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# ANNUAL REPORT

## AUGUST 2006 – JULY 2007

### AGRICULTURAL AND NATURAL PRODUCTS



August 2007

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The BAMEX project is implemented by Chemonics International Inc. and its partners.

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

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## ACRONYMS

ADEPTA	Association pour le Développement des Echanges Internationaux et des Produits et des Techniques Agroalimentaires
Alliance	Alliance Ecorégionale de l'USAID
ARKH	Antenne Régionale des Koloharena
BAMEX	Business and Market Expansion
BCI	Business Centers Ivoharena
BFV	Banky Fampanandrosoana ny Varotra
BOA	Bank of Africa
CARE	Care International
CCS	Corridor Coffee Spices
CEQUIP	Crédit for Equipement
CEM	Caisse d'Epargne de Madagascar
CIIFAD	Cornell International Institute for Food, Agriculture and Development
CITE	Centre d'Informations Techniques et Economiques
CKH	Coopératives Koloharena
CNCC	Comité National pour la Commercialisation du Café
CNISZ	Committee for the Normalization of the Ilakaka-Sakaraha Zone
CNKH	Confédération Nationale KoloHarena
COLEACP-PIP	European and Southern Hemisphere Countries Trade Facilitation Institution
CSBF	Commission de Supervision Bancaire et Financière
CTHT	Centre des Techniques Horticoles de Tamatave
CQI	Coffee Quality Institute
DAP	Di-Ammonium Phosphate
DDP	Développement des Partenariat
DNQ	Direction des Normes et de la Qualité
D1	D1 Oils Company
EAM	Entreprendre A Madagascar
EAFCA	East African Fine Coffee Association
EDBM	Economic Development Board of Madagascar
EG	Economic Growth
ERI	Eco-Regional Initiatives
ESSA	Ecole Supérieure des Sciences Agronomiques
EUREP-GAP	European Retailers and Producers working group for Good Agricultural Practices
FCE	Fianarantsoa Côte- Est railway
FCPA	Fonds de Commercialisation des Produits Agricoles
FEMAG	
FIEFE	Fonds d'Investissement pour les Entreprises Favorables à l'Environnement
IGA	Institut de Gemmologie d'Antananarivo
IGM	Institut de Gemmologie de Madagascar

IMRA	Institut Malgache de Recherches Appliquées
IPA	Salon International des Industries et des Procédés Agroalimentaires
JIRAMA	Jiro sy Rano Malagasy
LDI	Landscape Development Interventions
MAEP	Ministère de l'Agriculture, de l'Elevage et de la Pêche
MAP	Madagascar Action Plan
MCA	Millenium Challenge Account
MCC	Millennium Challenge Corporation
MECIE	Mise en Compatibilité des Investissements avec l'Environnement
MEFB	Ministry of Economy, Finance, and Budget
M&E	Monitoring and Evaluation
MEM	Ministry of Energy and Mining
MFI	Microfinance Institutions
MEPSPC	Ministère de l'Economie, du Plan, du secteur Privé et du Commerce
OTIV	Ombona Tahiry Ifampindramana Vola (IMF Institution)
PAM	Plantes Aromatiques et Médicinales
PCL	Plate-forme de Concertation pour la Filière Litchi
PRA	Pest Risk Assessment
PSDR	Projet de Soutien pour le Développement Rural
SME	Small and Medium Enterprises
UCV	Union de Commercialisation des Ventes
USAID	United States Agency International Development
USDA	US Department of Agriculture
USG	United States Gouvernement
TIAVO	Tahiry Ifamonjena Amin'ny Vola
WCS	Wildlife Conservation Society
WWF	World Wide Fund

## **Madagascar Business and Market Expansion (BAMEX) Annual Report 2006/2007**

### **1. Overview**

As from 2006 BAMEX Program entered its second and last implementation phase. Such phase lasts 2 years (August 2006 – July 2008) with the following slogan “*Ensemble, à la conquête du marché*”.

The present annual report outlines the major program achievements for the period ranging from August 2006 to July 2007. The actions were conducted under the sector of agricultural and natural products. Overall the program achieved all the goals it set for the period. In most cases the recorded results largely exceeded previsions.

#### **1.1 Main accomplishments to date**

<b>Indicator</b>	<b>Result</b>
Value of sales by BAMEX clients increased	<ul style="list-style-type: none"> <li>• \$8.9 million for litchis, rice, potatoes, onions, vanilla and handicrafts</li> </ul>
Value of loans obtained by BAMEX clients thanks to project assistance	<ul style="list-style-type: none"> <li>• \$5 million</li> </ul>
Value of investment in cash and kind by BAMEX clients	<ul style="list-style-type: none"> <li>• \$2.5 million</li> </ul>
Major legal and regulatory reforms	<ul style="list-style-type: none"> <li>• Issuance of a decree and texts related to new microfinance law</li> <li>• Draft decree on one-stop-shop for exports</li> <li>• Draft law on bio-fuels</li> <li>• Contribution to draft law on investment promotion</li> <li>• Legal framework for concession policy</li> </ul>
Public sector ability to support markets strengthened	<ul style="list-style-type: none"> <li>• Development of an organizational analysis to identify the material and human resource needs of the Ministry of Commerce.</li> <li>• Promotion and material support for the <i>Guichet Unique des Investissements et du Développement des Entreprises</i> (GUIDE) in various provinces.</li> <li>• Business English training for Ministry of Commerce staff.</li> </ul>
Business centers created	<ul style="list-style-type: none"> <li>• 7 business centers created</li> </ul>
Farmer associations’ ability to recognize and capture market opportunities improved	<ul style="list-style-type: none"> <li>• 21 Koloharena Cooperatives (CKH) received market info</li> <li>• 13 marketing contracts signed by CKH</li> <li>• \$250,000 contracts signed by CKH</li> <li>• 2 regional associations created</li> </ul>
Mindsets, habits, practices, and processes changed	<ul style="list-style-type: none"> <li>• Farmers have become more knowledgeable about market opportunities and requirements, more willing to adapt improved practices to achieve higher quality and better prices.</li> <li>• Agribusinesses are more knowledgeable about market opportunities and requirements, more willing to work with farmers to capture opportunities and respond to market needs.</li> </ul>

## **1.2 Linkages with rural development and biodiversity protection.**

In the present second activity phase BAMEX Program is entirely financed through the special funds for protecting the biodiversity. As such its activities must respond to biodiversity threats. In our case slash and burn agriculture is the major threat. It is the cause of new agricultural land clearings to the expense of priority ecosystems which host essential elements of Madagascar biodiversity. It was previously noticed that such need for new land decreases when farmers have more resources. Agricultural intensification is what enables Koloharena producers increasing their production and have sufficient food and generating incomes through selling surplus of food crops or through marketing export food stuff.

We thus facilitate their access to credits and to inputs, as well as equipment so that they may implement the techniques advocated through agricultural intensification upstream. Following harvest we intervene for liaising them with customers, on the one hand for selling their products and, on the other for better remuneration of their effort. We thereby contribute to protecting priority ecosystems but also the productive capacity of land used and the well being of rural populations

On another note, BAMEX is a full member of the Eco-Regional Alliance which collects data in the field that are directly linked to biodiversity indicators and complement information tracked by our team under SO6, such as the value of certified natural products sold by our clients. Together, we can accurately monitor a broad range of indicators that provide an accurate picture of the evolution of slash and burn agriculture and other destructive practices, in local areas near forest corridors, in USAID priority ecoregions. We also follow the behaviour and the performance of Koloharena and other farmer associations, in response to the technical and financial assistance provided by the Eco-Regional Alliance.

## **1.3 Contributions to the Madagascar Action Plan engagements**

The period matches the launching of *Madagascar Action Plan* (MAP), the country five year plan, the strategies and activities of which aim to real poverty reduction and concrete improvement of life quality among Malagasy. BAMEX interventions contribute to achieving MAP goals to achieve a quantum leap in the development process.

The following points may be mentioned:

- *“Poor and low income households will have the opportunity to access credit...”*  
MAP, p. 003

- *“[We must] increase the number of tourists visiting the protected areas.”*  
MAP, p. 099.

- *“[We must] promote the destination Madagascar as a superior and unique eco-tourism destination.”* MAP, p. 093.

- *“In each specific sector, bring together key stakeholders to maximize the value chain.”*  
MAP, p. 069.

- *“The time has come to provide strong support to the rapid and broad development of the private sector to increase production of quality and competitive goods suitable for export to regional and international markets.”*  
MAP, p. 003.

- *“Over the next few years, Madagascar will become an exporter of rice and other crops.”*  
MAP, p. 017.

- “[We must] develop value chains ... to ensure that biodiversity is linked to the economy and that economic pursuits are done in accord with environmental commitments.”  
MAP, p. 103.

- “We must attract more foreign investors to support our economy.”  
MAP, p. 003.

- “Strengthen the capacity of farmers’ organizations.”  
MAP, p. 067

- “[We must] pass market signals on to producers through media, decentralized communities, and farmers’ sector organizations.”  
MAP, p. 067.

