtout le renforcement des capacités techniques relatives à l'entretien et à la transformation du café.

Tableau 42 : augmentation des opportunités économiques en milieu rural

Secteur	oui		non		Total	
	Effectifs	%	Effectifs	%	Effectifs	%
Café	190	80.3	45	19.7	235	100.0
Lait	101	88.6	13	11.4	114	100.0
Horticulture	178	92.2	15	2.7	193	100.0
Total	469	86.5	73	13.5	542	100.0

1.6. La protection de l'environnement

Par rapport à la question de la dégradation de l'environnement, les résultats montrent que 70,1% des participants à l'étude ont l'impression que l'environnement se dégrade de plus en plus au Burundi. Les raisons généralement avancées par les participants à l'étude pour motiver cette affirmation sont notamment liés aux visibles notamment les feux de brousse observés dans différents coins du pays, la fertilité du sol qui diminue régulièrement, le niveau des cours d'eau qui continue à baisser, etc.

Tableau 43 : La dégradation de l'environnement au Burundi selon les participants

Dégradation de l'environnement au Burundi?	Effectifs	%
oui	380	70.1
non	162	29.9
Total	542	100.0

- **% des bénéficiaires du programme qui utilisent au moins une technique et au moins une technologie contribuant à la gestion durable des ressources naturelles et la protection de l'environnement, y compris la biodiversité**

Dans le secteur café, la technique contribuant le plus à la gestion durable des ressources naturelles et à la protection de l'environnement est la mise en place des courbes de niveau pour 72,2% des ménages, il est suivi par le traitement des eaux usées cité par 31,6% des chefs des ménages de secteur et la plantation des plantes fixatrices du sol mentionné par 30,4% des ménages.

Dans le secteur horticole, c'est également l'installation des courbes de niveau pour 45,7% des ménages et la plantation des plantes fixatrices sur les courbes de niveau pour 28,0% des ménages.

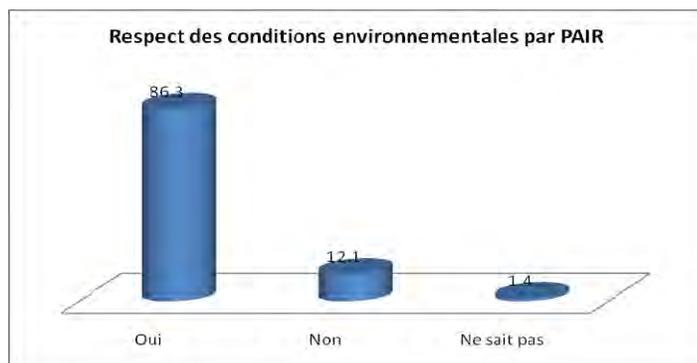
Dans le secteur laitier, ce sont également les mêmes techniques qui reviennent avec cette fois-ci une fréquence non négligeable des ménages (15%) qui citent la construction des toilettes sur site.

Tableau 44 : Techniques de sauvegarde de l'environnement

Secteur d'intervention	Techniques de sauvegarde de l'environnement	Fréquence	%
Secteur café	Pas de réponse	6	2.5
	Traitement des eaux usées	75	31.6
	Construction des latrines sur sites de travail	25	13.4
	Transformation de la pulpe en fumure	23	9.7
	Mise en place des courbes de niveau	171	72.2
	Plantation des plantes fixatrices	72	30.4
	Autres	4	1.7
Secteur horticole	Installation des courbes de niveaux	85	45.7
	Plantation des plantes fixatrices	52	28.0
	Installation des brises vents	15	8.1
	Traitement des eaux usées	33	17.7
	Installation des brises vents	23	12.4
	Construction des latrines sur les sites de travail	17	9.1
Secteur laitier	Traitement des eaux usées	11	9.2
	Construction des latrines sur les sites de travail	18	15.1
	Mise en place des courbes de niveau	49	41.2
	Installation des plantes fixatrices	32	26.9
	Installation des brises vents	11	9.2

- % des partenaires du programme qui affirment que les conditions environnementales ont été respectées lors de l'exécution des activités du programme et qui donnent des exemples

Selon les partenaires du programme participant à l'étude, 86,3% affirment que les conditions environnementales ont été respectées lors de l'exécution des activités du programme.



