CENTRE AGRO-ENTREPRISE

Mali Sustainable Economic Growth

ANNUAL REPORT – YEAR THREE (2000-2001)
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SUMMARY

This report describes the results of activities carried-out during the period October 2000 through September 2001 by the Centre Agro-Entreprise (CAE). During this third year, efforts of the Centre were particularly focused on ***the improvement of processing methods*** and ***improvement of agricultural food product marketing***. The following products were supported through the integrated sector development programs:

- Livestock sector: marketing of live animals and animal/poultry feed;
- Fruit and vegetable and alternative product sector: mango, potato and shallot;
- Cereal sector: rice, maize and millet/sorghum.

In addition to these agricultural food products, the Enterprise Support Services (ESS) of the Enterprise Development Unit was used as a tool to address enterprise creation or development (business plans) for other products called New opportunities, such as Karité, Honey, Milk, Sweet peas, etc.

The implementation of promotion and marketing activities for agricultural food product sectors required the organization of ***demonstration tests*** and ***pilot projects*** in order to achieve skills transfer to agro-entrepreneurs.

The Centre considers demonstration tests on best practices for the processing or storage and sale of products as relevant strategies to achieve behavioral change among actors in the agribusiness sector. In order to disseminate the results of these tests among a larger number of agro-entrepreneurs, they were supported by ***a communications program*** (preparation and publishing of newsletters, developing and broadcasting micro-programs and magazines, organizing seminars and workshops).

In the field of ***enterprise development*** (capacity building, fund raising, counseling-support in business management), achievements during the first two years were consolidated during Year Three. Closer linkages were established between ***sector development activities*** and ***enterprise promotion*** activities, which were considered as crosscutting activities that were relevant to all sectors.

Thus, in order to better conduct demonstration tests and implement pilot projects, ***business plans*** were developed for those who benefited from these activities, so as to establish collaboration linkages between them and financial institutions. Moreover, permanent counseling-support was provided to the demonstration test and pilot project beneficiaries by the Centre's technical team, with support from its sub-contracting partners.

Under this counseling-support activity, a ***network*** of ***counseling, survey*** and ***consultant firms*** was established in order to foster sustainability of the Centre's activities through skills transfer to local institutions. At this level, there is also need for a capacity building role through training of trainers. The role of CAE is to assist network members with the

development of ***bankable business plans***, business management ***training modules***, in order to ensure the quality of contents and re-investment of skills acquired during the training sessions by the agro-entrepreneurs.

For the ***training component***, emphasis was rather placed on capacity building among entrepreneurs for production techniques and processing technologies, instead of more generic training in management and accounting. However, these training sessions on these generic themes were maintained in order to teach the modules which were already introduced.

Finally, collaboration with IER was consolidated in the area of business climate improvement. This helped further involve the Laboratories (the food technology laboratory – LTA - and the Animal Nutrition Laboratory - LNA) of this institution in the implementation of the Centre's demonstration tests. Private sector reinforcement and sub-regional trade improvement activities were pursued. Appraisal of the agribusiness sector was conducted in collaboration with the Ministry of Industry, Commerce and Transportation (MICT), which resulted in the development of an ***action plan*** for the promotion of agricultural food product sectors as well as ***promotional data sheets*** for ***promising projects***.

As during previous years, the ***partnership fund*** has been a useful mechanism that helped CAE, through ***sub-contracting***, contribute in creating and maintaining a dynamic approach and achieve a certain number of its objectives for sector development. Thus, the involvement of CAE partner institutions, ***consultant firms, service providers and NGOs*** in the implementation of activities designed by the technical team, and the resulting ***capacity building***, helped ensure further sustainability to CAE interventions.

Total commitments of the Partnership Fund for Year Three amounted to ***US$644,545***. These resources, committed through sub-contracting, supported sector or sub-sector development activities as well as capacity building for Small-scale Processing Plants and GOM institutions.

In the field of ***Monitoring/Evaluation***, during Year Three, CAE developed its ***Result Framework*** which defines the strategy for activity monitoring and the evaluation of their impact on the agribusiness sector. In addition, this document determines the ***Performance Monitoring Plan*** for implementation of the Monitoring & Evaluation system. This document was produced in order to better guide implementation of the Centre's activities and to follow-up progress achieved toward the attainment of the five Intermediate Results of SEG/USAID.