- “We will provide appropriate incentives, regulations, and policies to facilitate the attraction, growth, and expansion of key sectors.”  
MAP, p. 16

- “Skills, skills, skills. Madagascar needs to rapidly develop the skills, know-how, and technology to thrive in a competitive and global environment.”  
MAP, p. 019.

- “We must change the mindsets, habits, practices, and processes that get in the way of progress.”  
MAP, p. 019.

**1.4 BAMEX main results (August 2006 – July 2007)**

LEVEL	RESULTS INDICATORS	TARGETS	ACHIEVEMENTS
		August 1, 2006 to July 31, 2007	From August 1, 2006 to July 31, 2007
USAID EG 5.2 / BAMEX RM 2	Number of agriculture-related firms benefiting directly from USG supported intervention / Number of farmer associations and assisted firms using business and financial services	40	42
EG 5.2	Number of new technologies or management practices made available for transfer as a result of USG assistance	7	8
Result Module 1	Increased value of sales of selected products from BAMEX clients	\$ 710,000	\$ 838,500
Expected Result 1.1	Number of persons trained with BAMEX support	100	215
Expected Result 1.2	Number of clients showing improved understanding of market requirements	30	32

<b>Expected Result 1.3</b>	<b>Value of contracts between farmer associations and agribusinesses</b>	\$ 286,000	\$ 758,000
<b>Expected Result 2.1</b>	<b>Volume of credit given to farmer associations and assisted firms with BAMEX support</b>	\$ 42,500	\$ 84,300
<b>Result Module 3</b>	<b>Number of farmer associations and assisted firms using agricultural inputs</b>	10	20
<b>Expected Result 3.1</b>	<b>Development of a law on bio – fuels<sup>1</sup></b>	55%	55%
<b>Expected Result 3.2</b>	<b>Development of legal and regulatory framework for agricultural inputs: seeds</b>	30%	30%

## **2. Main activities and results**

### **2.1 Natural Products**

#### 2.1.1 Value chains

##### A. Litchi

##### a. Last report's achievement (as of July 31, 2006)

- Phytosanitary issues

USDA in June 2006 issued to the Ministry of Agriculture, Livestock, and Fishery (MAEP) the findings of their survey on Pest Risk Assessment (PRA). False codling moth (*Thaumatotibia leucotreta*), African flies (*Bactrocera invadens*) and fruit flies (*Ceratitis sp*) are the major threats brought by Madagascar litchi through its export to the US. Madagascar must evidence its capacity to implement the adequate preventive measures to prevent such parasites from being transferred to the US.

From the preliminary PRA results, the MAEP-BAMEX-USD team provided parasite surveillance along the Toamasina litchi production. Takings indicated that:

- False codling moth, already encountered in the cotton area of the west coast, is present on the east coast; (14)
- Mediterranean fruit fly (*Ceratitis capitata*), one of major fears for the US, can be found in the region.

Although these pests were trapped during the litchi season, their attack on litchi needs to be confirmed.

- Organizing the value-chain

Up to now, BAMEX is the only institution to work thoroughly on the litchi export value-chain with the CTHT (*Centre des Techniques Horticoles de Toamasina*). Interventions start from technical assistance to Koloharena farmers as improved litchi picking techniques to market search. Utopia Ltd

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<sup>1</sup> Details are provided in annex 1

of the UK and Citronas bva of the Netherlands were highly satisfied of the quality of litchis from Faly Exprot and STOI in 2005.

Based on our success, the Malagasy Government, through the Ministry of Commerce (MEPSP) and the Ministry of Agriculture (MAEP), took the decision to scale up the approach. A workshop took place in April 2006 in Toamasina. All stakeholders — from producers to exporters, with service providers — attended the session conducted by both general secretaries of the two ministries.

Outcomes of the workshop resulted in two major follow-up actions. The first relates to a new law related to the value chain. Nine ministries participated in the development of the new law in consultation with various actors. The second requires that stakeholders, mainly the primary actors along the value-chain, set up the “*Plate-forme de Concertation pour la Filière Litchi*” or PCL. The organization’s first official general assembly took place on July 15, 2006 in Toamasina. As the PCL was in its implementation phase and working on leveraging funding, BAMEX assured the PCL executive secretary.

- Product certification

As a response to solicitations of support from local exporters, BAMEX helped them to acquire basic information about the EUREP-GAP requirements through information sessions and searches for certifying agencies. We mobilized 13 exporters during the first information session. Eight attended the more comprehensive presentation. As a result, five firms have requested support from COLE/ACP-PIP (European and southern hemisphere countries trade facilitator institution) to conduct a preliminary organizational study to comply with EUREP-GAP standards.

Nonetheless, “Faly Export,” the Koloharena’s most active business partner, ran an independent trial to assess the work needed in order to comply with EUREP-GAP standards and to scale up to the larger Koloharena movement. The work is to layout a quality management procedure.

a. Achievements:

- Institutional reform: “*Arrêté Interministériel portant Organisation de la Filière Litchi*”

All stakeholders participating to the April 2006 workshop agreed that the value-chain needs a new rule. It would set the standards about authorities, actors’ engagements, product quality and other issues. The “*Direction des Normes et de la Qualité*” (DNQ) of the MEPSP and the “*Direction du Développement des Partenariats*” (DDP) of the MAEP led the editing committee. They consulted all concerned parties. BAMEX participated to the committee as a prominent supporting body of the value-chain and as the PCL executive secretary.

The Government enacted it on November 18, 2006. The litchi harvest was planned for December 04, 2006 whilst early harvest and shipping already started on November 16, 2006.

Nonetheless, dispositions of the decree applied to the harvest season. One of those was that consolidators (collectors, middlemen) and transporters have to follow training on good harvest and transport practices.

- Capacity Building
  - Training of consolidators:

Poor litchi quality has been always blamed to consolidators. It is noteworthy to know that between 3,000 and 5,000 of them work during litchi season. The new decree requires training for any active collector. Consolidators were encouraged to form an association. Surprisingly, their association

became the most active of the litchi platform. Five training sessions were organized by BAMEX with other partners on the topics of good harvest practices and the stakes of quality on international market. 2,500 litchi collectors received certificates of attendance to be used during the campaign.

- Training of MAEP technicians:

As a follow up to the Pest Risk Assessment (PRA) and the Pest Survey conducted in the Toamasina Region, a broader training was conducted to help MAEP technicians respond to the PRA recommendations.

After discussion with the Plant Protection officials, two-day-trainings took place in Antananarivo, Manakara, and Fort-Dauphin. The sessions covered the topics of pest survey implementation and border control. Plant health technicians and quarantine inspectors composed the auditors, 15 in Antananarivo and 3 in Manakara. As the MAEP officers were not available in Fort-Dauphin, the study was transferred to the local CARE International office. Six extension technicians were trained.

- Finance: sales, contracts (number, total value)

- Koloharena litchi commercialization contracts:

The Koloharena cooperatives of Fénérive, Maromitety, and Brickaville renewed their contracts with Faly Export this season. Due to transportation problems, the Ilaka-Est cooperative could not follow-up. Overall, the contracts amounted to 100 tons of litchis valued at \$25,000. Due to organization setbacks at the pack house of Faly Export, 45 tons of Koloharena litchis were accepted. The Koloharena producers received \$12,500 of gross income.

Out of Faly Export, the Koloharena Cooperatives delivered 30 tons of litchis to other pack houses: SCRIMAD, MFL and EMEX. They earned \$7,500 from these transactions.

- Ramanandraibe Export partners with the Lokomby Cooperative in Manakara:

This partnership has been long awaited, especially by Koloharena members. They had to let their litchis go to waste or get a mere Ar 50 per kilogram. This situation was due to the difficulties shipping from Manakara.

The road from Manakara to the main axis of RN7 to Antananarivo was resurfaced. Driving is much easier and transit time shortened. Ramanandraibe Export took the initiative to secure their litchi supplies, thus the partnership. The contract set the quantity at 400 tons of litchis priced at Ar 220,000 per ton. RamaEx provided ring-calibers of 30mm and a technician to monitor the harvest preparations with the Manakara BCI Manager. BAMEX litchi specialist provided guidance on organizational and quality management. The deal concluded with the delivery of 245 tons of litchis valued at \$31,000.

The next table depicts those partnerships between Koloharena farmers and agribusinesses.

Region	Partner	Quantity	Value
Toamasina	Faly Export	45 tons	\$ 12,500
Toamasina	Others	30 tons	\$ 7,500
Manakara	RamaEx	245 tons	\$ 31,000
TOTAL		320 tons	\$ 51,000

b. Next steps, constraints and recommendations

- Constraints

- Toamasina
  - Koloharena associations and cooperatives in the region are composed of many producers with less than five litchi trees each. This requires a lot of organization and logistics for gathering information and products.
  - Most producers have their usual collectors with whom they may be bound by credit.
  - Exporters are not used to working directly with farmers.
- Manakara
  - Marketing opportunities are limited to five exporters.
- Next steps and recommendations
  - Follow-up on the results of the bagging experiment
  - Follow-up on the continuing discussions between MAEP and USDA
  - Continuing support to the Litchi Platform
  - Training on organization, EUREP-GAP requirements and quality management

## B. Specialty coffee

### a. Last report's achievement (as of July 2006)

In keeping with the promotion of Specialty Coffee crop, BAMEX Program jointly working with ERI Program and in collaboration with Corridor, Coffee and Spices Company established 2 wet processing stations in Fianarantsoa. The former station is located in the Arabica zone in Anjoma-Itsara (Isorana – *Région Haute-Matsiatra*) and the latter one is in the Robusta zone in Tolongoina (*Région Vatovavy-Fitovinany*).