1.7. Genre

Les informations sur la caractéristique des associations partenaires montrent des différences en fonction du secteur d'intervention du programme. En effet, dans la catégorie des associations masculines (les hommes plus nombreux), ce sont les ménages du secteur café qui sont les plus nombreux (20,5%), dans la catégorie des associations féminines (les femmes sont plus nombreuses et occupent les postes importants dans l'association), ce sont les ménages œuvrant dans le secteur horticole qui sont les plus nombreux (40,0%) et dans la catégorie des associations mixtes, ce sont les ménages du secteur café qui sont encore plus nombreux.

Tableau 45 : Types d'associations partenaires

Secteur	Masculine		Féminine		Mixte		Total	
	Effectifs	%	Effectifs	%	Effectifs	%	Effectifs	%
Café	47	20.5	8	3.5	174	76.0	229	100.0
Lait	6	5.1	40	33.9	72	61.0	118	100.0
Horticulture	18	9.7	74	40	93	50.3	185	100.0

Par rapport aux positions occupées par les femmes dans les comités des associations, les données du tableau ci-dessous montrent que les femmes sont essentiellement conseillères des associations et trésorières. Dans les positions de président, de vice-président et de secrétaire, les fréquences diminuent sensiblement.

Tableau 46 : Les positions occupées par les femmes dans les comités des associations

Poste	Oui	
	Effectifs	%
Président	156	28.8
Vice-président	195	36
Secrétaire	179	33
Trésorière	322	59.4
Conseillère	247	45.6

Concernant la compréhension du rôle et de la responsabilité des membres, les données du tableau ci-dessous montrent que le rôle et la responsabilité du président de l'association est plus compris, suivi par le rôle et la responsabilité du conseiller, du vice-président, du trésorier et en dernier position du secrétaire.

Tableau 47 : Compréhension du rôle des membres du comité selon les participants

Postes		Effectifs	%
Président	Très Bien	92	59.6
	Bien	58	29.7
	Moyen	3	1.9
Vice-président	Très Bien	107	54.9
	Bien	72	40.2
	Moyen	13	4.0
	nul	4	1.6
Secrétaire	Très Bien	94	52.5
	Bien	72	22.4
	Moyen	16	6.5
	nul	2	1.1
Trésorière	Très Bien	171	53.1
	Bien	118	47.8
	Moyen	17	5.3
	nul	2	0.6
Conseillère	Très Bien	141	57.1
	Bien	88	35.6
	Moyen	11	4.5
	nul	4	1.6

Par rapport à la question d'agrément, les participants à l'étude sont plus nombreux à affirmer que leurs associations sont agréées jusqu'au niveau communal (40,4%). Les autres niveaux d'agrément sont par ordre d'importance le niveau provincial et le niveau national avec respectivement 36,2% et 20,1% des participants.

Tableau 48 : Niveau d'agrément des associations

Niveau d'agrément	Effectifs	%
Communal	219	40.4
provincial	196	36.2
National	109	20.1
NSP	18	3.3
Total	542	100.0

Concernant la possession d'un statut en Kirundi pour qu'il soit accessible et compréhensible pour tous les membres des associations, les données du tableau ci-dessous montrent 85,4% des participants disent que leurs associations ont des statuts en Kirundi ce qui est heureux pour ces dernières. En effet, cela suppose que les membres devraient connaître toutes les articles concernant leurs associations et participent ainsi à la gouvernance de leurs organisations.

Tableau 49 : Associations possédant des statuts en Kirundi

Statut en Kirundi	Effectifs	%
oui	463	85.4
non	62	11.4
Ne sait pas	17	3.1
Total	542	100.0

Selon les participants à l'étude, le règlement d'ordre intérieur existe dans les associations partenaires car 83,2% des participants disent que leurs organisations possèdent ce texte régissant les relations internes des membres des associations.

Tableau 50 : Avoir un règlement d'ordre intérieur

ROI	Effectifs	%
oui	451	83.2
non	66	12.2
Ne sait pas	25	4.6
Total	542	100.0

Par rapport à la tenue des documents de gestion, les données collectées dans le cadre de cette étude montrent la majorité des participants disent les documents de gestion (fiche de stock, livres de caisse, livre de banque, procès verbaux des réunions) sont tenus par le président selon 32,7% des participants, par le trésorier selon 30,6% des participants, par le secrétaire selon 20,7% des participants.

Tableau 51 : Tenu des documents de gestion

Membres du comité	Effectifs	%
Secrétaire	112	20.7
Trésorier	166	30.6
Secrétaire	59	10.9
Président	177	32.7
Autre	14	2.6
Ne sait pas	14	2.6
Total	542	100.0

Concernant certaines activités qui ont marqué le domaine du genre, les informations collectées concernent l’alphabétisation et 62,4% des participants affirment qu’ils ont déjà entendu parler de cette activité conduite par le programme PAIR.