Following the development of this Result Framework, discussions were held with the SEG/USAID team which mainly helped correct the definition of certain indicators and the proposed targets. The final version of the document was submitted in June 2001. Since then, a table of indicator trends attached to the activity reports describes the results achieved during each reporting period.

The tables presented in this report describe the results achieved by ***Program Performance Measures (PPMs)*** during Year Three.

I. PROGRESS ACHIEVED TOWARDS INTERMEDIATE RESULTS OF SEG/USAID

This first chapter deals with the progress of result indicators, considering the two aspects (***processing*** and ***marketing***) of Intermediate Results 2 and 3 of SEG/USAID.

1.1. SEG/USAID Intermediate Result #2: Increased processing of agricultural food products (cereals, livestock and alternative products)

Table 1: Progress of result indicators

INDICATOR DESCRIPTION	MEASURMENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	ACHIEVEMENT %
Volume of paddy rice processed	Tons	2000	5000	250
Volume of maize processed	Tons	50	30	60
Volume of millet/sorghum processed	Tons	20	0	0
Volume of hides/skins processed	Tons	0	-	-
Volume of mangoes processed	Tons	0	-	-
Volume of shallots processed	Tons	28	21.6	77

The percentages of target achievement indicate that CAE has achieved its objectives in terms of volume of product processed. The most remarkable results were achieved in the processing of paddy rice due to the resuming of the test on the four small husking plants equipped with screening machines in the Office du Niger area. Production practices introduced through these tests and based on adequate management of the quality dimension, taking into account the requirements of targeted market segments, facilitated the production of products that were well appreciated by both merchants and consumers.

For paddy rice processing, it should be noted that since April 2001, an industrial plant started production with a theoretical capacity of 20,000 tons in Ségou (the GDCM company – "Grand Distributeur Céréalier du Mali" [Malian large-scale cereal distributor]) with support from CAE (***counseling-support in business management, support for business plan development, support for bank fund securing***). Investments made are sufficient and adequate to achieve usually accepted quality standards. The product is already available in the market and is sold under the trademark "GDCM – Riz de Luxe" at a factory-level price of FCFA 260,000 per ton.

The germ-removing test for maize helped process 30 tons of maize into high quality broken grains and flour, compared with initial planning for 50 tons. This test of maize germ-removing aimed at adding value to maize through introduction of germ-removing in the milling chart of small-scale village flour mills in the CMDT area. The objective was to improve product quality, mainly the quality of flour, and to adapt to market requirements.

As for shallot processing, the test actually concerned 21 tons, compared with initial plans for 28 tons. The gap may be explained by strict respect of standard organoleptic criteria of the "Echalotte Séchée en Tranches – EST" (dried shallot slices) from the Dogon Plateau by the time the product was delivered.

1.2. SEG/USAID Intermediate Result #3: Increased marketing of agricultural food products (cereals, livestock and alternative products)

Table 2: Progress of result indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	ACHIEVEMENT %
Volume of rice sold	Tons	1300	3000	231
Volume of maize sold	Tons	0	0	-
Volume of processed maize sold	Tons	50	20	40
Volume of millet/sorghum sold	Tons	80	0	0
Volume of processed millet/sorghum sold	Tons	1	0	0
Volume of hides and skins sold	Tons	0	0	-
Number of livestock sold	Number	380	926	244
Number of small ruminant sold	Number	4000	6650	166
Volume of mangoes sold	Tons	600	622	104
Volume of processed mangoes sold	Tons	0	0	-
Volume of shallots sold	Tons	25	0	0
Volume of processed shallots sold	Tons	3.5	2.7	77
Volume of potato sold	Tons	300	2781	927

Source: CAE

As was the case for, one of the most remarkable successes of the Centre in the area of marketing, during Year Three, was achieved through the sale of rice from the four sites. Significant improvement of the quality of rice presented on the four sites has created high demand on the local and even sub-regional markets. This positive and spontaneous reaction of the market indicates the existence of a market window that is not covered, neither quantitatively nor qualitatively, by the overall supply of local rice.