A promotion center of quality coffee production and processing was also set up thanks to collaboration with an expert in specialty coffee production; Mr. Bob Osgood. He collaborated with CCS and BAMEX for setting up an Excellence center in the *Région Haute-Matsiatra*. It is a center for producing, training and wet processing coffee, with the aim of producing quality coffee and which will allow teaching farmers, through practice, the techniques to be adopted for having quality products responding to the Specialty Coffee markets. A 10 are demonstration parcel was set up in Anjoma-Itsara using plants of Arabica coffee of Bourbon variety coming from Ampefy-Soavinandriana. Across such demonstration parcels, success factors for producing quality coffee are shown to farmers : selecting good plants; considering soil quality to determine fertilizing elements to be brought; irrigation water control; technique for using shade plants; mulching; diversifying and having complementary crops at disposal; windbreak technique; la producing green fertilizer; managing compost maker; managing parcels. It is also indicated across the Center of excellence that the plantation chains are interdependent, ranging from production to processing.

### b. Achievements:

- Strategy

The strategy adopted by BAMEX program consists in continuing the revival of the value chain by promoting quality coffee production. This consists in demonstrating to and training potential farmers to adopt enhanced and appropriate techniques for producing “quality”. Such techniques involve improving the coffee collection and processing process by promoting wet coffee processing.

- Objectives

The objective set in the 2006-2007 season (starting in the course of July 2006) is to group together the volume of 10 ton red cherries, Arabica and Robusta, all mixed, coming from groups of target farmers in the program intervention area. In the whole process, requirement for quality is obligatory. Quality is awarded a prize through an incentive increase in the applied price in order to come up with improving household income and improving economic status in the intervention area. The objectives set during the season also consisted in continuously improving production quality by building capacity among farmers planting coffee regarding the control of the whole chain from production to the technique for assessing the quality of cup coffee.

- Results

The operations for promoting and extending the action zones for producing gourmet coffee enabled collecting 7.5 tons of Arabica coffee from 104 producers in Anjoma-Itsara, Fanjakana, and Mangidy, 12 tons of Robusta coffee from 64 producers in Tolongoina and Manampatrana.

For better building technical capacities among Associations of Coffee Growers, 120 farmers producing coffee were also trained in techniques and organization of gourmet coffee collection, the importance of winning the gourmet coffee market for improving their living conditions and the process of wet processing. Besides, 180 coffee producers were trained regarding quality standards to be observed in gourmet coffee production.

9 agents for coffee collection and processing, on the other hand, were trained in Anjoma-Itsara and 16 ones in Tolongoina area regarding the quality norms to be observed in cherry collection, wet coffee processing and coffee processing station management.

Table summarizing the coffee collection and processing season

<i>Varieties</i>	<i>Rural Communes involved</i>	<i>Number of involved producers</i>	<i>Quantity of collected red cherries</i>
Arabica coffee	Anjoma Itsara; Fanjakana; Mangidy	104	7.5 tons
Robusta coffee	Tolongoina, Manampatrana, Ambohimisafy, Ambinanitromby, Maromiandra	64	11.8 tons

Thanks to close collaboration between the Comité National pour la Commercialisation de Café (CNCC) and ERI, a demonstration parcel containing 250 coffee tree plants of biclonal variety was also established in the Tolongoina-Manampatrana area in order to better train coffee growers in quality coffee production technique.

Furthermore Mr. Bob Osgoods; an expert in gourmet coffee production; visited Madagascar in November and December 2006 so as to assess the working of the Centers of Excellence in Anjoma-Itsara and Sahaendrana (Moramanga) and to train the field technical team regarding enhanced techniques for producing quality coffee. In his visit to Anjoma-Itsara and Manampatrana, he suggested diversification in crops accompanying coffee, such as Albizzia Guimifera as a fertilizer and Leucean leucocephala for shadow. As for the center in Sahaendrana, he recommended the use of phosphate enriched fertilizers before planting and compost applying every three months, as well as the implementation of techniques for shadowing young coffee plants.

In keeping with boosting quality coffee production and marketing, a training session on tasting speciality coffee and a “Taste of harvest competition” were organized with Coffee Quality Institute

(CQI) and Coffee Corps from October 23 to 25, 2006 at La Marina restaurant located in Ivandry. The session was led by a professional cupper, Mr. Alberto SONG.

The training objective was to establish for Madagascar an “expert committee in tasting” in order to be able to assess in a reliable manner the coffees from crops in each region of the island. “Taste of Harvest”, for its part, consists in rating the coffees from the various regions Madagascar according to the method that is recognized at the international level by professionals with regard to quality coffee. 20 coffee growers were trained on coffee tasting techniques in the course of the two day workshop. A panel made up of the best 5 participants and Mr. Alberto SONG assessed the diverse samples of coffee produced across the wet processing stations and underscored the fact that the best four coffees selected are those of Fanjakana and Anjoma-Itsara for Haute-Matsiatra, and Ampary and Analavory (Itasy-Soavinandriana) for the Région Itasy. Such coffee samples were thereafter sent in Ethiopia for further assessment by EAFCA (East African Fine Coffee Association) during the African taste of Harvest held from February 15 to 17, 2007. Analavory, Fanjakana, and Ampary coffee samples were assessed at a scale of 80 points in the course of the conference and won international reputation.

Note that the Corridor Coffee and Spices company marketed 376kg of Arabica finished product and 934kg of Robusta to customers such as Cookie Shop, Bio Aroma, Bongou, Lisy Galerie, Celtel, and SMAR. In addition, CCS on a continuous basis provides the promotion of its products at the Christmas Market Event (Bazar de Noël) of the American School.

c. Next steps, constraints and recommendations + Key Events

- Constraints :
  - Behavior change among farmers in practicing enhanced techniques, a trend due to traditionalism, is often noticed.
  - Required arrangement of land areas suitable for cultivation is costly (irrigation, watershed arrangement ...) and is not within the reach of producer farmer ways and means.
  - Huge social constraints: insecurity, bush fire, cattle theft, traditionalism ...
- Suggestions for improvement
  - Setting up village nurseries and demonstration parcels among leader farmers.
  - Increasing support to farmers by proposing more appropriate materials such as grinders, water pumps, plows; by facilitating access to credits and by diversifying training and exchange topics.
  - Multiplying small units for wet coffee processing.
- Key events

Training to 20 coffee producing farmers in coffee tasting techniques and selecting 3 of our Arabica coffee samples as worldwide value gourmet product in the East African Fine Coffee Association conference in Ethiopia.

D. Jatropha

a. Last report's achievement (as of July 2006)

In the course of fiscal year 2005, we conducted the promotion of jatropha value chain and provided training sessions in collaboration with D1 Oils Madagascar Company in Antananarivo, Manakara, Antsirabe, Mahajanga, Fort Dauphin, and Toamasina. The goal was to inform, and raise awareness among producers, operators, authorities, and development programs on jatropha and to assess the

potential for such crop. Moreover we set up a Jatropha demonstration parcel over 10 ares on Madagascar window case site at the Presidential Palace in Iavoloha. Setting up such site provides appropriate support to promoting jatropha.

During the 2005-2006 season, we supported the D1 oils Company in establishing collaboration contracts with 23 farming associations, of which 8 Koloharena cooperatives which group together about 1,500 farmers. The contracts related to planting 1,600ha of Jatropha. Overall, our support in jatropha cropping enabled establishing a 1,044 ha plantation in three regions selected by D1.

We found a financing source amounting to \$ 100,000 from PSDR. A memorandum of understanding among PSDR, BAMEX, and D1 Oils Madagascar was signed for financing by PSDR the jatropha plantation to the benefit of farmers' associations.

b. Achievements:

- Promotion of jatropha chain value: round table, workshop:

***National Meeting on bio energy, organized by PLAE, ADER, ERI, and BAMEX in October 2006 at La Résidence, Ankerana.***

The objective of the meeting was to promote the jatropha value chain and to invite actors and stakeholders to share information and to exchange experience in the domain of bio energy. The impacts of the jatropha value chain and its development were confirmed:

- Cultivating and using bio diesel and co-products enable preserving the environment and the population health.
- Jatropha considerably contributes to rural development and poverty reduction.
- It was again demonstrated that the jatropha value chain is fascinating. Its advantage, from up to downstream, is that it has simple and concrete applications at each user level, among rural households on agriculture, cosmetics, job creation, among small and medium enterprises regarding new prospects for diversifying their interventions and products ; among large investors in the area of bio diesel.