Tableau 52 : Entendu parler de l’alphabétisation

Entendu parler alphabétisation	Effectifs	%
oui	338	62.4
non	204	37.6
Total	542	100.0

1.8. Couverture médiatique des activités du programme

Concernant le domaine de la communication, le programme a un partenariat avec la radio Isanganiro qui concerne la couverture médiatique des activités du programme. Au cours des deux dernières années, les activités de communication ont couvert seulement le secteur café et au cours de cette quatrième année, ces activités couvrent aussi les autres secteurs et domaines du programme notamment le secteur laitier, le secteur horticole et le domaine genre. C’est pour cette raison que la présente étude a pris en compte ce volet afin de s’assurer que les émissions produites sous le titre « Akeza Karigura » atteigne le groupe cible. Avant tout l’étude a voulu savoir si les partenaires écoutent la radio et les données du tableau ci-dessous montrent que 80,1% des participants affirment qu’ils écoutent la radio.

Tableau 53 : Ecoute de la radio

Ecoutez-vous la radio?	Effectifs	%
oui	434	80.1
non	108	19.9
Total	542	100

Après avoir connu le taux d'écoute de la radio en générale, il fallait savoir si les émissions produites par la radio Isanganiro dans le cadre de la couverture des activités du programme PAIR sous le titre « Akeza karigura » sont réellement écoutées. Les données du tableau ci-dessous montrent 63,3% de ceux qui écoutent la radio affirmer qu'ils ont déjà écouté l'émission ce qui est un niveau d'écoute appréciable. En analysant les informations par secteur, on remarque que les producteurs du secteur café sont les plus nombreux à affirmer qu'ils écoutent l'émission ce qui est normal parce que cette émission a pendant plus de deux ans parlé des questions qui concernent ce secteur. Les producteurs du secteur horticole sont 66,9% et ceux du secteur laitier sont 37,2%.

Tableau 54 : Taux d'écoute de l'émission « Akeza karigura »

Secteur	Oui		Non		Oui	
	Effectifs	%	Effectifs	%	Effectifs	%
café	146	73.0	54	27.0	200	100.0
lait	35	37.2	59	62.8	94	100.0
horticulture	94	66.9	46	33.1	140	100.0
Total	274	63.3	159	36.7	434	100.0

2. Conclusion

Les données collectées au cours de cette année fiscale montrent que certains indicateurs connu augmentation sensible, d'autres ont connu une évolution mitigée et pour d'autres en l'occurrence les indicateurs composites, certains critères ont connu une évolution positive et d'autres une évolution faible. Le tableau qui suit résume les niveaux des différents indicateurs internes.

Nom de l'indicateur	Juillet 2009	Juillet 2010	Aout 2011
Revenu annuel moyen déclaré par les entreprises privées et paysannes	<p>Moins de 50.000 Fbu=20,0%</p> <p>Entre 50.000 Fbu et 100.000 Fbu=25,4%</p> <p>Entre 100.000 et 500.000 Fbu=41,5%</p> <p>Entre 500.000 et 1.000.000 Fbu=7,7%</p> <p>Plus de 1.000.000 Fbu=5,4%</p>	<p>Moins de 50.000 Fbu=48,0%</p> <p>Entre 50.000 Fbu et 100.000 Fbu=23,4%</p> <p>Entre 100.000 et 500.000 Fbu=23,0%</p> <p>Entre 500.000 et 1.000.000 Fbu=4,2%</p> <p>Plus de 1.000.000 Fbu=2,0%</p>	<p>Moins de 50000 fbu=20,1%</p> <p>Entre 50000 et 100000 fbu=18,5%</p> <p>Entre 100000 et 500000 fbu=42,9%</p> <p>Entre 500000 et 1000000 fbu=11,8%</p> <p>Plus d'1 million = 6,7%</p>
% des personnes impliquées dans les chaînes de valeur qui affirment que leur revenu a augmenté et qui le démontrent par des exemples	18,5%	26,7%	34,2%
% des bénéficiaires du programme qui ont adopté au moins une technique et au moins une technologie qui rendent les filières plus efficaces en réduisant leurs coûts et en même temps augmentant le volume et la qualité des produits	<p>Récolte de la cerise mure=43,1%</p> <p>Sélection de la cerise sur table=9,2%</p> <p>Sélection de la cerise par flottaison= 20,0%</p> <p>Séchage pyramidale=0,8%</p> <p>Techniques d'entretien du café= 90,0%</p> <p>Redimensionnement des bacs de fermentation=2,3%</p>	<p>Secteur café</p> <p>Récolte de la cerise mure=49,1%</p> <p>Sélection de la cerise sur table=16,3%</p> <p>Sélection de la cerise par flottaison=18,6%</p> <p>Séchage pyramidale=5,9%</p> <p>Techniques d'entretien du café=86,4%</p> <p>Redimensionnement des bacs de flottaison=3,6%</p> <p>Secteur horticole</p> <p>Irrigation=65%</p> <p>Emballage des</p>	<p>Secteur café</p> <p>Récolte de la cerise mure=44,7%</p> <p>Sélection de la cerise sur table=18,2%</p> <p>Sélection de la cerise par flottaison=14,9%</p> <p>Séchage pyramidale=7,8%</p> <p>Techniques d'entretien du café=87,5%</p> <p>Redimensionnement des bacs de flottaison=4,5%</p> <p>Secteur horticole</p> <p>Irrigation=65%</p> <p>Emballage des</p>

