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# QUARTERLY REPORT

## DECEMBER 2010 – FEBRUARY 2011

**INCREASING RURAL INCOMES AND IMPROVING FOOD SECURITY THROUGH  
INTEGRATED INITIATIVES FOR ECONOMIC GROWTH IN MALI**

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### **DISCLAIMER**

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# ACRONYMS

<b>ANSSA</b>	National Agency of Food Safety and Hygiene
<b>ARPASO</b>	Agricultural Producers and Rice Farmers Association in Western San
<b>AVPA</b>	Association of Agricultural Product Vendors (Bamako)
<b>BEACIL</b>	Research and Technical Assistance Bureau for Local Initiatives
<b>CRRA</b>	Regional Center for Agronomic Research
<b>CSV</b>	Crop Storage-Based Credit
<b>DAO</b>	Call for bids
<b>DNEF</b>	National Forestry Service
<b>DRA</b>	Regional Directorate of Agriculture
<b>E-ATP</b>	Expanded Agribusiness and Trade Promotion, a USAID regional program.
<b>FAMSOUDOUF</b>	Ferme Agricole des Moribabougou
<b>GIE RCGOP</b>	Economic Interest Group, Consultancy Network in Farmer Organizations Management
<b>GIS</b>	Geographical Information System
<b>GREFA</b>	Group of Agricultural Research, Surveys and Training
<b>GRN</b>	Natural Resource Management
<b>HFP</b>	Host-Free Period
<b>IER</b>	Institute of Rural Economy
<b>IF</b>	Supportive Funds for Innovative Agribusinesses
<b>IICEM</b>	Integrated Initiatives for Economic Growth in Mali
<b>IPM</b>	Integrated Pest Management
<b>IVP</b>	Irrigated Village Perimeter
<b>LOA</b>	Law on the Orientation of Agriculture
<b>MT</b>	Metric ton
<b>NGO</b>	Non-Governmental Organization
<b>ODRS</b>	Sélingué Rural Development Office
<b>OHVN</b>	Office of the Upper Valley of Niger
<b>OMA</b>	Observatory of Agricultural Markets
<b>PO</b>	Producer/Farmer Organization
<b>OPIB</b>	Office of Baguinéda Irrigated Perimeter
<b>PDCO</b>	Community Development Program
<b>SAF</b>	Strategic Activities Fund
<b>SICA</b>	Agricultural Collective Interest Company
<b>SRI</b>	System of Rice Intensification
<b>UCUTOHA</b>	Tondibi and Ha Cooperatives Union
<b>URCEP</b>	Potato Traders and Exporters' Regional Union
<b>USAID</b>	United States Agency for International Development
<b>USG</b>	United States Government
<b>WASA</b>	West Africa Seed Alliance, a USAID regional program
<b>YAGTU</b>	Yam Giribolo Tumu (a Bandiagara-based NGO)



# INTRODUCTION

Integrated Initiatives for Economic Growth in Mali (IICEM) is USAID/Mali's flagship economic growth program, which spurs economic expansion and improves food security through increased productivity and trade in basic cereals and horticultural crops. IICEM follows a value chain approach. IICEM is implemented by Abt Associates, Inc. as prime contractor, in partnership with ACDI/VOCA, Sheladia Associates, Inc., CARANA Corporation and 6 implementing partner NGOs, and orchestrates over 400 Malian associations and public and private entities (national government services and institutions, businesses, banks, input suppliers, and business development service providers).

The objectives of the IICEM project are closely aligned to the Feed the Future (FTF) strategy emerging from the President's Global Hunger and Food Security Initiative (GHFSI), with its emphasis on 'increasing economic growth and developing supply of basic commodities' by improving agricultural productivity, minimizing transport and trade barriers, promoting market demand-based agriculture, and increasing the level of participation of the most deprived in economic growth.

IICEM pursues five strategic objectives: 1) increasing access to markets and trade and improving commercialization of targeted products; 2) rehabilitating and scaling-up irrigated agriculture while diversifying and intensifying agricultural production; 3) improving financial services; 4) supporting an enabling environment for agriculture, trade and private sector development; and 5) stimulating entrepreneurship through a strategic activity fund, small business development and a grants facility.

This quarterly report describes program achievements from December 1, 2010 to February 28, 2011. It contains an executive summary, followed by a brief narrative of achievements by value chain and by cross cutting activity, which includes natural resource management; biodiversity and climate change; transport and trade facilitation; gender-equitable opportunity in value chain development, and capacity building in value chain development. Success stories appear in the Annex.

## **A NOTE ON ACHIEVEMENTS AGAINST 2011 TARGETS**

In general, the incomplete percentage achieved against value chain goals or overall program targets noted in the tables throughout this report are due in large part to where the quarter falls against the agricultural calendar; the period covered by this quarterly report does not correspond to major harvesting, storage, marketing and commercialization or processing periods for the major value chains. In some cases, this work has either not started up or is in the planning phase for the upcoming season. With respect to shallots, production is in progress. A significant increase in production-associated achievements and other indicators are anticipated in the next two quarters, given the work described herein to clarify demand and quality requirements of buyers, and link this back to supply organization for the coming production season.

# EXECUTIVE SUMMARY

## **VALUE CHAINS AND SECTORS**

### **MILLET/SORGHUM**

Achievements this quarter centered value chain development and promoting millet/sorghum as a strategic product for the project and USAID's Feed the Future strategy. Activities focused essentially on increasing access to markets and trade while improving productivity in targeted areas. Following implementation of the INTSORMIL/IICEM technology package on more than 3,000 hectares last year, IICEM is preparing for a scale-up to 11,500 hectares in the upcoming agricultural season.

To drive this scaling up, IICEM is focusing on markets and partnerships. Activities to increase access to markets focused on: (i) conducting a market survey to identify wholesalers; (ii) establishing partnership agreements between wholesalers and IICEM's partner producers; (iii) negotiating a partnership between cereal processors (Moulins du Sahel and FAMSODOUF) and wholesalers; (iv) improving harvest, post-harvest and storage conditions; and (v) promoting group sales.

To increase agricultural productivity, activities focused on: (i) planning millet/sorghum production input needs for the 2011-1012 agricultural campaign, and (ii) negotiating memoranda of understanding with the Regional Directorates of Agriculture in targeted work zones.

## **RICE**

Rice value chain activities focused on monitoring harvest, post-harvest and marketing. As part of increasing access to markets and trade, the project carried out the following activities in the Sikasso region for lowland rice: (i) established business relations between rice producing and processing farmer organizations and purchasers, including parboiled rice wholesalers from Bamako and Sikasso, (ii) strengthened producer capacity to sort and condition rice paddy, (iii) monitored the use of rice husking equipment provided to women's groups, and (iv) monitored production input loan repayments.

For the irrigated village perimeters in the north, activities focused on monitoring harvest and post-harvest of paddy for traditional production farming, SRI farming, and seed production plots. During the same period a survey was undertaken on the rice value chain in 11 communities in the Mopti region. In addition, a demonstration day of new agricultural equipment was organized to facilitate SRI scaling up. The new equipment included two motorized planters and 2 motorized tillers.

## **MAIZE**

In the maize value chain, activities focused on the last operations of grain harvest, collection, consolidation, and storage in order to support successful group sales by cooperatives, and on facilitating access to markets with targeted buyers. In the Sikasso region, the collection and storage of grain is ongoing, which will allow to repay loans granted by the BNDA. The total stored volume to date is 494 metric tons (MT). With that stored volume, both cooperatives Jigiseme of Larasso and Nipagnon of Loutana already succeeded in repaying the totality of their loan, 12.5 million FCFA, even if the commercialization campaign will still going on for the next two months.

In Bougouni, the main activity was marketing and commercialization, namely through connecting farmer organizations with various buyers. Other activities included improving capacity in negotiating prices, developing sales contracts, and improving product quality, particularly in reference to maize sorting, winnowing, packaging and storage.