However, some points remain to be clarified at the technical, organizational, financial level. Similarly, a jatropha forum was put in place so as to lead reflections and provide technical information exchanges on jatropha. 3 committees were established within the: production committee, processing commission, marketing commission.

***Round table on sustainable production of bio diesel in Madagascar organized by BAMEX and WWF – June 28, 2007, at CITE Ambatonakanga.***

The objectives of the Round table were:

- To raise awareness among key actors on the definition, the importance and the interest of sustainable development of bio diesel for the country and for investors; i.e. bioenergy contributing to sustainable development of economy, to social development and preserving vital ecological and environmental balances.
- Initiating reflections on the actions to be envisaged for sustainable development of bio diesel investment in Madagascar.

What came out of the meeting was the importance to see to their sustainability, from both environmental and social standpoints. Faced to economic promises, it is essential to set up the markers required for avoiding a drift, especially towards degrading ecological balances and towards social and economic. In addition, the environmental and social aspects of bio diesel production must be subject to in depth assessments. Depending on the elements that would come out of these, it will be necessary to look for compromise solutions with the private sector. Thus a strategic Environmental Impact

Assessment has to be conducted regarding the bio diesel value chain, which will have to bring out the minimum elements to be taken into account by investors.

Furthermore in front of evolution in the international context that lets predict bio diesel increasing demand for export bound to Europe, especially coming from south hemisphere country, the government shall plan and set objectives regarding bio diesel production in the country, which would Madagascar being positioned on the emerging international market. Tools, procedures for implementing investment in bio diesel must be established through consultations. A best practice and best conduct code of bio diesel production has to come out of these with an inter ministry expert committee. Developing a skill network in bio diesel would help better advance in sustainable development of bio diesel. In, the same vein, setting up an observatory was also suggested regarding the bio diesel value chain.

- Technical assistance and training: plantation and jatropha oil processing

We continued distributing technical cards on jatropha to visitors at BAMEX office or via the web site. In setting up jatropha plantations in Ambatondrazaka, we collaborated with D1 in training new jatropha growers at the beginning of the 2006-2007 season. The 2006-2007 campaign resulted in a plantation of 1,500ha of jatropha by D1 in the 3 intervention regions for a total of 2,500ha of jatropha thanks to direct support from BAMEX. But overall Madagascar currently owns a 20,000ha jatropha plantation.

We supported the D1 Company in collecting 10T jatropha seeds. Moreover we are continuing looking for better oil presses. Our objective is to have a range of oil presses at our disposal, which will be proposed to producers according to their size, production capacity. It is also important to presses specially adapted for jatropha.

We also lent our support in commissioning and regulating MadaEnergy oil press. We provided recommendations in the improvement of the material. In addition we started collaboration with a press manufacturer in France, FEMAG, so as to develop a model for press adapted to jatropha. BAMEX provided the grains for test and adaptation. The collaboration is going to continue.

- PSDR funding for the jatropha plantation:

We lent support to farming associations for their application for financing from PSDR in Ambatondrazaka, Antsirabe, and Mahajanga and in collaboration with ERI for the case of Fianarantsoa. Indeed, BAMEX commitment under the PSDR-D1-BAMEX protocol consists in supporting farming associations in preparing file application for financing. Support consists in preparing requests, instruction files, and files of formulation according to PSDR procedure. Regarding the 2006-2007 season, 57 files deposited by farming associations of Mahajanga, Vakinankaratra, and Ambatondrazaka were processed. For Ambatondrazaka, 15 associations eventually secured financing from PSDR for a total amount of Ariary 20 millions and for a program of 95ha plantation. We are continuing supporting and supervising such associations in using the funds according to PSDR procedure. We also provided training in funds management, disbursement procedure, book keeping (streamlined accounting), and streamlined rule of procurement at the level of farmers.

- Trade: contracts between private firm and jatropha producers

For the 2006-2007 season, D1 Company keeps its intervention in the regions of Ambatondrazaka, Mahajanga, and Antsirabe. The project goal in plantation area is reaching 2,900ha, of which 300ha for Ambatondrazaka. D1 signed 79 partnership contracts, of which 50 are conducted with farming organizations.

- Promoting investment

In keeping with J&J Group prospecting for investment in bio diesel in Madagascar, BAMEX took the team to Fianarantsoa and Manakara. Jointly by BAMEX and ERI-USAID, the field team met with diverse authorities: Chefs de Régions, high rank State civil servants: President’s office, Ministry of Energy ... J&J Group is interested in investing in the regions of Haute Matsiatra and Vatovavy-Fitovinany. Their investment project will include several parties:

- Investment in operating an oil palm plantation that already exists in Manakara for producing bio diesel;
- Investment in the FCE Fianarantsoa – Manakara railway line;
- Investment in the port of Manakara ;
- Investment in setting up a large scale jatropha plantation west of Fianarantsoa.

Moreover, the group will cooperate with jatropha and oil palm tree producers in both regions. Bio diesel production will be sold on the national market and will not be for export. An annual 10 million liter production is envisaged at the beginning. Therefore negotiations with potential buyers, especially JIRAMA, deserve follow. Such investments are considerably important for the two regions and are well integrated in an integrated development perspective. J&J Group willingness to invest in FCE railway line and the port as well, respond not only to their concern for reducing logistic and transportation costs but will also enable making the two vital infrastructures sustainable for the population.

NEO Company is also interested in investing in Madagascar. The company is developing projects in bio diesel in several countries of Africa. It came to Madagascar for a prospecting visit and for collecting primary information in the perspective of investing in the jatropha value chain. The primary purpose of the company was to plant jatropha on a large scale, 5,000ha in the region of Bongolava so as to extract oil and produce bio diesel. Bongolava was selected because the investor is in contact with a partner who owns a piece of land in the area. The investment program will consist of:

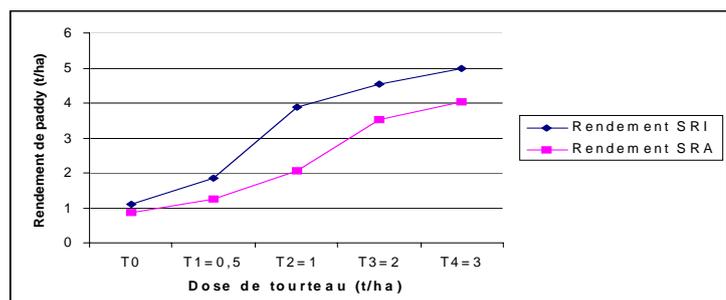
- Investment prevision in the order of Euro 10 million;
- Jatropha cultivation, which is time phased over 5,000ha in Bongolava ;
- Partly state controlled cultivation but developing partnership with private operators and farming organizations who are interested in the project;
- Oil extraction and bio diesel production;
- Investment in electricity sector by producing electric energy;
- Contribution in developing road infrastructures. Investor is interested in supporting the construction project of the road linking Tsiroanomandidy to Maintirano.

Lastly, we have always kept the collaboration with D1 Company in the region of Ambatondrazaka. GEM Company, even if it does not intervene in the USAID zone has always been in contact with BAMEX for information sharing purposes.

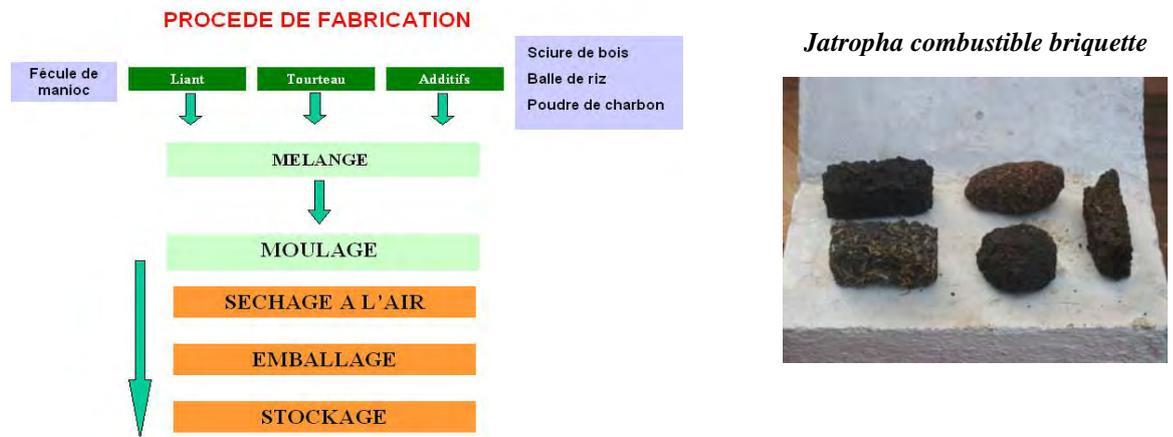
- Research: putting value on jatropha seedcakes and oil

Research on jatropha seedcake with ESSA indicated that it may be valorized as a fertilizer or as a fuel in the form of briquettes. A tentative application of seedcake on an experiment parcel on rice demonstrated significant rise in paddy yield.