		produits=16,3% Triage des produits=37,5 Production biologique=2,5% Bonne pratiques agricoles=77,5% <u>Secteur laitier</u> Stabulation permanente=52,5% Hygiène du lait=45% Cultures fourragères=47,5% Transport hygiénique du lait=27,5%	produits=15,7% Triage des produits=48,5% Production biologique=3,6% Bonne pratiques agricoles=79,7% <u>Secteur laitier</u> Stabulation permanente=47,9% Hygiène du lait=48% Cultures fourragères=49,5% Transport hygiénique du lait=38,6%
% des partenaires du programme qui affirment que les conditions environnementales ont été respectées lors de l'exécution des activités du programme et qui donnent des exemples	83,1%	79,3%	86,3%

<p>% des bénéficiaires du programme qui utilisent au moins une technique et au moins une technologie contribuant à la gestion durable des ressources naturelles et la protection de l'environnement, y compris la biodiversité</p>	<p>Traçage des courbes de niveau=26,2%</p> <p>Plantations des herbes fixatrices (tripsacum, setaria, etc)=56,9%</p> <p>Autres techniques (plantation des arbres sur les pentes et autour des champs)=33,1%</p>	<p><u>Secteur café</u></p> <p>Traçage des courbes de niveau=68,3%</p> <p>Latrines sur les sites de travail=8,0%</p> <p>Transformation de la pulpe en fumure organique=10,7%</p> <p>Plantations des herbes fixatrices=25,7%</p> <p><u>Secteur horticole</u></p> <p>Traçage des courbes de niveau=40,0%</p> <p>Plantes fixatrices=32,5%</p> <p>Installation des brises vents=10%</p> <p><u>Secteur lait</u></p> <p>Traçage des courbes de niveau=40,6%</p> <p>Plantes fixatrices=28,1%</p> <p>Installation des brises vents=9,4%</p>	<p><u>Secteur café</u></p> <p>Traçage des courbes de niveau=72,2%</p> <p>Latrines sur les sites de travail=13,4%</p> <p>Transformation de la pulpe en fumure organique=9,7%</p> <p>Plantations des herbes fixatrices=30,4%</p> <p><u>Secteur horticole</u></p> <p>Traçage des courbes de niveau=45,7%</p> <p>Plantes fixatrices=28,0%</p> <p>Installation des brises vents=12,4</p> <p><u>Secteur lait</u></p> <p>Traçage des courbes de niveau=41,2%</p> <p>Plantes fixatrices=26,9%</p> <p>Installation des brises vents=9,2</p>
<p>% des partenaires du programme qui pensent que le projet a contribué à l'augmentation des opportunités économiques en milieu rural</p>	<p>86,2%</p>	<p>85,3%</p>	<p>86,5%</p>

Dairy ANNEXES

MILK COLLECTION CENTER STAFF SHOULD OBSERVE THE FOLLOWING:

1. Be be medically examined and adjudged as fit to handle food
2. Put on clean white apparels
3. Regularly wash their hands after leaving bathrooms or handling chemicals with clean water and soap
4. Have short nails and have no jewelry on themselves while in the dairy
5. Have their hair covered with the right caps or head gear
6. Good personal habits i.e. avoid smoking, spitting or eating in the dairy room
7. Have open wounds covered with elastoplasts
8. Do not cough directly into milk
9. Sick personnel should not be allowed to work in the dairy but allowed to seek medical treatment immediately.
10. Should no blow or pick their noses while in the dairy. if this is done outside the dairy, then they should have their hands washed
11. Always be in gumboots to avoid injury from detergents used to clean cooling equipment and sharp objects in the MCC premises

BULK MILK COOLER CLEANING

Areas on a cooler to pay special attention to when cleaning either manually or cleaning in place consist of the following:

- **Tank outlet**
- **Under the bridge and the lid**
- **Dipstick and dip stick socket**
- **Agitator blade**

NOTE: Automatic (cleaning in place) tanks need regular inspection to ensure they are cleaning correctly.