## **HORTICULTURAL PRODUCTS**

In southern Mali, activities to increase production and productivity of horticultural crops focused on facilitating access to seed of improved varieties of lettuce, cabbage, carrots, hot pepper, bell pepper, eggplant, tomato and okra for Finkolo Ganadougou Women's Union and Zoloko Women's Cooperative, as well as organizing a training for the same two women's groups in nursery management best practices.

In northern Mali, the project identified six women's farmer organizations (3 in Timbuktu, 2 in Mopti, and 1 in Gao) capable of producing and marketing horticultural products and facilitated their access to improved seeds for the products listed above.

## **POTATO**

Potato activities focused on increasing market access, improving financial services and facilitating producer access to finance. Regarding market access, IICEM supported marketing planning by strengthening the capacity of cooperative marketing committees, and facilitated potato exports to Ivory Coast between URCEP and an Abidjan market trader. Activities to improve financial services

available to potato value chain actors focused on the development of credit applications and brokering contracts between BNDA, Kafo Jiginew and potato producer cooperatives.

In the north, the project established demonstration sites for improved practices in potato farming using three new varieties including *Spunta*, *Liseta* and *Mondial*. The program also facilitated group purchases of potato seed by Gao producers from Sikasso seed suppliers. Potato producers in Timbuktu received IICEM-supported training on organizing group purchases, sales techniques, cost pricing, sale pricing, and drafting balance sheets (including profit and loss accounts).

### **SHALLOT**

Shallot value chain activities addressed the key areas of production, marketing and access to credit. Shallot production is underway in IICEM's targeted work zones. The project began the reporting period by facilitating access to shallot seeds for Mopti, Timbuktu and Gao area producers.

The total volume of marketed fresh and processed shallots was 28 tons and 22 tons, respectively. Shallot purchase and cost prices as well as the costs for processed products increased during the quarter, generally increasing operator incomes. The main national outlet markets include Bandiagara, Mopti, Timbuktu, Gao, and Bamako. Ivory Coast was the primary sub regional outlet market.

### **TIGER NUT**

Increasing access to markets and commercialization as well as improving financial services were the focal points of tiger nut activities during the reporting period. As part of increasing market access the project worked with producers to determine the volume of tiger nut needed to repay loans, monitor storage conditions, facilitate contract negotiations and signature between supported cooperatives and the Malian exporter for 500 tons, and train cooperatives on good post-harvest practices and respect of contract conditions to ensure better planning of tiger nut supply as scheduled by the exporter. The project assisted a key exporter in developing an application and negotiating terms for 20 million CFA Francs in financing from BNDA. The loan will increase his operating funds and enable him to meet his commitments to producers and his major buyer.

### **MANGO**

The quarter's activities for the mango value chain focused on the establishing an efficient supply chain for the pulp factory, COMAFRUIT, as well as on monitoring the various markets for dried mangos. IICEM organized meetings on mango cost pricing and quality criteria between COMAFRUIT and the producers in various production areas. IICEM also provided technical assistance to COMAFRUIT to advise on the construction of their new pulp factory and the controlled temperature ripening rooms in Sélingué.

### **FISH FARMING AND RICE-FISH FARMING**

Fish farming and rice-fish farming activities essentially focused on carrying out participatory diagnoses with stakeholders in fish breeding and monitoring tests in rice-fish farming in the Mopti region.

### **ENHANCING FINANCIAL SERVICES**

The activities to increase farmer organization access to credit resulted in the mobilization of 552 million CFA Francs, or just over \$1.1M. Most of this amount (550M CFA Francs) supported 41 potato farmer organizations in the Sikasso area as well as a Sikasso-based exporter, and the remainder (2M CFA Francs) benefitted a Mopti vegetable grower.

## **CROSS-CUTTING ACTIVITIES**

### **NATURAL RESOURCE MANAGEMENT, BIODIVERSITY AND ADAPTATION TO CLIMATE CHANGE**

The key activity for the quarter was facilitating the signature of the community-based natural resource management agreement in Baye (Bankass District, Mopti region).

### **FACILITATING TRANSPORT AND TRADE**

In addition to continued facilitation and preparation of the Kayes cross-border trade conference with Malian and Sénégalaise stakeholders, IICEM's transport and trade facilitation specialist led a study of logistical costs associated with millet/sorghum, maize and rice value chains along key national and sub-regional corridors.

### **PROMOTING GENDER-EQUITABLE OPPORTUNITY IN VALUE CHAIN DEVELOPMENT**

A study on gender-based differences in men's and women's roles and opportunities along the millet value chain was launched using the guide "Promoting Gender-Equitable Opportunities in Agricultural Value Chains." Additional focus-group data will be conducted to enrich the study and draw more solid conclusions for the overall millet value chain development plan.

### **CAPACITY BUILDING IN VALUE CHAIN DEVELOPMENT**

This quarter, IICEM continued work to build staff, partner NGO, and representatives from regional government services in value chain development. Work focused on coaching local participants in finalizing the maize value chain survey; monitoring rice and shallot surveys in the Mopti region for their respective value chain assessments; and conducting three value chain development training sessions in the regions.

# MILLET/SORGHUM

## IMPROVING ACCESS TO MARKETS

### MARKET SURVEY TO IDENTIFY STRATEGIC WHOLESALERS

The project conducted a survey of Sikasso, Koutiala, Ségou and Bamako markets during the quarter to acquire market information on millet/sorghum demand and supply. The survey helped identify cereal wholesalers, major production/supply areas, the best-selling millet/sorghum varieties, and major millet/sorghum markets. Wholesalers' demand requirements in terms of volumes and quality were compiled and used to develop potential market segments.

The project also facilitated linkages between producers and wholesalers on one hand, and between wholesalers and cereal processors (e.g. Moulins du Sahel) on the other hand. Based on expressed desire to better structure their raw material supply chains and invest in product quality assurance, the following wholesalers were selected as strategic partners on the basis of high sales volumes and their experience in formalizing cereal transactions using purchase contracts.

**Table 1: Volumes of IICEM's strategic partner wholesalers**

Location	Traders	Annual volumes (MT)		Total	Turnover (in million CFA Francs)
		Millet	Sorghum		
Sikasso	Kalilou Diallo	1,200	2,400	3,600	444
Koutiala	Sidiki Badjan Doumbia	2,900	1,900	4,800	665
Ségou	Issiaka Keita	9,000	6,000	15,000	1,890
Bamako	Bandiougou Samaké	1,960	5,600	7,560	926.8
<b>Total</b>		<b>15,060</b>	<b>15,900</b>	<b>30,960</b>	<b>3,925.55</b>

The selected traders sold about 31,000 metric tons (MT) of millet and sorghum in 2010, for a turnover of about 3.9 billion CFA Francs. These strategic partners will help IICEM establish a better-structured supply chain based on quality criteria to stimulate commercial supply from the project's targeted production areas.

### ESTABLISHING PARTNERSHIP AGREEMENTS WITH WHOLESALERS

The project drafted and signed a partnership agreement with each selected wholesaler (consolidator). It should be noted that each wholesaler will work with a network of farmer groups, collectors, and traders who will also be supply chain partners.

### NEGOTIATING PARTNERSHIP AGREEMENTS WITH MAJOR MILLET/SORGHUM PROCESSORS

The project organized a series of meetings with millet/sorghum processors, including Moulins du Sahel (MDS) and Ferme Agricole des Moribabougou (FAMSODOUF) in order to assess the demands of these two commercial grain markets. As a result, a partnership agreement was signed between FAMSODOUF and IICEM for the development of a sorghum-based poultry feed, and a program to develop and diversify final product markets for cereal-based, high value processed products, initially for the domestic market.

MDS will supply quality criteria to wholesalers and farmer groups for commercial grain supplies and work with the Food Technology Laboratory, SOADF (bakery school in Bamako), Purdue Food Technology Department/INSORMIL and IICEM to develop composite flour technologies and applications.