*Effect of jatropha seedcake as fertilizer on rice yield*



A research was also undertaken to test the use of the jatropha seedcake as fuel with the *Ecole Supérieure Polytechnique d'Antananarivo*. Several formulations were tested and allowed to conclude on feasibility to use the cake as alternative to charcoal. But its use requires a special hearth. Here are the manufacturing process and the briquette models.



In collaboration with a manufacturer of economic cooking hearth “mitsitsy”, we initiated the design of a hearth adapted to jatropha products (oil and seedcake). This hearth is made from clay so that rural population could manufacture it. Lastly, we developed a technique of manufacturing soap containing jatropha with the ESPA. Various techniques were proposed.

c. Next steps and recommendations

The next stage will be the development of the market of jatropha by the promotion of jatropha products as jatropha oil can find outlets in cosmetics and soap manufacturing. The use of the seedcake will be also promoted. We will carry out trainings and demonstration on the use of jatropha products. Of course, we will continue to promote the development of the value-chain, to promote investments, the search on press and the installation of a pilot unit. Lastly, we will continue the actions of technical assistance on plantation financed by PSDR and the management of the funds.

E. Rice

a. Last report’s achievement (as of July 2006)

Further to the partnership already developed by the National Confederation of Koloharena in Italy and Switzerland, 725 kg of red rice and pink rice have been exported to Switzerland to the company Swiss Re, the Zurich Masoala Zoo, and Slow Food. These products include mainly 250 kg of polished red rice in 50 kg bags, 100 kg of plain red rice in 50 kg bags, 250 kg of pink rice in 50 kg bags, 60 kg of processed polished red rice in bags of 1 kg packed in small wicker baskets, 56 kg of processed pink rice in bags of 1 kg packed in small wicker baskets and 9 kg of polished pink rice.

The confederation has been able to develop partnership linkages with SMTN, which is in charge of shipping Koloharena products.

b. Achievements

- Promotion of red rice and pink rice to the United States: Partner: CIIFAD ; Clients : Lotus Food

In the frame of our effort to promote red rice and pink rice in U.S. markets, we have developed a partnership with CIIFAD (Cornell International Institute for Food Agriculture and Development)

through the establishment of the SRI Red Rice Marketing Initiative. We have fostered a linkage with Lotus Food, an American company that is interested in red rice/pink rice from Madagascar. In this respect, we have promoted two varieties of red rice from Ambatovy Moramanga, one variety of pink rice from Amparafaravola, and two varieties of red rice from Fianarantsoa. So, a 36 kg order of premium quality red rice/pink rice with three degrees of processing has been shipped to Lotus Food with a view to a first tasting in the United States. Organoleptic tests will be conducted in order to identify the variety of red rice that appeal to clients.

In October 2006, Ambatovy and Fianarantsoa Koloharena Cooperatives sent nine different varieties of red rice totaling 36 kg. In order to make sure that the quality of rice corresponds to the criteria for quality required by the U.S. market, we have proceeded first to the varietal purification with FOFIFA.

Further, Lotus Food (Ken and Caryl Levine) and CIIFAD (Olivia Vent) teams came to Madagascar in October 2006 to identify the potential in the production of red rice and pink rice by using the Intensive Rice-farming Systems. They met officials of the Tefy Saina Association, MAEP representatives, forwarding companies and presidents and representatives of Koloharena Cooperatives. Field visits have been made in the Ambatovy area (Moramanga), in the region of Amparafaravola (Ambatondrazaka), and in the region of Ambatovaky (Fianarantsoa).

For the area of Ambatovy, Lotus Food and Cornell met with 30 Koloharena members to discuss the production of red rice, including the growing techniques already used, post-harvest issues, and the small infrastructure set up. Thus, Koloharena farmers have raised the various constraints in the production which impede their production capacity before the tasting session for the indigenous varieties of Ambatovy.

For the case of Amparafaravola, the Lotus team met with 10 representatives of Ivolumiarina Koloharena Cooperative to discuss the growing techniques, infrastructures already in place and post-harvest handling of the red rice, but also tasting the different varieties of pink rice specific to that region. The production in that region has attracted the attention of Lotus Food. The teams of Lotus Food and Cornell University have also visited the facilities of Madrigal at Andramosabe with a view to identifying the different types of improvement to make for a good quality red rice crop.

In Fianarantsoa, the Lotus teams have had a discussion session with the Cooperatives of Ambatovaky, Miarinarivo, and Manakara. They have showed the different types of existing red rice in their regions with their respective specificities. The discussion was followed with a series of red rice tasting sessions. Field visits were also made in Ambatovaky in order to identify the different techniques of red rice farming.

- Promotion of products in Europe : Suisse. Partners : IUCN ; Clients : Swiss Re

We have collaborated with Seed Initiative-Suisse to boost the supply chain in Switzerland. To this effect, 20 kg of pink rice from the region of Amparafaravola have been shipped to IUCN on October 31, 2006 to be sampled during the SRI Day in Geneva.

c. Next steps, constraints and recommendations

During the visit of the teams from Lotus and Cornell University to Madagascar, a wrap up session was held with the attendance of USAID, MCC, MCA, and the Embassy of the United States in Madagascar. This has helped us identify the potential of each area in matters of production and local infrastructure. Thus, the visit allowed an *a priori* assessment of the different gaps at the level of production, processing, and the shipment of the products to the United States. In this respect, Lotus Food introduced us with the various demands of the different U.S. markets:

- For production: the US market requires "Oryza Sativa" rice that should be certified organic by a certification body or the Ministry. Such product should be from a homogenous variety.
- For processing: the US market requires a maximum rate of 3% broken rice and a product that is free of pathogen germs.
- For shipment: the US market requires that the duration of the shipment does not exceed 30 days and that the products are fumigated.

With regard to organic certification, it was noted that Koloharena rice cannot be certified organic because chemical residues carried by irrigation water from upstream plots would pollute their land despite the efforts already made by the producers. We proposed thus that Lotus Food buys the products under the conventional standard. As for the 3% broken ratio, the Madrigal Company cannot guarantee its respect since the grains of pink rice varieties are finer and longer than the MK34 ones and that the sorting unit is not adapted to such dimension. We are thus in the course of prospecting toward the Fanampy Rice Mill on the possibility of processing the Koloharena products. Shipping unpolished rice to Lotus Food also proves one of the prospected solutions.

#### F. PAM

##### a. Last report's achievement (as of July 2006) :

The "*Plantes Aromatiques et Medicinales (PAM)*" value-chain was officially initiated within USAID in 2005-2006. Nonetheless, BAMEX already developed some activities related to it in particular for essential oils. BAMEX undertook studies on several aromatic plants like clove, cinnamon, geranium, ginger, vanilla... and on market opportunities at the international level, market trends, prices, and competing countries.

Support to commercialization of aromatic plants was carried out on 2 levels:

- On the local market: prospecting of the needs from processors and exporters.
- On the international market: prospecting of markets in England and in the United States was carried out by CAPITAL CRIMSON and ETHNOPHARM.

The PAM value-chain took a new start with the workshop organized by USAID in Moramanga in July 2006 during which all the stakeholders from the producers to the exporters while passing by the processors took part. Thus constraints were identified and actions were recommended in order to develop the value-chain. Principal actions were then included within BAMEX 2006-2007 work plan, of which a special support at the producers level.

##### b. Achievements

- Promotion of PAM chain value

BAMEX worked to bridge buyers with the farmers' organizations of Moramanga: CKH and UCV. We organized two meetings with IMRA in collaboration with ERI and ADRA. These meetings consisted of the presentation of the market of aromatic and medicinal plants which the IMRA represents to the members of the Alliance and the farmers' organizations. The farmers showed interest to this request and are ready to answer it. The members of the Alliance will bring the supports needed by IMRA and the farmers' organizations. In addition, BAMEX regularly transmitted to these organizations a list of PAM requested by other customers like Homeopharma, BIOSAVE, ITD, Label CBD.

- Technical assistance:

- *Training on quality* : In collaboration with IMRA, we carried out a training on the quality of the aromatic and medicinal plants to the benefits of the farmers' organizations (CKH and

UCV) in Moramanga. The training touched the various stages of the preparation of PAM before their marketing: collect, sorting, drying, and conditioning.

- *Installation of essential oil still for the CKH of Ilaka-Est:* The CNKH and the Ilaka-Est CKH asked for BAMEX support to study the feasibility of installation of a unit of distillation in Ilaka-Est. Information were gathered in particular the production potentiality of the area in aromatic plants and the organization of the CKH in the implementation of this project. Based on received information, the project will concentrate initially on the production of cinnamon essential oil (bark and sheets). The production of essential oil of *Niaouli* deserves an additional study in term of definition of its quality because this one will determine its price and its profitability. An estimate of the potentiality confirmed importance of the plantation of cinnamon and *Niaouli* in this zone. The quantity is sufficient to make turn to maximum capacity a still of 1000L in the case of cinnamon and a still of 3000L for *Niaouli*. A planning of the collection will be established on the basis of these data in order to rationalize the production and to adapt it to the capacity of the still. The other subjects such as the availability of energy, the reinforcement of the capacity in the control of the extraction, the place of installation of the unit were also tackled. An estimated calculation showed that this project will allow, only for cinnamon, the production of 60kg per month of Cinnamon essential oil (bark and bark) from August to December thus generating a turnover of \$ 500 per month for the Ilaka-Est Cooperative.