PROCEDURE FOR CLEANING OF THE MILK TANKER

When emptied, with outlet valve open, hose the milk tanker thoroughly inside.

Make up about 100 litres of the detergent solution in dump tank to clean the inside of the cooler/tanker using 1% solution of the

alkaline detergent at 50°C and circulate for 30 minutes

Rinse with plenty of cold water

In the meantime brush the inlet and outlet valves and the pipes with a pipe brush

Wash the outside of the Cooler/tanker with the a detergent that is not harmful to your hands or body i.e. soap

Rinse with plenty of clean water to remove all traces of the detergent.

NOTE:

- 1. Once a week use 1% nitric acid solution at 50°C after after the last cold water rinse for cleaning the cooler/tanker and then rinse with plenty of cold water.**
- 2. After milk reception or loading of the milk tanker, the hoses should be cleaned together with the dump tank using the C.I.P procedure**
- 3. The MCC manager should inspect the cooler and or a milk tanker after it has been cleaned and before it is loaded with milk and either approve or have the cooler or tanker cleaned properly.**

Horticultural Annex

Annex 1. Demonstration Plot Methodology

Demo Plots Methodology

Field demonstrations put in place by BAP have been designed to primarily teach farmers by example. Demo plots are the central tool of field technology dissemination concerning improved agronomic practices. The new cultivation techniques have been carefully selected and tested and are delivered in a practical fashion, while promoting the participation of ADCs and DPAEs. The field demonstration methodology is divided in four major sections. First, high priority is placed on the selection criteria for groups or individuals under which the responsibility to maintain field demonstrations will be assigned. Second, the choice of crops and technologies to be showcased was discussed with the group so that they take part in determining what crops are important to them in terms of food security and market opportunities. Third, the establishment and follow up of the field activities are also determined and agreed with the groups making sure there is a strong commitment to tend the plot and collect data when needed. These sections are explained further in the following paragraphs.

a) Group and individual's selection

BAP has selected partner groups willing to tend demonstration plots and follow the instructions provided. The selected partners are associations formed by 15 members or more. The selection criteria of these associations were:

- Approved associations had to have a viable organizational structure, demonstrated cohesion or affinity between the members and a good performance record concerning management documents and previous experience.
- Whenever possible, community leaders were identified within the organization or as individuals to facilitate the adoption process of new technical practices. This was based on the premise that once community leaders adopt the promoted practices, others follow more easily or pay more attention to what the leaders do.
- A partnership agreement in French and Kirundi was prepared and circulated among members of the associations and to participating individuals so that everyone was informed and could offer suggestions on amendments as they deemed necessary. The association or the individual had to approve and sign the partnership agreement with BAP, which shows the roles and responsibilities of each party to the agreement.

- The person in charge of the demo plot had to have experience with horticulture.
- The partner group or individual agrees to let other members and non-members visit the demo plot during open field days.
- It was preferred that the person in charge of the demo plot was literate at least in Kirundi to be able to gather and register data from the treatment and control fields.
- The field demo plots should have physical characteristics representative of the agro ecological conditions of the target communities.
- The field had to be close to a source of water in order to show irrigation practices.
- A minimum parcel must have a minimum area of 0.10ha or de1000m ². It was desired to work in fields with moderate slope and representative soil quality of the zone.
- The plot had to be available for at least one production cycle.
- It was a request for the demo plot to be close to a community market.

b) Crop Selection

The choice of culture was based on the organization's or the individual's preference. This preference, we confirmed, was based on the marketing ability of the producer and prior experience.

c) Demo Plot Establishment

The following actions were taken into account to establish the 24 demo plots:

- Half the land (0.05 ha) was used to implement new cropping techniques. We called this sub plot the treatment (T1). The other half (0.05 ha) was cropped under traditional techniques and we called that the control (T0). The source of seed was the same.
- All inputs were provided by the project except fertilizers and pesticides. Manure, fencing and construction materials were purchased from communities in the area of the demo plot.