### **IMPROVING MILLET/SORGHUM STORAGE CONDITIONS**

In order to consolidate millet/sorghum supply in production areas, the project has assessed the logistical and economic advantages of building 52 millet/sorghum warehouses in production zones. The competitive bidding process was launched for the supply of building equipment and materials to start construction.

### **SECURING THE POST-HARVEST QUALITY OF PRODUCTS**

As part of assuring the quality of harvested products and guarantee added value, IICEM tested the introduction of triple-layer sacks. The Mopti office will distribute 4,000 sacks to IICEM's millet farmers in Koro, Bankass and Bandiagara. The project also conducted training sessions for producers in quality control and its importance in supplying competitive products.

## **IMPROVING PRODUCTIVITY**

### **PLANNING FOR THE 2011-12 AGRICULTURAL SEASON**

As part of planning production for the 2011- 2012 agricultural season, the project organized a series of working meetings with producer organizations from high millet/sorghum production zones such as Sikasso, Koutiala, Yorosso in the Sikasso region; Bla, Ségou, Barouéli in the Ségou region; and Koro Bankass in Mopti region. As a result of these meetings, the project selected Mopti (Bankass, Koro), Koulikoro (Dioïla) and Sikasso (Koutiala, Yorosso) for targeted millet/sorghum production activities. Based on discussions, the project set a production target of 17,250 tons of millet/sorghum on an area of 11,500 hectares, assuming average yields of 1.5 MT per hectare using improved farming technologies (i.e. combining improved seed with appropriate fertilizer application). Site-by-site details appear in Table 2 below.

Moreover, the project signed an agreement with the Regional Directions of Agriculture of the targeted zones and drafted partnership agreements to monitor production and provide outreach support to producers. Next quarter will be primarily devoted to mobilizing input credit from the BNDA, and facilitating seed and fertilizer supplies for millet/sorghum producers.

**Table2: Breakdown of millet/sorghum surface area for the 2011-2012 campaign**

Region	District	Implementing Partner Organization	Surface (ha)		TOTAL (ha)
			Millet	Sorghum	
Sikasso	Koutiala, Yorosso	DRA/Sikasso and GIE AIID/Koutiala	2,000	3,000	5,000
Mopti	Koro	DRA/Mopti	500	500	1,000
	Bankass		500	500	1,000
Koulikoro	Dioïla	Dioïla Union of Maize Producers	2,000	2,500	4,500
<b>TOTAL</b>			<b>5,000</b>	<b>6,500</b>	<b>11,500</b>

# RICE

## IMPROVING ACCESS TO MARKETS

As of the closing of the reporting period, IICEM has facilitated 1,757 tons in sales volumes for 184.1 million CFA Francs in purchases from smallholders of irrigated rice in the northern regions, lowland rice in the Timbuktu region, and lowland rice in the Sikasso region. See details below in Table 3.

**Table 3: Volumes and Values of Purchases from Smallholders**

	Volume (t)		Value (millions CFA Francs)	
	Target	Achieved	Target	Achieved
Lowland Rice (Sikasso)	3,000	365	--	--
Lowand Rice (Timbuktu)	2,500	736	135	95.6
IVP Rice (North)	5,000	656	105	88.5
<b>TOTAL</b>	<b>10,500</b>	<b>1,757</b>	<b>235</b>	<b>184.1</b>

## INTRODUCING NEW PARBOILING TECHNOLOGIES

To improve the quality of parboiled rice produced by the Zangaradougou women's cooperative in the Sikasso region, the project facilitated the introduction of improved parboiling equipment, driers, sacks for the handling/sorting phase, tarps, more efficient cook stoves and a husking machine. Furthermore, surveys have been completed to estimate the acquisition costs of technologically appropriate steaming ovens, which will help achieve better quality of parboiled rice. Also, the project strengthened women's technical capacities through a series of trainings in steaming techniques to produce a product in accordance with the quality criteria provided by potential buyers. Ninety-three women were trained on good steaming practices and adopted the new steaming technology. The trainees included 85 women from Zangaradougou, 2 women from Loutana, 3 women from M'Pègnesso, 1 woman from Kouroumasso and 2 women from Finkolo.

## MONITORING INPUT CREDIT REPAYMENT

In order to ensure repayment of input loans to women farmer organizations, the project helped the women define and gather the amount of paddy rice to be commercialized. Table 4 below describes the amount of rice per farmer organization /village needed to repay the credit. It also shows the amount of credit per farmer organization as well as collected and stored amounts.

**Table 4: Volume of Stored Paddy Rice to Sell to Repay Input Loans**

Village	Name of Organization	Number of beneficiaries	Credit Amount (CFA Francs)	Paddy (t)	Quantity to Repay Input Loans (t)
M'Pègnesso	BENKADI	273	12,539,250	100	22.4
Nantoumana	BENKADI	74	2,461,340	20	7.7
Loutana	FOKABEN	300	2,280,000	18	8.9
Niena	COFRN	186	4,480,130	36	6.4
Finkolo Ganadougou	Women's Union	614	4,639,990	37	0
<b>TOTAL</b>		<b>1,447</b>	<b>26,400,710</b>	<b>211</b>	<b>45.45</b>

## PROMOTING WOMEN-PRODUCED PARBOILED RICE

The project subsidized the acquisition of mills by women farmer organizations (including those from Loutana and Finkolo Ganadougou) in order to promote the processing of parboiled white rice, which

generates sources of employment and creates added value. The project also trained 9 women from Loutana women's cooperative in good milling practices, and facilitated marketing of finished product by initiating contacts between women groups and several local buyers.

### MONITORING RICE MARKETING

Women farmer organizations in the Sikasso region marketed 365 MT of rice, including 309 MT of parboiled rice and 56 MT of polished white rice. The 309 MT of parboiled rice are broken down as follows: 25 MT marketed by Zangaradougou women; 20.7 MT by Loutana women; 64 MT by M'Pègnesso women; 4.3 tons by Kouroumasso women; and 46.2 tons by Finkolo Ganadougou women. The 56 tons of husked, polished rice were sold by Loutana, M'Pègnesso, Kouroumasso, and Finkolo Ganadougou women.

In the North, the marketed amount of rice paddy during this quarter reached 448.78 tons of irrigated village perimeters (IVP) rice in the Timbuktu area, 735.84 MT of lowland rice in Lake Horo (Timbuktu), and 207 MT in the Gao area. The total marketed production is of 1,391.6 tons which amounts to 184,120,550 FCFA broken down as follows: 57,531,800 FCFA for Timbuktu IVP rice, 30,929,550 FCFA for Gao IVP rice and 95,659,200 CFA Francs for Horo Lake lowland rice.

### SURVEYING NATIONAL RICE MARKETS

A survey on the rice value chain was conducted from January 5 - 26, 2011 in 11 areas of the Mopti region including Korientze, Sah, Attara, Sofara, Konna, Badiangara, Koro, Bankass, Kouakourou, Djenne, Mopti/Sevare among collectors, distributors, processors, and rice consumers. The survey identified the main rice markets in the region and stakeholders working along the value chain. This helped define supply and demand and get price information during various periods of the year. The results of the survey are being analyzed and will be submitted next quarter as an integral part of a rice value chain assessment for the Mopti region.

### SUPPORTING THE EMERGENCE OF PROCESSOR-PRODUCER HUBS, BY INVESTING IN SMALL MILLING FACILITIES

As part of promoting local demand for quality paddy rice, and to respond in an increasingly competitive way to boost regional demand for milled rice, IICEM identified 3 private Malian operators: Ousmane Cissé, founder of Société Planète Distribution of Sévaré; Mr Bocoum, founder of Société Rizerie and Fabrique d'Aliments Bétail (RIFAB) in Sévaré; and Ibrahim Cissé, founder of Attara mini rice processing-factory in Youwarou area keen to invest in mini rice milling operations. In response to Mr. Ousmane Cissé's request for funding, a business plan was developed with IICEM's support. This plan includes the extension and improvement of his paddy rice business.