- *Installation of essential oil still for the CKH of Beforona:* The CKH Tongalaza in Beforona also expressed its interest to produce essential oil from ginger. Indeed, the ginger is produced in great quantity in this zone with a production about 800T. The essential oil extraction will contribute to facilitate the commercialization of the gingers. The CKH Tongalaza has the advantage of already having some elements of the unit of extraction. A diagnosis and inventory of existing equipments were carried out. We then noted that the principal elements already exist: still, condenser, various pipes. The elements which will be to acquire will be the boiler and the vapour catcher. A prospecting was also carried out in order to identify the appropriate places to install the unit of extraction.

- Trade: sales, contracts

IMRA presented a request of more than 30 varieties with their respective quantities. For this purpose, information collection sheets were developed to allow identifying the varieties of plant and the quantities available for each CKH. These sheets were distributed to the cooperatives during field visits to Koloharena and UCV in Ambatovy, Ambatondrazaka, Amparafaravola and Fianarantsoa through the BCI, ADRA, ERI. The medicinal plants sought by IMRA are 38 whose principal ones are: *Eugenia Jambolaya*, *Centella Asiatica*, *Molluco Nucodilis* and *Euphorbia herta*. Homéopharma sought ginger. At this beginning of partnership, the customers started initially with test orders. So the following plants were commercialized during this season: *Euphorbia Herta*, *Molluco Nucodilis*, and ginger. For the season, other plants will be ordered like *Centella asiatica*, *the callophylum innophylum*.

#### c. Next steps and recommendations

The next stage consists of developing sales and diversifying the marketed plants. The priorities are then:

- the finalization of the commercialization contract of PAM between IMRA and farmers' associations with consequential orders.
- the installation and starting of the stills for the CKH in Beforona and Ilaka-Est. These projects will be preceded by the writing-up of financing requests.
- the search for working capital for the cooperatives.

## 2.2 Cross-cutting activities

### 2.2.1 Result Module 1 – Increasing the competitiveness of selected product chains

#### A. Expand new market opportunities

##### a. Documentation center

The information and documentation center of BAMEX continued to host interested public. The average of visits was 15 to 20 visitors per month consisting mostly of partners of the program, businesses and farmers, students and consultants. Requested information are related mainly to the value-chains on which the program intervenes actively like jatropha, litchi, essential oils, spices and fruits and vegetables, but also to information on previous projects, especially LDI.

The center currently counts in its data base 2760 references of hardcopy documents. Numerous documents in electronic versions are filed on the project server. The Center also produces the monthly bulletin “Kolotsena” distributed through the BCI bound for the farmers’ associations of which the Koloharena and other actors in rural areas. The “Kolotsena” offers information on the price of agricultural produces and the trends on national and international market, as well as other information considered to be useful to farmers, with the example of the input supplies and standards to export.

##### b. Website of BCI

Launched in April 2005, the BCI web site was initially designed to be a tool for analysis and decision intended for BCI’s targeted public. For that the web site contains:

- Information on prices and market trends, as well national as international
- Buyers and sellers list
- Appropriate technologies list
- Information on legal matters and taxation
- Information on the MECIE
- And information on BAMEX selected value-chains

In term of performance, with the key words “business centers Madagascar”, the BCI Web site is at the first position on [www.google.fr](http://www.google.fr) out of a total of 2.730.000 listed pages. Moreover, with the key word “jatropha”, always on [www.google.fr](http://www.google.fr), the <http://www.bcmad.com> site is positioned at the 6th place on a total of 884.000 pages.

In terms of visitors, since its installation, the Web site recorded on average 3211 visitors per month, which is well in top of the objectives that we fixed ourselves. And because of the information on the site, we also record many phone calls from abroad to obtain more information for example on Jatropha.

#### B. Increase ability to respond to market requirements

##### a. Strengthen Confederation National Koloharena marketing and negotiation skills.

##### - **Last report’s achievement**

A revitalization workshop of the Koloharena movement was organized by Programs ERI and BAMEX in order to identify the strength and the weaknesses of the Movement and to be able to propose practical recommendations as for the support to the Koloharena. The resolutions were directed towards the improvement of the structure of Koloharena by the means of the implementation of the Antennes Régionales KH, the improvement of the communication by the reinforcement of

information dispatch and finally towards the reorientation of BCIs and the reinforcement of their collaboration with the Koloharena which precisely led to the domiciliation of the ARKH at the BCI.

Then, the general meeting of the Koloharena took place on May 11, 2006 in Fianarantsoa with the participation of various partners: MAEP and authorities as well as the SOA network. This assembly consisted first of all of the management and financial reports of the year 2005 of the CNKH, then on the renewal of the board members and the improvement of the structure of KH by the installation of the ARKH.

- **Achievements**

Development of ERI - BAMEX withdrawal plan towards supports to KH :

Before the close out of BAMEX and ERI programs, the two agreed on the development of a common plan of withdrawal to support the Koloharena. Thus, a dynamic and sustainable KH Movement was defined as common legacy and the challenge is taken up to achieve concrete and palpable results from now to December 2007 using this common action plan.

The adopted methodology is to carry out an analysis by sector to define the awaited results and to identify the priority actions on which to focus the efforts. 5 activity lines were defined to revitalize the movement: financing, production, commercialization, institutional development, and information system.

Assistance for commercialization

*Preliminary studies related to the pink rice export to the US:*

Based on collaboration with Lotus Food relating to the pink rice promotion in the United States, a field visit was organized in Amparafaravola in order to assess the capacity of the cooperative to honour the contract. Various tasks were carried out to establish the projection of production and collection by the cooperative.

- Evaluation of the production of the Koloharena: after a survey carried out with the ERI team, the production of pink rice of the cooperative of Amparafaravola is evaluated at about 80 tons of paddy for this year.
- Identification of KH producer by the filling of an identification sheet which records the use chemicals, either pesticides or fertilisers: only one KH farmer, who exploits a land of 5 ha, do not use chemical. However, the irrigation water is contaminated upstream. A report on this matter was directed to Lotus Food
- Cost analysis: a study was carried out with the President of the CNKH and the cooperative board members for this project of pink rice export which was then exposed to the KH farmers for validation. The producers requested a price adjustment to Ar 700 per kilogramme, that is to say an Ar 300 margin
- Achieving processing requirements: to comply with Lotus Food standards of maximum 3% broken rice, we approached Madrigal and Fanampy Rice Mill, the two most advanced rice processing units in the Alaotra region. It appeared that Madrigal's plant was conceived specifically to process Makalioka 34 rice variety, whilst the KH pink rice grain is finer and longer than the Makalioka and more prone to breakage. 10 T of pink rice would be needed to do a test run. FRM manager suggested to perform straightforward a test run for which they would need 50 T at a processing cost of Ar 120 per kilogramme

A memorandum recording all of these findings, the expected challenges, and an activity proposal was addressed to Lotus Food.

*Export to the European market:*

As a continuation of their partnership with Slow Food, we assisted the Koloharena to participate to the Terra Madre fair which was held from in November 2006 in Turin. On this occasion, we exported 1,000 kg of red rice and 300 kg of pink rice to Risi & Co. Koloharena were able to multiply contacts through the event.

Zurich Zoo Restaurant also ordered 300 kg of red rice and pink rice in 10kg vaccum bags. These products were collected from the cooperative Ivolamiarina of Amparafaravola and Hanitry ny Ala of Ambatovy. Rice was shipped on May 15, 2007 in collaboration with Company IDS Rogers. The total value of the transaction was about \$600.

Still within the partnership with Slow Food Koloharena were invited to take part to the fair “A l’Origine du Goût” which took place on April 16, 2007 in France to present the pink rice of Koloharena - Madagascar. Consequently, several French partners were interested to develop a relationship thereafter.

From these transactions, the Koloharena movement acquired knowledge on responding to an export deal: arranging the collection, the processing and the shipment, preparing paper works and following procedures.

*Pink rice deal for the domestic market:*

We also developed the local market to launch the pink rice of Koloharena. We contacted several wholesalers, retailers and even grocery stores and supplied samples to test the market. Thus, a contract was fixed between the store “CLAIRE” and the cooperative of Amparafaravola for the delivery of 1.5 tons pink rice per month (400 kg week) at a price of Ar 840 Ariary per kilogram, but depending to the price on the national market. It was the same way with the Company Mazet/CORA for the delivery of 300 kg pink rice for a market test which price was Ar 800 per kilogram.

*Integrating the Koloharena to the banana commercialization channel:*

The cooperatives of Beforona, Ranomafana Est, Maromitety, Fenerive Est et Ilaka Estput in their work plan the revitalization of the banana commercialization. We discussed with their board members to lay down their partnership with the CNKH, gather information about their potentialities, assess the local collection and commercialization system and run a cost analysis.