Essentially, it is the quality of processing in testing sites (better yields averaging 63% with maximums of 70% were observed; low rates of broken grains; adequate level of cleaning/whitening) which may explains the enthusiasm demonstrated particularly for the two plants at Coloni and Nango. Presently, it is estimated that 3,000 tons of white rice resulting from the services delivered by these sites in Year III of CAE, received average

quality premiums of 15 to 25 FCFA per Kg at sale. This additional income may also be explained by the high demand recorded in the test sites.

Another considerable result in the area of marketing during Year III came from sale tests for high quality fattened animals. Animal fattening and marketing activities carried-out during the period from March 2000 through September 2001 involved seven professional groups (over 150 professionals) considered as being among the "leaders" in the sector in the regions of Koulikoro, Sikasso, Ségou and Mopti. The goal was to develop a market for high quality balanced feed. The objective was to promote value added for fattened high quality animals through better management of production costs while using balanced feed and better planning of commercialization, targeting promising markets at the national and sub-regional levels.

To do so, animal fattening entrepreneurs developed a business plan and a marketing strategy and established a mechanism for monitoring production costs, in fact an integrated program to develop their enterprises. (*It should be noted that by the end of this activity, the BNDA expressed interest in examining campaign credit applications for five of the seven groups which participated in the program.*)

The overall turnover of these activities amounted to FCFA162,098,887, with an average gross profit of about 13.8% (20.35 for demonstration tests and 6.14% for marketing tests). Nine hundred and twenty six (926) animals were sold in Bamako (about 60%) and in Ivory Coast (about 40%) through this activity.

In addition, other professional groups in the sector, mainly in Mopti, solicited support from those professional groups which participated in this program in order to reinforce their technical skills and performance in the processing and marketing of high quality animal and to build their capacities for negotiations with financial partners.

For vegetable and fruit, the new mango trademark, "Dogon", created by four CAE-supported exporters and support provided to other exporters to help theme secure cardboard boxes, facilitated the exportation of 622 tons of mangoes towards European markets.

Out of the 3.5 tons anticipated for dried shallot sales, 2.680 tons were tested in the national market, in Bouaké and in Guinea. In Bamako, the channels that were prospected avoided the de-facto monopoly detained by Dogon merchants over the sale of shallot produced in the district of Bandiagara. In Bouaké, the wholesale market was retained as the focal point for shipments before they are dispatched throughout Ivory Coast. In Guinea, two wholesalers, established in the traditional markets, seem to be better positioned to receive the EST.

In order to facilitate the marketing of potato, stored or not stored, it was requested from partner NGOs ACOD and AMATEVI to provide support to potato producers to identify markets at the national and sub-regional levels. As part of this effort of establishing commercial relationship, the partners contacted village private operators (usual village-

level potato buyers) and formal national institutions such as "Mali Yiriden", specialized in vegetable and fruit marketing, in order to inform them about product availability in the ten villages.

Therefore, at the national level, contacts established with commercial agents facilitated sales in the ten villages for ***2.781 tons*** of potato, out of which ***2.657 tons*** were not stored; ***124 tons*** were stored for 3 to 4 months (of which ***59 tons*** were stored in the two prototypes of storage warehouse).

II. PROGRESS ACHIEVED DURING YEAR III, BY P.P.M.

This second chapter will discuss progress achieved, during the year, to reach the contractual objectives, that is, the nine (9) PPMs.

2.1. PPM 1: Dissemination of commercial and technical information

Participation in the drafting of the paragraph: *Information, Communication and Training Working Group***.**

Table 1: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Weekly price information newsletters published	#	100	48	48
Exporters using weekly price information	#	4	6	150
Operating devices for radio broadcasting of price information		2	2	100
Newsletters on techniques and technologies disseminated	#	3	2	67
Newsletters on regulatory texts, norms and standards	#	2	1	50
Web site visitors	#	1300	21760	167
Agribusiness entrepreneurs trained in the use of the Internet	#	70	24	34
Cyberspace visitors	#	500	773	155

Source: CAE

Referring to the rates of target achievement, increasing the availability of commercial (prices and quantities), technical and technological information about the agricultural food sectors has been successful under Work Plan III. For the second year, the number of visitors to the ***Agromali.com*** Web site (www.agromali.com) far exceeded our estimates. This indicates that our web pages have useful information. Six fruit and vegetable

exporters, compared with 4 initially planned, regularly used our newsletter on weekly prices, to decide between European markets. It should be noted that we recorded 28 subscriptions to this newsletter, most of which were from fruit and vegetable exporting enterprises.