Discussions are ongoing with Mr. Ibrahim Cissé to assess the technical and economic feasibility of his business plan. IICEM supported Mr. Bocoum, the founder of RIFAB, in drafting his implementation plan relating to the construction, establishment and start-up of his new rice processing and livestock feed factory. As of the end of February, construction is about 40% completed.

### IMPROVING PRODUCTIVITY

**Table 5: Rice Production Volume in Sikasso Lowlands**

Villages	Organization	Surface (ha)	Yield (t/ha)	Production (t)
Loutana	Fokaben	450	2.2	990
Nantoumana	Benkadi	35	1.7	60
Kouroumasso	Benkadi	120	1.4	168
M'Pègnesso	Benkadi	280	1.6	448
Nièna	COFRN	190	2.5	475
Finkolo Gndgou.	Women's Union	1,050	1.5	1,575
Zoloko	Female Producers	130	1.2	156
<b>TOTAL</b>		<b>2,255</b>	<b>Average 1.7</b>	<b>3,872</b>

**Table 6: Yield growth for the 2010-2011 agricultural campaign (MT/ha)**

Targeted Product	Achieved 2009- 2010	Target 2010- 2011	December 2010 February II Quarter	% of target value achieved for this quarter
Sikasso Lowland rice	1.35	1.8	1.7	94 %

The yield assessment for women's plots conducted in the lowlands of Sikasso shows an average yield of 1.7 MT/ha and a total production of 3,872 MT over a total cultivated rice area of 2,255 ha. These figures represent a 680% increase in total production and a 534% increase in total cultivate area compared to 2009-2010 figures, when production in the same areas was 569 tons of paddy rice over a total area of 422 ha. The increase in cultivated area is partly due to the construction of dams financed by IICEM on some lowlands in different villages of Sikasso district such as Finkolo Ganadougou, Gladie, Zoloko, Kouroumasso and M'Pegnesso.

An analysis of these results indicates that the production objectives set by the project were greatly exceeded. Overall yield increases in the future will depend on water control and application of good agricultural practices by Loutana and Niena women's farmer organizations whose yields exceeded 2 MT per hectare in 2010.

#### **REHABILITATING AND/OR EXPANDING IRRIGATED AGRICULTURE WITH HIGH INTENSIVE LABOR**

This quarter, these activities focused on identifying and assessing potential project sites in Ambiri, Owa, Bia, Aoure, Takoutala, Doua 2, Warsa Attara 1, Warsa Attara 3, Dofana, and Ayoum sites in the Mopti region. Moreover, the project identified a seed breeder cooperative in N'Daye Mbada in the Timbuktu region. Sites in the Mopti area were selected based on their potential to supply raw materials to IICEM-supported mini rice-processing factories that are being installed in the region.

The project selected building material suppliers and identified skilled workers to construct the irrigation works on irrigated village perimeters in the Mopti region (Fanabougou, Gobi, Gounki, Korientzé, Akka, Seby and Deibata), the Timbuktu region (Bagadaji, Singo and Daounakeina), and the Gao region (Gassi and Danga).

Periodic maintenance works using the high-intensity labor approach were also carried out this quarter on Timbuktu sites (Kabara, Kondi, Goubo, Sibonne, M'Bétou), Gao (Adourourou, Djeflani, Tondithio), and Mopti (Kamaka, Sah, Djogui I and II, Korientzé and Adoul Karim).

#### **REHABILITATING AND EXPANDING IRRIGATED AGRICULTURE VIA THE PRIVATE SECTOR**

The various irrigation infrastructure works in irrigated village perimeters and lowland sites that were constructed by private companies have received provisional approval. These works are located in Baramadougou and Kouana (Mopti region) and Bagadadji, Kessoubibi and Goubo (Timbuktu region) and cover a surface area of 494 ha.

#### **STRENGTHENING IRRIGATED VILLAGE PERIMETER MANAGEMENT CAPACITY, INFRASTRUCTURE AND EQUIPMENT**

During this reporting period, the project trained 120 diesel-powered motor pump mechanics, including 20 junior mechanics from IICEM-supported farmer organizations. The training focused on maintenance and repair techniques as well as effective business management to ensure continued upkeep. Additionally, IICEM will select a few outstanding technicians and facilitate access to loans, so they can establish businesses selling water pump spare parts as well as offering repair and maintenance services.

Furthermore, 17 agents from IICEM's staff and partner NGOs in the north, were trained in the uses of basic GIS information and how to capture a simple set of site coordinates using GPS devices. Trainees also learned two techniques for determining surface area under cultivation, one for a square parcel and one for a more irregularly-shaped parcel.

### **PROMOTING THE EMERGENCE OF FARMER SEED PRODUCERS**

IICEM signed memorandums of understanding with various Regional Directorates of Agriculture (DRA) to facilitate producer access to improved seeds, hence supporting the multiplication of seed in Mopti, Timbuktu, and Gao. During the 2010-2011 agricultural season, producers cultivated improved seed on 45 hectares in three regions. Ten agricultural cooperatives (four in Gao, three in Timbuktu, and three in Mopti) participated in the seed production program, totaling 97 seed-breeder farmers. The DRAs monitored the activities and provided technical assistance to the producers.

This quarter, IICEM monitored and assessed seed harvests. Samples were sent to the Seed Laboratory (LABOSEM) for certification. IICEM also organized meetings for its partner farmer organizations to discuss the process of developing an application for input financing buy to seeds for the 2011-2012 agricultural season. This was also done to encourage the cooperatives to purchase seeds from the partner seed producers, hence creating market links between two rice value chain stakeholders.

### **INTRODUCING AGRICULTURAL EQUIPMENT**

To scale-up SRI techniques, IICEM facilitated the procurement of two planters and two motorized tillers for partner farmer organizations. A demonstration day was organized in San, jointly with the Association of Rice farmers from San West (ARPASO). About 100 participants attended, including representatives from the Prime Minister's Office, San's administrative and political authorities, IICEM partner farmer organizations, NGOs, RDAs, RCAR, the Office du Niger, and the Rice Office of Ségou.

### **IMPROVING FINANCIAL SERVICES**

Monitoring loan repayments was the major activity this quarter. Three farmer organizations were reported late in repaying their loans, including the cooperatives of Sah, Kouin, and Touara Homme. In the Timbuktu area, the Sibou cooperative paid penalties of 427,500 CFA Francs due to the delayed repayment of its previous loan of 8,895,000 CFA Francs. The Beregoungou cooperative received two loans: one for the purchase of inputs and one for a water pump. The cooperative will pay off its loans through the carefully timed sale of 35 MT of stored marketable product.

# MAIZE

## IMPROVING ACCESS TO MARKETS

The maize marketing period is not complete, but data compiled thus far indicates the following volumes and values of maize purchased from smallholders:

**Table 3: Volumes and Values of Purchases from Smallholders**

	Volume (t)		Value (millions CFA Francs)	
	Target	Achieved	Target	Achieved
Maize	4,500	1,502	816.8	767.3

## DETERMINING MAIZE QUANTITIES AND MONITORING STORED STOCK

The following activities were implemented in preparation for consolidating maize production surpluses for a group sale:

- Determination of the quantities the producers will need to commercialize to ensure the reimbursement of input loans. This assessment was executed based on local market maize prices.
- Monitoring quantities of maize stored based on the amount of credit each farmer needs to repay.

The table below shows the amount of maize that needs to be sold to repay the loans:

**Table 7: Stored Quantities of Maize**

Location	Name of FO	Number of beneficiaries	Loan Amounts in (CFA Francs)	Maize quantity (t)	Stored quantity (t)
Sikasso	12	528	72, 871, 956	1,041	494
Bougouni	13	435	79, 175, 758	732	690
<b>TOTAL</b>	<b>25</b>	<b>963</b>	<b>152,047,714</b>	<b>1,773</b>	<b>1,184</b>

## ESTABLISHING BUSINESS RELATIONS BETWEEN PRODUCER ORGANISATIONS AND WHOLESALERS

As part of facilitating FO maize sales, the program organized business meetings among producers, major cereal processors, and wholesalers. The program, furthermore, facilitated the price negotiation meetings and purchase contract agreements. Below is the list of processors and traders that have established business links with producers.