It appeared that Beforona CKH has some experiences trading bananas and could sale about 20 T weekly. However, they faced some setbacks due to ill quality management and inappropriate payment system leading to lack of running funds. Nonetheless, we found clients in Antananarivo ready to take charge of the product transportation and reward Ar 160 to 200 per kilogram. By the time the deal was to be concluded, banana price in Beforona already jumped to Ar 170 due to the coming of the low season. The cooperative preferred to postpone the transaction in September. To get prepared for that time, a “Banana fund” was set with the CNKH to address the problem of starting funds and ease the collection.

*Initiating the commercialization of various beans and cereals*

For the revival of the beans and vegetables value-chain, we contacted CORA for the prospecting of market. CORA already has its professional suppliers. They put us in relation to one of its suppliers, the Mazet Company. After discussion the person in charge transmitted a list of products, mainly dry vegetables such as beans (white, red, black), lima beans, corn, *voanjobory* and lens, as well as rice.

For the time being they presented a collaboration model proposal. For this purpose white bean samples were collected from the cooperatives and delivered to test the market.

*Diversifying ginger outlets:*

To provide the CKH of Beforona with more partnership options we approached potential buyers. Homéopharma, Label CBD and ITD answered our call. Homéopharma was interested on fresh ginger to use for their line of medications. As they work within a high end market, they paid the 1.2 T of ginger at Ar 900 per kilogramme instead of Ar 300. For ITD, they export essential oil of ginger and were interested to a monthly supply of 5 T. The continuation is waiting the result of analysis they run with a sample of 50 kg the CKH provided. In the same line Label CBD is interested in essential oil for US, European and Australian clients. The installation of the CKH's still is much awaited.

Assistance to production

*Partnership development with GuanoMad*

With the view to develop the Koloharena partnership, a draft-agreement was established between the CNKH and Guanomad for the distribution of the biological fertilizer "guano" through the Koloharena Supply Centers. Moreover, a training session on the use will follow this protocol in order to promote the use of the products by the farmers. The Koloharena cooperatives could profit from a preferential price for the distribution of this product.

- **Next steps, constraints and recommendations**

Capacity building

- Information session on contract respect
- Companionship on cost analysis for various products

Red and Pink Rice

*International markets:*

- Seed multiplication from selected seed base in collaboration with FOFIFA
- Red rice promotion with CIIFAD under the SRI Marketing Initiatives
- Investigation of needed structures and packaging materials and equipments
- Setting up of collection organization within the CKH

*Domestic markets:*

- Setting up of Koloharena shop in Toamasina.
- Facilitation of partnership with FCPA clients

C. Strengthen linkages along selected supply chains

a. Fertilizers

Demonstration of Diammonium Phosphate (DAP) as fertilizer was performed in Fianarantsoa, Ambatondrazaka and Ranomafana Est. The sites of demonstration, of 12 ares each one, were distributed as recorded here:

Zones	Number of sites
Fianarantsoa	4
Ambatondrazaka	10
Ranomafana	1 <sup>2</sup>
Total	15

For Fianarantsoa, SDMad entrusted the follow-up of the operation with the assistance of the BCI Fianarantsoa. In Ambatondrazaka, ERI in collaboration with BCI Ambatondrazaka took charge of the technical assistance, the follow-up and the animation of the KH. For Ranomafana, ERI dealt with the tasks ascribed to the activity.

The excess of rain in January 2007 somewhat distorted the results anticipated for the demonstration. All the sites in Ranomafana were thus flooded and no survey of output could be carried out. For Fianarantsoa and Ambatondrazaka, the survey results showed the effectiveness of the use of DAP on irrigated rice: the lands fertilized with the DAP yielded either slightly superior or slightly lower than those fertilized with NPK 11-22-16 (+/- 5%), according to the type of ground and the previous crop, with a cost of fertilization lower by approximately 40%.

b. Seeds and plant material

The rice variety tests followed upon the facilitation of the establishment of SDMad as hired-management of the *Centre de Multiplication des Semences d'Anosy-Fianarantsoa*, to supply the Koloharena in the region with quality seeds. SDMad carried out the tests on the SEBOTA 70 rice variety within 3 sites of Fianarantsoa II: Miarinarivo I and II, and Sendrisoa. The test plots were rather small, about 30 to 60 m<sup>2</sup>, because of the delay of the installation and unwillingness of the farmers. The comparative results with the varieties used usually by the farmers are under analysis.

D. Strengthen researches on applied production technologies: Homéopharma processing unit modernization

a. Develop technology database (*Salon International des Industries et des Procédés Agro-alimentaires*) :

The BAMEX technology specialist was invited by the French Ministry of Agriculture and the “*Association pour le Développement des Echanges Internationaux des Produits et Techniques Agroalimentaires*” (ADEPTA) for a visit to the IPA Show of Food Processes and Technologies in Paris on November 20-24, 2006.

The IPA show involved an international meeting and exhibition on agribusiness equipment. The show included a large majority of all international suppliers in the area of materials and equipment for processing and valorizing agricultural products and also all suppliers of packing materials and packing machinery, who come from several countries: France, Italy, Spain, Germany, Taiwan, the United States, Turkey, etc.

The objectives of the mission were as follows:

- To prospect and identify manufacturers and suppliers of processing and conservation equipment, which would meet the expectations of investors and substantiate the database.
- To prospect and secure supply from the contacted suppliers.
- To support Malagasy agribusinesses identifying French firms and developing partnerships.
- To have information on the development of food technology: new equipment; new packing types and models.

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<sup>2</sup>

The site of Ranomafana was distributed on 3 farmers at a level of 4 ares per participant

Several companies met during the meeting are able to provide a whole or part of a production line: equipment for extracting jatropha oil, machines for processing fruits and vegetables, paddy processing unit, packing machines.

b. Technical assistance: HOMEOPHARMA processing unit modernization :

We also provided support to Homéopharma Company in keeping with the improvement of their production system. Support to such company involves prospecting and identification of equipment for processing aromatic and medicinal plants.

The project goal is on one hand to be able to meet the consumer demand in aromatic, medicinal, and cosmetic products, and to be able to absorb raw material supplies from producers on other hand. In that respect, BAMEX assistance to Homéopharma production unit will allow facilitating the marketing of products from farmer organizations supported by BAMEX.

We conducted a diagnostic visit to Homéopharma's production unit, which is divided into several chains: for infusion products, for Vahona (aloes) based products, for balms and essential oils, for cosmetic products, and for labeling.

c. BCI's agricultural inputs and technology permanent showcases

With regard to setting up of showcases of agricultural materials within the BCI, we conducted reviews of the various material suppliers and manufacturers. The agricultural equipments and tools proposed by such suppliers were surveyed depending on BCI needs with regard to promoting small scale equipment in their region.

## 2.2.2 Result Module 2 – Increasing capacity and use of business and financial services

### A. Strengthen Business Service Providers

#### a. Business Centers Ivoharena

The BCI network is continuing to provide customized services to firms and farmer organizations, however, support is focused on farmer organizations in ecoregions, after reorientation of BAMEX activities.

#### - **Last report's achievement**

In July 2006, the network of the four BCI (Toamasina, Ambatondrazaka, Fianarantsoa, and Manakara) recorded: 696 visitors, 84 file openings, more than Ar 2,760,000 in sales for owner partners. Such support generated Ar 13,800,000 in additional sales among supported associations and firms.

#### - **Achievements**

The principal activity was rather focused in the preparation of the program disengagement plan of the BCI. For this purpose, a workshop of validation was organized in May 2007. The principal emanating resolutions of this workshop are presented under annex #

With regard to the activities themselves during the period covered by the present report, the four BCI received 425 visitors, of which 31 associations and firms opened files. The services provided generated more than Ar 7,447,000 to BCI owner partners.

Details on BCI achievements are provided here.

REGIONS	VISITORS	CLIENTS	TOTAL
Toamasina	31	11	42
Fianarantsoa	75	15	90
Manakara	39	0	39
Ambatondrazaka	280	05	285
<b>TOTAL</b>	<b>425</b>	<b>31</b>	<b>456</b>

The following table shows the BCI's supports to their clients.

TYPE OF SUPPORT	REGIONS				
	TVE	FIA	MNK	ABZ	TOTAL
Management support		23	1		24
Information on prices, markets, buyers, sellers, others		45		31	76
Access to finance	11	26	9	56	102
Access to training		10	2	111	123
New project ideas				9	9
Commercial exhibitions				1	1
Establishing relationships between companies and farmer associations	11	10	3	12	35
Information on standards and certification			1		1
Investment promotion / Search for partners		6	1		7
Other Information		10		34	44

b. Financial services

- **Credit Facilitation**

We concentrated our efforts and supports in favour of farmers' associations and in particular to the Koloharena to meet their specific requirements for equipment and/or working capital. The financed activities related to projects of rice huller, the improvement of the agricultural outputs through the use of the cultivators, the financing of the inputs, the *Grenier Commun Villageois* and *faisance valoir*.