- Seedling nurseries and demo plots were established as a combo in each of the localities. All nurseries were managed following the same recommendations to ensure that data collected could be compared and contrasted across groups by the BAP horticulture team and by the farmers.
- The planting season for the demo plot was chosen to match the known period of highest prices for that particular crop according to historic data collected from ISTEERU.
- The choice of materials used was based on the availability in the community at an affordable cost to ensure that the experience is replicable by producers in the absence of financial support from BAP.
- Each activity was preceded by a series of training sessions by the Technical Coordinator, the ADC, or both. The training took into account the knowledge and experience of the farmers.
- The use of new tools and materials (e.g., spray, treadle pump, metering inputs) was demonstrated to members of associations at the time of delivery.
- A technical guide on demo plots in Kirundi and French was produced and distributed to associations, community leaders, ADCs and DPAE's.

Two hundred and fifty (250) copies including one hundred and fifty (150) in French and 100 in Kirundi were printed for the first edition.

176 copies including 108 in French and 68 in Kirundi were diffused. (see annex ...).

The copies for DPAE's monitors and farmer groups to be granted by BAP will be diffused after the validation of these associations and their locations.

BAP horticulture team is preparing the second edition according to the comments received for the first edition in order to make it more useful for small growers and DPAEs field extension staff.

- Open field days were conducted periodically and in one opportunity the training was broadcast through Radio Isanganiro. The guests in this event were members of the association, individual farmers and associations around the surrounding collines under the collaborating DPAE's. The development of these open field days was carried out as follows: (a) introduction of participants; (b) presentation by the Technical Coordinator of the extension approach by the demo plots; (c) submission by the president of the association of activities in this field, lessons learned and challenges; (d) field visits and question and answer session; (e) analysis of constraints and formulation of recommendations.

d) Demo plot monitoring and evaluation

- Data was collected regularly by the demo plot manager with the support of the ADC.

e) Branding and visibility for promotion of practices

- A sign was placed at each site with references that provide information on the culture, the partner association, the site location and the duration of the demonstration. The USAID branding rules were followed on each sign.
- The signs were of great value for the visibility of the demo plots. We were informed that a significant amount of farmers visited the plot by noticing the sign.
- **Figure3. Techniques displayed in demo plots**



Optimum planting density



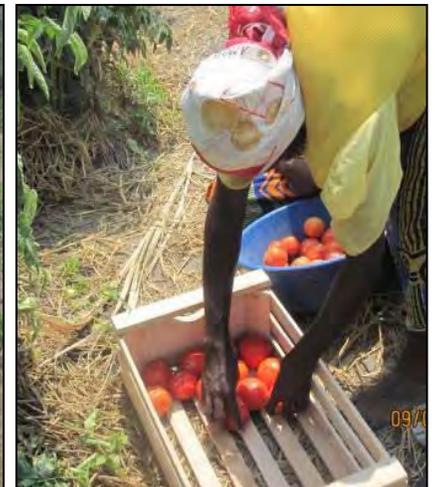
Tomato trellising



Spraying



Irrigation



Harvest and ooden boxes



Raised beds & mulching



Mixture of fertilizers

Annex 2. List of on farm demonstration plots established during the dry season 2011C

No	Crop	Colline	Commune	Province	Owner	Objectives and comments
1	Tomato	Musama,	Kayokwe	Mwaro	Imelde	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. The field is on harvest stage, gathering data is going on
2	Cabbage	Musama	Kayokwe	Mwaro	Francine	Compare planting on raised beds, optimum planting density, mixed fertilizers, dry grass mulching to local farmer's practices. The field is harvesting, data are being collected
6	Tomato	Nyagitongati	Kayokwe	Mwaro	Claver	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. The field is on harvest stage, gathering data is going on
3	Tomato	Mageyo	Mubimbi	Buja Rural	Evariste	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. The owner replicated the treatment because he thought it would probably produce more than his traditional practices The field is on harvest stage, gathering data is going on
4	Tomato	Muyange	Mutimbuzi	Buja Rural	Abakenyezi twisununure	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. The field ended harvest with an increase of kg 204 of yield sold at 102,000 BIF
23	Amaranth	Migera	Kabezi	Buja Rural	Girumwete	To contrast planting on raised beds, optimum planting density, mixed fertilizers to traditional