**Table 7: List of traders and processors identified for the marketing of maize**

Region	Customers	Categories	Types	Targeted cereals
Bamako	COGETRAM	Processor	Wholesaler	Maize
Bamako	Grands Moulins	Processor	Wholesaler	Maize
Bamako	Moulins du Sahel	Processor	Wholesaler	Maize, millet/sorghum
Bougouni	Abou	Trader	Semi wholesaler	Maize
Koutiala	Sidiki Badian Doumbia	Trader	Wholesaler	Maize, millet/sorghum
Sikasso	Kalilou Diallo	Trader	Wholesaler	Maize, millet/sorghum
Sikasso	Mariam Coulibaly	Trader	Wholesaler	Maize, millet/sorghum

The meeting yielded the following results:

- The signing of a contract for 373 MT of maize between Bougouni producers and Sidiki Badian Doumbia, a wholesaler from Koutiala;
- The securing of a trading MOU between Larasso cooperative (Sikasso) and Kalilou Diallo, a wholesaler from Sikasso, for 101.2 MT.

The overall sales rate of maize, including contract-based and market-based ones, reached 1,502 MT this quarter. Sales reached 33.4% of the target set for the 2010 campaign. Bougouni organizations sold 577 tons and Sikasso district's organizations sold 925 MT. More sales will be done in the next quarter.

The gross margin achieved is higher than the 2010 target, at 145,000 FCFA/ha. The producers achieved this year a gross margin of 248,000 FCFA/ha. This improvement is due to increases in yields and selling price in both production areas. The program's estimate had targeted an average sale price of 80,000 FCFA/ton whereas purchase prices from producers reached 110,000 FCFA/MT on the average. Thus, the gross margin achieved in Sikasso amounts to 248,000 FCFA while that of Bougouni amounts to 266,265 FCFA or an average of 257,000 FCFA.

### **INSURANCE AND QUALITY MONITORING OF STORED MAIZE**

Financial organizations and potential purchasers expressed their concerns about maize quality during a marketing meeting among producers organized by IICEM's Sikasso office. They specified their requirements on moisture levels, impurities, and grain size.

In collaboration with the Food Technology Laboratory (FTL/LTA) of the Institute of Rural Economy (IER), IICEM organized a quality control visit to Sikasso and Bougouni in order to make sure that warehouses comply with the quality requirements specified by customers. Samples were taken from the stocks of different sites and analyzed by the LTA. The analyses showed that all the samples complied with the standards relating to moisture level. However, some efforts remain to be made at the level of impurity and grain size, out of which more than half of the analyzed samples do not comply with the standards.

### **IMPROVING PRODUCTIVITY**

The total volume of maize produced by IICEM supported farmer organizations in Sikasso and Bougouni districts reached 6,976.3 MT, thus exceeding the 2010 target (which was 5,000 MT) by 139 %. This surplus was due to yield increases, which reached 3 MT per hectare compared with the expected yield of 2.5 MT per hectare. This increase in yields was partly due to the use of improved seed supplied and subsidized by the program. Another contributing factor was the timely use of inputs obtained by support of the BNDA funding ensured by the program's guarantee fund. Most importantly, the producers benefited from IICEM's technical support, which led to the

implementation of good agricultural practices. In 2010, 27 farmer organizations received services from the program's maize value chain, which represents an achievement rate of 96%.

### **SUPPORTING AN ENABLING ENVIRONMENT FOR AGRICULTURE AND TRADE**

	<b>Goal 2011</b>	<b>Southern Regions</b>	<b>Achieved</b>
<i>Number of participants in trade and investment trainings</i>	50	28	56%

# HORTICULTURAL PRODUCTS

## IMPROVING PRODUCTIVITY

In the northern regions, three implementing partner NGOs worked with producer organizations to improve production and productivity of horticultural crops: RCGOP, PEENAL, and CONFIGES. They reported the following contribution to progress against certain indicators this quarter:

Indicator	RCGOP	PEENAL	CONFIGES	Total
<i>Number of vulnerable households benefiting directly from IICEM assistance</i>	126	141	50	317
<i>Number of producer organizations benefiting directly from IICEM assistance</i>	6	3	1	10*
<i>Number of women's organizations/associations assisted as a result of IICEM assistance</i>	3	2	1	6
<i>Number of individuals who have received short-term agricultural sector productivity training</i>				17

\* The delay in seed supply compelled farmer organizations to use other commodities in order to keep up with the campaign, so the program provided seeds for a group of volunteers.

In order to increase the productivity and income of women involved in horticultural crops, IICEM focused on a large-scale test of horticultural products with women's organizations. Following the test, IICEM introduced five new horticultural products, which are aimed at responding to market demand in the Bamako region. These new varieties were selected due to their year-round availability since they are resistant varieties and adapt to different seasons.

In the south, IICEM trained women from Zoloko and Finkolo Ganadougou on good nursery practices, proper garden bed making, and appropriate transplanting. A total 150 women, including 75 in Finkolo Ganadougou and 75 in Zoloko, participated in the training. Women in these areas have established nurseries for horticultural produce including cabbage, tomato, sweet pepper, and carrots.

Furthermore, during this quarter IICEM carried out a training-of-trainers on good practices for horticultural production, organic agriculture, and food quality. There were about 20 participants in the training, including representatives from GREFA, CONFIGES, PEENAL, RCGOP, ODRS, OPIB, DNA technical services, and the private company AID-SA, as well as six producers who are members of gardening cooperatives in the Hamdallaye ACI 2000 neighborhood of Bamako. Many documents and guides on different themes addressed were distributed to participants. The training included both theoretical and practical elements. Each of the 20 participants must pass on the knowledge acquired to their respective organizations.

# POTATO

## IMPROVING ACCESS TO MARKETS

Harvests were just beginning in late February. The program will report on potato commercialization data next quarter.

## CONSOLIDATING GROUP SALES BY STRENGTHENING THE TECHNICAL SKILLS OF MARKETING COMMITTEES

As part of improving the organization of potato marketing and ensuring the prompt repayment of BNDA loans for inputs, the program reinvigorated and strengthened capacity of marketing committees and monitored potato marketing. Furthermore, 45 potato producers in the Timbuktu region, including 16 men and 29 women, received training on group purchases, sales techniques, cost-price calculations, pricing, and producing balance sheets and incomes statements.

## PROMOTING POTATO EXPORTS IN THE SUB REGION

The political turmoil in Ivory Coast slowed down potato imports from Europe into the Abidjan market, causing a supply shortage and boosting sub-regional demand for potatoes. The program, in collaboration with URCEP traders, contacted Ivorian retailers to define sales and shipping requirements so Malian farmers and exporters could take advantage of the market opportunity. Shipments were organized in January, aimed at testing security measures and the repatriation of funds from sales. The results overwhelmingly showed that Malian potatoes were well appreciated in the Abidjan market, particularly given the absence of European competitors. It is hoped that Malian producers have thus gained a longer-term foothold in the Ivorian potato market.

## IMPROVING PRODUCTIVITY

Activities to increase potato production and productivity in the north contributed to achieving the following results for the quarter (“Goal” represents the portion of the overall project target assigned to the regional project for the relevant value chain):

<b>Indicator</b>	<b>2011 Goal</b>	<b>North</b>	<b>% of Goal Achieved</b>
<i>Number of vulnerable households benefiting directly from IICEM assistance</i>	542	746	138 %
<i>Number of producer organizations benefiting directly from IICEM assistance</i>	50	34	68 %
<i>Number of individuals who have received short-term agricultural sector productivity training</i>	300	46	15 %
<i>Number of women’s organizations/associations assisted as a result of IICEM assistance</i>	5	28	560 %

Activities to increase potato production and productivity in the south contributed to achieving the following results for the quarter:

Indicator	2011 Goal	South	% of Goal Achieved
<i>Number of agricultural firms benefitting directly from IICEM assistance</i>	3	2	67 %
<i>Number of persons with increased adaptive capacity to cope with the impacts of climate variability and change as a result of IICEM assistance</i>	130	128	98 %

### **INCREASING THE VALUE OF LAND IMPROVED THROUGH THE CONSTRUCTION OF DAMS IN THE PRODUCING ZONES OF ZOLOKO AND M'PEGNESSO**

Building on recent work to increase the surface area rehabilitated for agricultural production by building the small dams in Zoloko and M'Pègnesso, the program facilitated access to inputs (fertilizers and seeds) for 128 farmers in those areas. The surface area under cultivation is 66.4 ha, comprised of 49 ha in M'Pègnesso and 17.4 ha in Zoloko.