We maintain privileged relationship with our primary financial partner, Entreprendre à Madagascar, which could directly satisfy the needs for Koloharena in GCV, *faisance valoir* and in CEQUIP.

In terms of capacity building of the farmers' associations and their members, we trained and supported them in the writing up of financing request documents and sensitized them on credit and entrepreneurship mindset. Nearly 120 members profited from these trainings.

In addition, we started to organize training sessions on the simplified accountancy and the costs calculation to allow the board members of the farmers' cooperatives, the paysans animateurs et paysans vulgarisateurs improving their managing capacity, to help them calculate and analyze the costs of their production as well as the profit margin.

- **MFI Development :**

Our support for the study of the new law regulating microfinance bore its fruits. The decree of application of this new was enacted in May 2007. The objective was to lighten the procedures of the Commission de Supervision Bancaire et Financière (CSBF) for granting of licences and approvals. Microfinance institutions of level I, II and III are concerned for the application of this decree. Thus, 15 institutions have officially obtained the authorization to legally carry on their financial activities for the last 6 months. In parallel, taking into account the lightening of the procedures of granting approvals, new microfinance institutions were created.

- **FIEFE :**

The mechanism of refinancing and guarantee FIEFE continues to function in the form of revolving credit. We devoted the use of this fund in favour of farmers' associations and cooperatives operating in the agricultural, mining and lapidary sector for the financing of small equipment, inputs and working capital. Entreprenre à Madagascar constitutes our principal partner. However, negotiations already started with other financial institutions like the OTIV network in Toamasina and TIAVO in Fianarantsoa in order to widen our partnership.

In the agricultural sector, the recent financed activities relate to the financing of rice growing, essential oils and acquisition of equipments like the rice hullers and cultivators. The granted credits account for \$ 84.300.

- **FCPA**

For the year 2006-2007, 24 requests were financed jointly by FCPA and two commercial banks, Bank of Afrika and BFV SG, among them a farmers' cooperative. During this period, the credit granted by FCPA accounted for \$ 626.500 and the two banks (BFVSG and BOA) granted \$ 1,310,000. The financed products consisted of rice, various seeds, corn, and clove. Within the framework of the partnership between the private operators and the farmers' associations to help them improve the incomes of the members, 23 associations profited from the supports of companies by the supply of inputs (fertilizers, seeds). The granted credits were completely refunded in June 2007 which represents the end of campaign FCPA 2006/2007.

The following table shows the amount granted per institution.

<b>INSTITUTIONS</b>	<b>AMOUNTS (in \$)</b>
FCPA	626 500
BVF	930 000
BOA	380 000
<b>TOTAL</b>	<b>1 936 500</b>

2.2.3 Result Module 3 – Improving the enabling environment for private enterprise development, trade and investment

A. Policy reforms

- a. Support the development of a law on bio – fuels

- **General context**

BAMEX initiative to support the Government is in keeping with the setting up of an enabling environment for developing the bio fuel sector and the jatropha value chain in Madagascar. As a matter of fact, the surveys conducted by BAMEX demonstrated the positive impact of such sector and that of the jatropha value chain, as well as its contribution to economic development, preservation of the environment, poverty reduction, and meeting energy needs in Madagascar. Increased interest is also to be noticed among investors, producers, and authorities in such bio fuel sector and that of jatropha – which is translating into an increasing number of investment projects in planting, processing jatropha into bio fuel.

However, all players who are directly or indirectly involved in bio fuel sector noticed the existence of a gap in the law regarding the legislation on bio fuel production and marketing. This is the context in which BAMEX took the initiative of suggesting to the Ministry of Energy and Mining the development of a draft law on bio fuel.

- **Achievement**

Several actions and proceedings have been conducted since August 2006. However, a few modifications have been brought right from the beginning to the following part. Therefore the initial text was made up of three parts: the status of bio fuel, the regulation on bio fuel production and distribution and related tax benefits. It was decided that only the first two parts would be considered in the draft law. The 3rd part which is about tax benefits will be studied subsequently.

In order to keep and secure a consensual draft law, a work group was established, the members of which are representatives from MEM, people involved in petroleum sector, investors. Several draft laws were then written out, as well as proposals and counterproposals by players before reaching a general consensus on the text.

After its validation by the work group, including all players involved in the sector, the bill was finalized. Overall, four points make up the main orientations of the draft law:

- The bio fuel status which is made up of plant origin fuel, such as bio diesel for jatropha and bioethanol for sugar cane
- The regulation on manufacturing bio fuel: the text adopts the liberal system at such level; nevertheless products have to comply with standards.
- The regulation on storage, transportation, marketing of bio fuel: a licensing system is put in place for all operators who would like to invest in such chain
- The draft law provides for the use of pure bio fuel over the long term but imposes as an obligation the incorporation of bio fuel among fossil fuel regarding bio fuel sale for transportation. Nevertheless, the incorporation rate and the effective date of the compulsory incorporation will be set in an agreed manner with operators.

- **Next steps, constraints and recommendations**

The draft law is now referred to the Ministry of Energy and Mining. The next step is submission by MEM of the draft law to the Parliament for its adoption. Regarding calendar, the next parliamentary session will take place in May 2007.

The bill is now transmitted to the Ministry of Energy and Mines. The delay on its adoption was due to the change of Government which took place in January 2007 and the dissolution of the National Assembly in July 2007. BAMEX will stay available to the Ministry of energy to bring any additional

explanations to this law. In addition, BAMEX continued to work on the 3rd part concerning the tax advantages. We will develop a partnership with EDBM on this particular point.

b. Decree on seeds and plant materials import

The Quarantine Service of MAEP approved the TOR for the consultant to draft the order. The definition of the responsibilities and the costs of the interventions of the service appear among the innovations brought in the preliminary TOR, but the questions relating to the GMO were voluntarily omitted taking into account the extent of the subject. With the promulgation of decree 2006-618 January 2007, relating to the application of the seed-bearer law 94-038, the formulation of the decree on the importation of seeds proved to be inappropriate, since the seed-bearer authorities being designated on the aforementioned decree are not yet operational.

c. Fertilizer partnership charter

In 2006, the administration could not start the process of implementing the charter of partnership between the private sector and the public administration, in front of the electoral period. Since June 2007, meetings follow one another between the private importing operators, the farmers' organizations and MAEP in order to install a platform aiming at the implementation of the charter. An ad hoc committee will be created soon in order to install the fertilizer platform.

d. Input supplies credit system

The election in 2006, the change of the government after the election and the delay in the appointment of the various persons in charge for the MAEP in 2007, did not make it possible to start the process of installation of the system of financing agricultural inputs, formulated by BAMEX at the beginning of year 2006 and appreciated by the Minister of the time. The implementation of the MAP, and particularly that of the "green revolution" however caused the enthusiasm of the MAEP, following a recall of the existence of the file by the team of BAMEX. Only over the course of July 2007, three successive meetings tend towards the concretization of the project, the principal objective being the constitution of guarantee funds from MAEP through donation counter-values. The new system of financing should be operational before the starting of the crop year 2007/2008 that is to say before October of this year.

### **3. Budget Monitoring**

a- Detailed Budget (obligated amount)

On July 31, 2007, end of the year 3, the total amount of the obligated amount allocated to program BAMEX rises to \$ 4.533.500.

The following table indicates the details in the obligated amount for each fund source:

<b>SOURCE</b>	<b>AMOUNT</b>
DA Funding	\$ 3,517,162
Prime Funding	\$ 300,000
ESF Funding	\$ 491,338
REDSO Litchi Funding	\$ 225,000
<b>TOTAL</b>	<b>\$ 4.533.500</b>

b- Expenses by source of funds

Source	Invoiced through June 2007	Invoiced in July 2007	Total invoiced
DA Funding	\$ 3,431,165.60	52,954.05	3,484,129.65
Prime Funding	\$ 299,886.63		\$ 299,886.63
ESF Funding	\$ 484,427.21	\$ 6,907.20	\$ 491,334.41
REDSO Litchi Funding	\$ 225,539.38		\$ 225, 539.38
<b>TOTAL</b>	<b>\$ 4,440,479,.44</b>	<b>\$ 59,871.25</b>	<b>\$ 4,500,890.07</b>

99.28% of the totality of \$4,500,890.07 allocated to program BAMEX until July 31, 2007, were engaged and invoiced to USAID.

For DA Funding, 99.06% of the obligated amount, thus \$ 3,484,129.65, are engaged and invoiced to USAID.

For the Prime Funding and REDSO Litchi Funding, all were already engaged and invoiced to USAID since the last date of use of these funds were respectively on August 31, 2006 and March 31, 2006.

For the ESF Funding which was allocated to the mining sector, and whose last date of use was on July 31, 2007, 99.99% of the funds, thus \$ 491.334.41, were engaged and invoiced to USAID

c- Number of signed contractual documents:

The following table shows the number of signed contractual documents as of July 31st, 2007:

Documents	Number
Contract	109
Purchase order	2.153
Memoranda of Understanding	45