No	Crop	Colline	Commune	Province	Owner	Objectives and comments
						farmer's practice. The field is at stage of harvest and data are being collected
24	Eggplant	Gakungwe	Kabezi	Buja Rural	Clement	To contrast planting on raised beds, optimum planting density, mixed fertilizers to traditional farmer's practice The stage of the field is flowering .
5	onion	Nyarunazi	Rutegama	Muramvya	Remesha	To contrast planting on raised beds, optimum planting density, mixed fertilizers to traditional farmer's practice The field is at the stage of harvest and gathering of data is going on
7	cabbage	Murambi	Matongo	Kayanza	Déo	To contrast planting on raised beds, optimum planting density, mixed fertilizers, natural mulch to traditional farmer's practice The field is at the stage of harvest and gathering of data is going on
8	Green pepper	Munyinya	Matongo	Kayanza	Benoit	To contrast planting on raised beds, optimum planting density, mixed fertilizers, natural mulch to traditional farmer's practice. The field is still on fructification stage
9	Cabbage	Munyinya	Matongo	Kayanza	Turyekamwe	To contrast planting on raised beds, optimum planting density, mixed fertilizers, natural mulch to traditional farmer's practice The field is at the stage of harvest and gathering of data is going on
10	Tomato	Karunyinya	Muruta	Kayanza	Murimi w'ikawa gir' ijambo	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice The variety given to the farmers group was not

No	Crop	Colline	Commune	Province	Owner	Objectives and comments
						indeterminate . Also, hail rain fell on 3 rd September and destroyed the major part of the field.
11	Tomato	Gihanga	Gihanga	Bubanza	Dufatane munda	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice The region is facing rough drought because the well dug on the demo plot doesn't supply enough water to irrigate the whole demo plot at once as water level went down during this dry season. The stage of vegetation is harvest and data are being collected
12	Tomato	Ninga	Gihanga	Bubanza	Twiyungunga nye Bakenyenzi	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice The farmer group formed by women faced a problem of high cost of trellis. However, harvesting has finished. He collected 3MT on treatment (60MT/ha) which above the national average.
13	Tomato	Ninga	Gihanga	Bubanza	Dukorere Hamwe twungurane Ubumenyi	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice The farmer group formed by women faced a problem of high cost of trellis. However, harvesting has finished. He collected 3MT on treatment (60MT/ha) which above the national average.
14	Tomato	Gihanga	Gihanga	Bubanza	Eric	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical

No	Crop	Colline	Commune	Province	Owner	Objectives and comments
						trellis to traditional farmer's practice A attack of mildew has been reported during fructification. However the field is being harvested and data collection is going on
15	Tomato	Kizina	Gihanga	Bubanza	Canut	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice The field is in harvest and has already produced 2.6Ton treatment (≈52T/ha), which is above the national average
16	onion	Mirama	Gitega	Gitega	Kazozakeza	To contrast planting on raised beds, optimum planting density, mixed fertilizers to farmer's practices The farmers group decided to replicate the treatment as it was evident that with the raised beds irrigation was made easy. The farm is at the stage of bulbing
17	onion	Gasunu	Giheta	Gitega	Turwany Nzara i	To contrast planting on raised beds, optimum planting density, mixed fertilizers to farmer's practices. The stage of the field is bulbing stage
18	Tomato	Rubagabaga	Mutaho	Gitega	Twitezimbere I	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. A severe attack of anthracnose caused great losses as the local extension agent of the DPAE was not able to help the farmer group to fight against. However, the field is at the stage of harvest

No	Crop	Colline	Commune	Province	Owner	Objectives and comments
						and data collecting goes on as well
19	Cabbage	Mirama	Gitega	Gitega	Twungurane Ubumenyi	To contrast planting on raised beds, optimum planting density, mixed fertilizers, natural mulch to traditional farmer's practice The field is at the stage of harvest and gathering of data is going on
20	Tomato	Mugerama	Nyanza Lac	Makamba	Tunganyubu zima	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. The field is being harvested. Birds caused damage before the farmer group was trained to harvest technique which should have waited to harvest before fruits were totally red
21	onion	Nyabigina	Makamba	Makamba	Dufatane Munda II	To contrast planting on raised beds, optimum planting density, mixed fertilizers to traditional farmer's practice The farmers group tried fertilization with urea but finally caused damage to seedlings, the available healthy seedlings could not plant the whole field. The comparison of yield will consider equivalent surfaces of the elementary blocs. The farm is at the stage of vegetation
22	Tomato	Karinzi	Mabanda	Makamba	Dukorere Hamwe	To contrast planting on raised beds, optimum planting density, mixed fertilizers and vertical trellis to traditional farmer's practice. The field is as the stage of fructification