### **FACILITATING PRODUCER ACCESS TO INPUTS**

As part of facilitating access to inputs to producers in the north, IICEM implemented a group purchase strategy. As a consequence, producers in Mopti paid for 23 boxes of 30 kg of *MONDIAL* seed variety and producers from Gao paid for 88 boxes of 25 kg (46 boxes of *Pamina*, 41 boxes of *Spunta* and 1 box of *Sahel*) from Sikasso suppliers. Similarly, Timbuktu producers bought 244.5 boxes of seed from local suppliers, supporting production on 14.5 ha in Timbuktu and 1.4 ha in Gao.

### **DEMONSTRATION TESTS ON GOOD POTATO PRODUCTION PRACTICES AND DEVELOPMENT FOR WOMEN FARMERS**

IICEM subsidized the introduction of two new varieties of potato seed for 18 producer organizations - five in Mopti, six in Timbuktu, and seven in Gao. The project aimed at conducting demonstration trials using 'best practices' in potato farming. The trials were initiated in December 2010. In total, IICEM supported trials on 2.5 ha in Mopti, 2.3 ha in Timbuktu, and 1.7 ha in Gao. The varieties tested were *Mondial*, *Liseta*, and *Spunta*.

### **IMPROVING FINANCIAL SERVICES**

For the project year to date in the southern regions, IICEM has supported 41 loans in the sector totaling 528,774,000 CFA Francs. IICEM has also supported 45 loans year-to-date in the north. These activities are described in more detail under the Enhancing Financial Services section starting on page 20.

# SHALLOT

## IMPROVING ACCESS TO MARKETS

Indicator	2011 Goal	Achieved	% of Goal Achieved
<i>Number of processors who have adopted new technologies or practices</i>	5	5	100 %
<i>Volume of new products produced with new processing techniques</i>	500 MT	128 MT	9 %

### MONITORING SHALLOT MARKETING AT THE NATIONAL LEVEL

Wholesalers, retailers, and intermediaries purchased a total of 50.1 MT from project-supported producers, including 28.4 MT of fresh product and 21.7 tons of processed product. The price for the purchase of the fresh shallots fluctuated from 225-350 CFA Francs/kg. The average price was 287.5 CFA Francs/kg. The price for processed shallots varied between 250-2,000 CFA Francs/kg with an average price of 1,125 CFA Francs/kg.

### MONITORING SHALLOT MARKETING AT THE SUBREGIONAL LEVEL

An IICEM partner trader sold four MT of fresh Malian shallots in the Ivory Coast at a price fluctuating between 600-750 CFA Francs/kg. The average selling price was 675 CFA Francs/kg. Total sales amounted to 2,700,000 CFA Francs.

### PROMOTING A GROUPED SALES AND PURCHASE STRATEGY

In Timbuktu, 15 people, including eight women, received training in organizing group sales and purchases. The objective of the training was to build the capacity of farmer organizations to improve efficiencies via group seed purchases as well as in shallot marketing through group sales.

### BUILDING AND EQUIPPING A STOREHOUSE AND A WAREHOUSE

A total of seven store houses for shallot preservation are being constructed on the Dogon Plateau in Boro, Sassambourou, Kediely, and Pelou, and in Timbuktu in Hariboro, Taborack, and Mekore. The selection of building material suppliers and builders has been completed, as well as the development of purchase orders for payment advances to start the activities. Memoranda of understanding have been concluded between beneficiary farmer organizations and IICEM in order to define the responsibilities and obligations of both parties during the building and operational processes of the facilities.

## IMPROVING PRODUCTIVITY

Indicator	2011 Goal	Achieved	% of Goal Achieved
<i>Volume of targeted products</i>	2,310 MT	6.2 MT	.27 %
<i>Number of new technologies or management practices available for transfer</i>	3	2	67%
<i>Number of vulnerable households benefiting directly from IICEM assistance</i>	1,400	1,137	81 %
<i>Number of organizations benefiting directly from IICEM assistance</i>	26	36	139 %
<i>Number of women's organizations/associations benefiting directly from IICEM assistance</i>	9	15	167%

The 6.22 MT of shallots produced represents the amount collected and stored during the quarter. Harvest and collection are currently in progress. The gross margin will be determined at the end of the harvest.

Production concerns rainy season onion tests undertaken in Bandiagara, Timbuktu, and Gao areas where the total yields were 6.2 MT, of which 0.8 MT are from The Dogon Plateau, 5 MT from Gao, and 0.4 MT from Mopti. The average gross margin per hectare obtained at the end of the rainy season onion tests was 503,341 CFA Francs/ha, derived from 966,775 CFA Francs/ha in Gao, 303,250 CFA Francs/ha along the Dogon Plateau, and 240,000 CFA Francs/ha in Mopti.

In Timbuktu, 1,112 vulnerable households benefited directly from IICEM interventions, which included trainings, technical support, and technology diffusion through improved seed. In Gao, 25 households received support from the IICEM program through the introduction of the rainy season onion variety. In total 1,137 vulnerable households benefited directly from IICEM interventions during the quarter. In northern Mali, 36 farmer organizations received direct assistance from the project during this period. In the Dogon Plateau, 15 organizations benefited from trainings on improved production, processes, and conservation of fresh and processed shallots. Another 15 organizations from Timbuktu, four from Mopti, and two from Gao received training on improving shallot productivity. Fifteen of those organizations were women's cooperatives/associations.

### INTRODUCING SHALLOTS INTO TIMBUKTU AND GAO IVPS

IICEM facilitated access of Timbuktu and Gao cooperatives to shallot seed to cultivate 0.5 ha farming per IVP. However, given the delay in seed procurement by Gao producers, recipients decided to wait for the rainy season to sow. In Timbuktu area, out-planting is complete.

## IMPROVING FINANCIAL SERVICES

### FACILITATING COOPERATIVE TO GET ACCESS TO FINANCE FOR INPUTS

IICEM established a monitoring system as part of facilitating the repayment of loans granted to cooperatives who are ULPTE members. This arrangement helped ULPTE follow up on repayment of 50% of its agricultural season credit, which reaches maturity on May 30, 20011. Thus, by February 2011, it repaid 6,983,485 CFA Francs, or 47% from the total loan amount contracted totaling 15,175,308 Francs CFA including interest, which benefited nine farmer organization members of ULPTE.

In the Mopti area, a request for finance was submitted to the BNDA, with IICEM assistance, on behalf of a shallot producer from Sio Commune. Additionally, another shallot producer received a loan of 1,881,000 FCFA to be repaid over eight months.

# TIGER NUT

## IMPROVING ACCESS TO MARKETS

### BUILDING PRODUCER CAPACITY IN HANDLING AND SORTING

IICEM carried out some activities aimed at improving tiger nut quality in its effort to control infestation by the *Aspergillus* fungus (preventing contamination with an aflatoxin), to help producers improve tiger nut sales, and earn higher prices for better quality product. The program trained producers on good practices for tiger nut storage, sorting, handling and packaging according to the quality requirements specified in the contract of the partner exporter. Moreover, IICEM provided support to establish a quality control monitoring committee for tiger nut exports, and developed scopes of work to select building material suppliers for the construction of tiger nut storage warehouses.

In total, 305 producers from 20 cooperatives participated in a 'best practices' training for drying, sorting, and packaging of tiger nut. The beneficiaries of these training sessions were able to improve their product quality and strengthen their negotiations in the marketplace. They signed a delivery contract of 500 MT of tiger nut seeds with a Malian exporter for a value of 240,000 CFA Francs per MT, compared to 210,000 FCFA per MT received last season, which represents an increase of 14.5%. In addition, measures have been initiated to facilitate the procurement of appropriate harvest and post-harvest equipment in order to prevent breakage and decrease the challenges and duration of harvest and post-harvest activities.

### MONITORING TIGER NUT EXPORTS

During this quarter exports amounted to 260 MT, for a total value of 62,400,000 FCFA. IICEM-supported producers sold a total volume of 170 MT of tiger nut in sub-regional markets as well, including 70 MT to Liberia, 40 MT to Ivory Coast, and 60 MT to Senegal. The total value of these sales was 35,700,000 CFA Francs.

## IMPROVING FINANCIAL SERVICES

In order to encourage tiger nut sales, the IICEM supported a local buyer, Malian exporter Harouna Konaté, in drafting a credit request for working capital from the BNDA. A funding contract of 21 million CFA Francs was signed between BNDA and Mr Konaté, which is backed by the project's loan guarantee fund with the BNDA. This funding will help the exporter advance payment for tiger nut deliveries made by producers and avoid payment delays as in previous years.

# MANGO

## IMPROVING ACCESS TO MARKETS AND TRADE

### MONITORING DRIED MANGO MARKETING ACTIVITIES AT NATIONAL AND SUB-REGIONAL LEVELS

During this quarter, the core activity concerned monitoring the delivery of dried mangoes to markets prospected over the past two quarters with IICEM assistance, including markets in the sub-region (Benin and Burkina Faso) as well as national markets, specifically Bamako supermarkets. Sales in national and sub-regional markets reached 1 MT, including 375 kg sold by Kéné Yiriden to a buyer in Benin, 400 kg sold by EIG/AGSA, and 225 kg sold by USTAKO. All sales were priced at 3,000 CFA Francs/kg.

IICEM's assistance to dried mango businesses has helped the businesses become more profitable and expand. These mango processors in turn have created and sustained 145 seasonal jobs for unskilled labor. Women fill 124 of these jobs. More about the impact of this employment on workers can be found in the success story in the Annex of this report.

### TEST SALES OF DRIED MANGO TO GERMANY AND FRANCE

Seeking to diversify dried mango markets, IICEM-assisted processing units sent promotional shipments of 200 kg of dried mangoes to Germany and France. The German client approved of product quality and appears ready to develop consistent business relations with IICEM-supported processing units.

### FACILITATING THE COMAFRUIT SUPPLY SYSTEM FOR DELIVERY OF QUALITY MANGOES

IICEM's efforts to facilitate the establishment of a COMAFRUIT supply chain led to a series of training sessions aimed at increasing producer awareness of mango in Sikasso, Koulikoro, Bougouni, Yanfolila, and Kita areas. This activity was carried out in collaboration with the Sikasso collectors' association, cooperatives, the mango producer union, and fresh mango sales companies SCOFLES and Mali Yiriden. In these meetings, participants discussed prices, collection center procedures, and mango volumes per production zone. The farmgate price was fixed at 25,000 CFA Francs per ton, and volumes to be delivered from each zone were set at 4,000 MT for Bougouni, 2,000 MT for Yanfolila, 3,000 MT for Kita, and 6,000 MT for Sélingué.

### MONITORING THE STOCKING CENTER BUILDING WORK AND QUALITY

Thanks to the project's financial and technical assistance, the processors' associate has been equipped with a center, which responds to the quality and storage requirements for processed mangoes. Construction was scheduled to finish this quarter, but due to some necessary modifications made to the building funding became a problem. Making this center functional will help resolve difficulties related to the stocking and quality control monitoring for dried mango.

### MONITORING CERTIFIED ORGANIC MANGO ORCHARDS AND ASSISTING PRODUCERS IN RENEWING CERTIFICATION

More than 100 mango orchards applied for the renewal of their organic certifications. Project activities focused on assisting the producers in establishing a system of documentation and compliance conforming to good production practices. This helped producers get their certificates renewed, which allowed organic mango exporters and processors to receive certified raw materials in time for the 2011 harvest season.

# FISH FARMING AND RICE-FISH FARMING

Indicator	2011 Goal	Achieved	% of Goal Achieved
<i>Number of new technologies or management practices available for transfer</i>	2	1	50 %

## CONDUCTING AND MONITORING DÉMONSTRATION TESTS

Partner NGO PEENAL continued monitoring test sites for integrated rice and fish farming in the Mopti region. In consultation with the program's aquaculture specialist, field agents and beneficiaries monitored the weight of *Tilapia nilotica*, a prolific species. In Kouakourou, a net weight increase was recorded. In Korientzé, a slight decrease in fish weight was observed, most likely due to lax adherence to the IICEM-recommended technical specifications. Also of note, to create synergies and maximize cost efficiencies, the program delayed introduction of catfish to the Korientzé production system, which is typically done to control explosive populations of tilapia that threaten the balance of the pond/paddy. This allowed for the second generation of tilapia fingerlings to be harvested at the Korientzé site and be transferred to stock the Kouakourou site.

During the quarter, the program monitored the final harvest of the Mamassoni demonstration pond constructed in partnership with an association of young miners who sought alternative income sources following the closing of the Morila Gold mine. The new fish pond generated 479kg of fish and \$800 in revenue. The success story for this activity is in the Annex at the end of this report.

# ENHANCING FINANCIAL SERVICES

Indicator	2011 Goal	Achieved	% of Goal Achieved
<i>Number of IICEM-supported special funds loans issued this year *</i>	150	43	%
<i>Value of IICEM-supported special funds loans issued this year *</i>	700M CFA Francs	550 M CFA Francs	%

\*Depicts loans supported by the loan guarantee fund only; IICEM also facilitates access to finance for beneficiaries outside of the loan guarantee fund.

## **LOANS ISSUED TO IICEM PARTNERS DURING THE QUARTER**

IICEM facilitates access to finance in two ways: 1) with the backing of a loan guarantee fund, especially for new, credit-worthy recipients, or 2) directly, without the backing of a loan guarantee fund, but through playing a consultative role advising beneficiary organizations on technical matters as well as loan repayment, which increases the bank's comfort in issuing loans. Combined, IICEM helped facilitate access to 550M CFA Francs finance for 43 organizations.

The loan guarantee fund at the BNDA backed two loans:

- A loan for 20M CFA Francs to a tiger nut exporter, to assure the production and supply of quality tiger nuts from Producers in the Sikasso area; and
- A loan for 2M CFA Francs to a vegetable grower in Sio (Mopti region).

IICEM facilitated access to finance outside of the loan guarantee fund for 41 partner organizations in Sikasso for a total value of 529,774,000 CFA Francs, broken down as follows:

- Three URCEP cooperatives received KAFO JIGINEW loans totaling 24,065,000 CFA Francs;
- Thirty-eight SICA cooperatives and other cooperatives received BNDA financing for an amount of 504,319,000 CFA Francs.

# CROSS-CUTTING ACTIVITIES

## NATURAL RESOURCE MANAGEMENT, BIODIVERSITY CONSERVATION AND CLIMATE CHANGE ADAPTATION

### DUNE FIXATION IN GOBI

The continuation of dune fixation activities in Gobi planned for this quarter following the harvest period in fact did not resume due to a lack of access to *Leptadenia* and *Euphorbia* cuttings to support the activity. The activity has been postponed for the fall period when it will be easier to supply the materials to the village by truck.

### SIGNING LOCAL AGREEMENTS

During this reporting period, stakeholder signed two community management agreements, one in Timbuktu and one in Baye (Mopti). This increases the achievement rate from 23 to 37%.