Annex 3. Training topics and attendance in preparation for demo field management

Topic	Farmer group #	Prov. #	# attendees			# of sessions	Attendee/ session	% of Women
			Men	Women	Total			
Nurseries	10	2	91	40	131	6	21	30.5
Composting	25	6	90	69	159	18	8	43.3
Raised beds	25 & 1 ind	3	60	91	151	11	13	60.26
Planting density	10 & 1 ind	5	99	86	185	16	11	46.48
Irrigation	2	2	7	8	15	2	7	53.3
Pump installation	1	1	2	13	15	2	7	86.66
Spraying	3 & 1 ind	2	19	27	46	4	11	58.6
Trellising	5 and 3 ind	3	28	117	145	15	9	80.6
Pruning	3 and 1 ind	2	19	27	46	4	11	58.6
Assessment of demoplots activities	19 and 2 ind	6	103	218	321	28	11	67.9
Harvest	8 and 2 ind	4	16	108	124	15	8	70.9
Extension of wooden boxes	5 and 4 ind	3	5	7	12	3	4	58.3
TOTAL			539	811	1350	124	10	60

Annex 4. Training on use of wooden boxes for post-harvest management and sales

Farmers group/individual	Province	Commune	Crop	# of boxes provided	Observations and use on adoption
Evariste	Buja Rural	Mubimbi	Tomato	3	The boxes facilitated the transportation of product by car from the field to the Mutoyi shopping center in Bujumbura
Abakenyezi twisununure	Buja Rural	Mutimbuzi	Tomato	10	The boxes helped in gaining space of storage at home when waiting for market day since they can be stackable in many layers. The farmer groups that used boxes to sell their products are experiencing buyers getting used to trade in these boxes as well
Imelde	Mwaro	Kayokwe	Tomato	6	The farmer uses wooden boxes to transport the production to the market
Claver	Mwaro	Kayokwe	Tomato	10	The farmer uses wooden boxes for storage of his production
Twiyungunganye bakenyezi	Buja Rural	Gihanga	Tomato	10	The transportation of the wooden boxes by bicycle has a higher cost than traditional baskets, but they can manage to transport bigger volumes with less post-harvest losses
Dukorerehamwe twungurane ubumenyi	Bubanza	Gihanga	Tomato	10	The transportation of the wooden boxes by bicycle has a higher initial cost than their traditional baskets, but reduces post-harvest losses
Canut	Bubanza	Gihanga	Tomato	10	The farmer uses the wooden boxes for harvest and storing production, but more wooden boxes are needed as he producers put out at least 300 kg per harvest day
AGRED	Mwaro	Kayokwe	Tomato	10	The farmer group uses the wooden boxes to transport production to the market.
Abazimyamuriro	Mwaro	kayokwe	Tomato	15	The farmer group uses the wooden boxes to transport production to the market.
TOTAL				84	

Annex 5: Training on Good Agricultural Practices

Sub-theme	# provinces	# associations	# of attendees			# of sessions	# of attend/session	F%
			M	F	T			
Hygiene, water	2	2	5	14	19	2	9	73.6
Demo fields record keeping	3	7 +1 ind	73	120	193	11	17	62.6
TOTAL			78	134	212	13	16	63.2

Annex 6: Supporting farmer groups to develop their grant requests

During this quarter, BAP has supported farmer groups to develop their business plans for their projects to be granted for season 2012 A. Table 13 shows details of this activity.

List of supported groups for development of grant requests

#	Name of farmer group	Province	Commune	Crop	Area	Scheduled season
1	Twiyungunganye	Kayanza	Butaganzwa	Cabbages Carots	0.2ha 0.1ha	2012 A 2012 A
2	Dushirehamwe	Mwaro	Kayokwe	Cabbages Eggplant	0.25 ha 0.25ha	2012 A 2012 A
3	Tugwizumwimbu	Mwaro	Kayokwe	Tomatoes	0.5ha	2012 A
4	Abakenyezi Twisununure	Buja rural	Mutimbuzi	Tomatoes	0.5 ha	2012 A
5	Dukorere hamwe	Makamba	Mabanda	Tomatoes	0.5 ha	2012 A
6	Dufatanemunda	Makamba	Makamba	Garlic	0.5 ha	2012 A
7	Tunganyubuzima	Makamba	Nyanza Lac	Tomatos Eggplant	0.25 ha 0.25 ha	2012 A 2012 A
8	Tugwanyubukene Tugwizumwimbu	Buja Rural	Mugongo manga	Plums	1.5 ha	2012 A