## TRANSPORT AND TRADE FACILITATION

### LOGISTIC COST STUDY FOR MILLET/SORGHUM, MAIZE, AND RICE

Two teams carried out the surveys for this study along different road corridors corresponding to major trade flows. A team composed of representatives from CARANA Corporation in Washington and USAID's regional program E-ATP conducted the surveys along the Ouagadougou, Bobo-Dioulasso, Sikasso, Koutiala, Ségou, Niono, and Bamako corridors.

Another team composed of IICEM's Transport/Trade Specialist and three assistants for data collection conducted the surveys along the Bamako-Kayes-Kaolack-Dakar and the Bamako-Kankan-Conakry corridors. The surveys extended from January 28 to February 28, 2011. Following data analysis, a study will be published stating the current situation and making strategic recommendations to improve trade and commerce along these key corridors.

## PROMOTING GENDER-EQUITABLE OPPORTUNITIES IN VALUE CHAIN DEVELOPMENT

IICEM's gender specialist and an Abt Associates gender specialist drafted an assessment to better inform program activities targeting the millet/sorghum value chain. The assessment followed USAID's manual, *Promoting Gender Equitable Opportunities in Agricultural Value Chains*. Findings were presented to IICEM staff members who provided comments and observations in order to improve the document. Additional focus group research will be done to strengthen and finalize the assessment for submission to USAID.

## BUILDING CAPACITY IN VALUE CHAIN DEVELOPMENT

### COMPLETING THE MAIZE VALUE CHAIN STUDY

IICEM's capacity building specialist continued strengthening maize value chain study started by consultant Charlie Stathacos. The specialist reviewed available documentation and performed data collection with the ministry of agriculture and ECOFIL, a research organization within IER.

## **MONITORING RICE AND SHALLOT VALUE CHAIN STUDIES IN THE MOPTI REGION**

IICEM conducted surveys on the rice value chain in January in eleven localities of the Mopti region. The shallot value chain study started at the end of January and covered Bandiagara and neighboring villages.

The rice and millet/sorghum value chain specialists and value chain assistants analyzed field data from the surveys and developed the rice value chain study for the Mopti region. The study, which will be published next quarter, will offer valuable information on the rice value chain and will provide clear recommendations to the project in terms of strategic initiatives, helping increase productivity, efficiency, and profitability of rice in Mali.

## **TRAININGS**

The first workshop took place in Sikasso from November 30th to December 1st 2010 and the second one in Mopti, from January 31 to February 1st 2011. During these two sessions IICEM focused on building the organizational and institutional capacity of its own technical team and local implementing partners. The workshops focused on five modules: (i) IICEM's value chain approach, (ii) value chain selection, (iii) value chain mapping, (iv) value chain analysis, and (v) design for competitiveness and action plan development.

The ultimate objective for each workshop was to ensure that IICEM technical staff and its partners focus their efforts on making targeted value chains more competitive. The workshops also helped provide participants with some tools necessary for developing a value chain study. The training sessions also enabled the participants to brainstorm on constraints and opportunities related to the targeted value chains in the Mopti and Sikasso regions. Appropriate action plans were elaborated at each workshop for the 2011 – 2012 agricultural season.

# ANNEX: SUCCESS STORIES



## SNAPSHOT

# Opportunity Knocks for Rural Workers

### Support to the mango sector generates vital opportunities for rural unskilled laborers



Photo: by Dana Starkey, Abt Associates

*USAID's support to the mango processing company G.I.E. AGSA enabled it to expand its operations and hire employee Maimouna Ouatarara. Ouatarara's new job offers her a stable salary of \$60/month – income that is higher than any she has ever earned before. The new income provided her with investment capital to help her mother start a business where Maimouna will work in the off-season. She dreams of owning her own processing business one day.*

*USAID's support to four local agribusinesses helped the companies expand their operations, resulting in 145 new jobs for unskilled laborers.*

#### Telling Our Story

U.S. Agency for International Development  
Washington, DC 20523-1000  
<http://stories.usaid.gov>

In Mali, 89% of the population lives in rural and semi-urban areas, with a majority depending on the local agricultural sector for food and income. To boost rural livelihoods and spur economic growth, USAID's Integrated Initiatives for Economic Growth assisted four mango processing companies to better respond to international market demand. Through tailored technical assistance, training, and access to finance, IICEM helped the companies establish solid business plans, find financing for new equipment, identify new markets, and meet hygiene and quality control standards. IICEM also worked with producers to gain organic certification, a vital asset to access high-value markets. As of 2011, these four businesses operate profitably and support 145 seasonal, unskilled jobs. Women fill 124 of the 145 jobs. Of the 145 hired, some employees have never held a job before. Others worked unstable, low paying jobs, such as street food vending, earning a maximum of only \$30 per month if they worked seven days a week and sold high volumes every day. With such low income, they could not cover their family's basic health or education needs, and with low levels of education, had few alternatives.

Dried mango workers now earn approximately 30,000 FCFA, or about \$60 a month, working seven days a week in peak season. For many workers, this is the first time they have ever received a consistent monthly salary. With the additional income, they are able to send their children to school and buy school supplies, clothing, and medicine. Some women are investing in microenterprises. "I used a portion of my salary to purchase and resell vegetables, soaps, and clothing. Now I make more than 200,000 FCFA (about \$400) per month," said Sangaré Sitan Berthé, the sole wage earner in her family.

The businesses are diversifying and expanding their operations, which will support additional jobs. Youssouf Coulibaly, owner of the company Kéné Yiriden is adding 14 more jobs and two more months of operation with its new cassava drying and flour processing activities for a local baker. "The workers are always encouraging me to create more months of employment for them," he said, "I try to find ways, because these women are so poor. With this work they not only support their families but also send their children to school."



# SNAPSHOT

## Fish Farming: A New Gold Mine

### Fish farming creates alternative income and high-protein food for Sikasso's former miners



Photo: Dana Starkey, Abt Associates

*Young entrepreneurs sell fish raised at the new Mamassoni fish pond to a trader, who will sell the fish to neighboring villages. A group of former miners started the aquaculture project when they faced unemployment from the mine's closing, and requested help from USAID to make their project commercially viable.*

*USAID's introduction of improved fisheries management generated about \$800 in revenue from one test pond, identifying a sustainable alternative income and food source for former miners.*

#### Telling Our Story

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Faced with unemployment following the closing of the Morila Gold Mine, workers from Mamassoni on the outskirts of Sikasso worried about how they would support their families. About 20 young former miners established the Youth Cooperative of Craftsmen and initiated an aquaculture project, but their fish did not reproduce or grow big enough to become commercially viable. Having heard of improved fisheries practices being tested by USAID's Integrated Initiatives for Economic Growth in Mali program (IICEM), the miners approached IICEM for guidance.

IICEM immediately began working with cooperative members and other fish farmers in the area, to establish a new test pond conforming to the latest best practices in design, and helped the cooperative acquire higher-producing tilapia and catfish fingerlings for a test period. Then, over the next 230 days, IICEM's aquaculture specialist worked closely with the young miners and local fish farmers to train them in: making high-protein fish food from locally available millet husks blended with fish meal and peanut cake from oil processing; enriching the pond with cow manure; monitoring and controlling water quality; and conducting periodic harvests to monitor growth rates and adapt feeding regimes.

After only three months, the young men saw more and bigger fish in the new pond than in the old pond. By the end of the season, they harvested 479 kg of fish from the test pond, covering their families' fish consumption needs and selling about \$800 worth of fish to local residents and traders who sold fish in nearby villages. Pond manager Chiaka Traoré confirmed his satisfaction with USAID's help, observing that "with the practical knowledge we acquired about fish farming through the test we managed ourselves, we are sufficiently equipped to continue improving our business and evolve from miners to fish farmers. We are more secure in confronting the closing of the mine."

With their profits, the miners-turned-fish farmers invested in fingerlings for the next season and redesigned their old pond to conform to the improved standards of the test pond. Next year, IICEM will help the miners improve profitability and formalize the local fish market, which will ensure sustained and increased commercial viability of this new source of revenue and protein.