2.2. PPM2: Increased volume of sales by agribusiness enterprises

Table 2: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Market surveys completed	#	3	0	0
Market prospecting completed	#	3	8	267
Market tests completed		5	8	160

Source: CAE

One of the Centre's objectives is to provide support to Malian exporters who are looking for new markets or who wish to increase their shares of usual markets. To this effect, market surveys, prospects and tests were planned under Work Plan III. Efforts were focused on market prospecting (for mango, shallot and potato) and market tests (for mango and shallot). At this level, the figures indicate that the estimates have been largely surpassed.

For mango, a survey tour to European markets (France, Germany, Britain, Netherlands) was organized by the Centre for the four exporters of the "DOGON" trademark mango, who later tested this new trademark in these markets, in addition to the Swiss market.

As for the higher quality dried shallot, it was tested in the national, Ivorian and Guinean markets.

2.3. PPM3: Improved processing techniques and technologies

Table 3: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Tested technologies	#	8	6	75
Agro-entrepreneurs trained in the new technologies	#	840	1269	151
Agro-entrepreneurs trained in quality improvement	#	20	24	120
Private operators who use those techniques and technologies introduced by CAE	#	173	1269	734

Source: CAE

Conducting demonstration tests in processing technology is an efficient means of skills transfer in the area of processing and storage best practice which was widely used by the Centre throughout Year III. Out of eight technologies planned for, six were tested. The two tests that were not completed concerned (i) the introduction of the stone-trap to clean millet/sorghum, due to the delay experienced by the Senegalese supplier in delivering the machine, and (ii) mango drying because the drying plant, which is still in the phase of feasibility study, did not start operations. Besides new technology introduction activities, the Centre also provides training to agro-entrepreneurs to help them better understand these new technologies. Figures indicate that all Centre estimates have been surpassed in this respect, because the high interest expressed by the beneficiaries for these demonstration tests.

2.4. PPM4: Management capacity building and support for funding

Table 4: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Agro-entrepreneurs trained in business management	#	400	2094	524
Agro-entrepreneurs using new management skills	#	340	204	60
Business plans developed and submitted to banks	#	21	18	86
Agro-enterprises having reliable accounting systems as a result of CAE support	#	3	3	100

Source: CAE

Training sessions were organized for capacity building in business management among the agro-entrepreneurs. The figures in Table 4 indicate great interest of beneficiaries for these training sessions, comparing achievement rates with initial estimates. A large number (204) of these entrepreneurs use the new skills acquired in order to better manage their enterprises.

CAE's SSE (Support Services to agricultural food Enterprises) aim at teaching enterprises sound management rules and facilitating their access to funding by creating sound and viable markets, establishing contacts among the agro-enterprises, local or international consulting firms and commercial banks. Thus, 18 business plans were developed by the SSE consultants and presented to local or sub-regional banks. Though our core activity is the development of business plans and support for fund raising for agro-enterprises, particular emphasis was placed on counseling-support to build management capacity and improve competitiveness in order to help Malian agro-entrepreneurs become creditworthy and competitive.

In addition, three reliable accounting systems were established in three enterprises and several working sessions were conducted to help the promoters reinforce or re-direct and streamline their project ideas or help them with practical aspects, such as the management of revolving funds or cash-flow.

CAE provided consulting firms with information and training tools necessary for any viable activity, through training or working sessions aimed at improving the quality of credit dossiers. Local banks were closely involved in this activity, 33 consultants or 8 representatives of financial institutions participated in these training sessions in Bamako, Ségou and Sikasso.

2.5. PPM5: Improved access of enterprises to funding

Table 5: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
New funding sources identified	#	1	1	100
Training seminars organized on funding sources	#	2	2	100
Banks contacted as part of awareness-raising about financing agribusiness	#	9	9	100
Business plans financed by banks	#	5	3	60

Source: CAE

The main constraint identified by CAE which impedes agro-enterprise development remains the access to funding, without which no development action can be consolidated. After identification of new funding sources, information obtained from these institutions is transmitted to the agro-enterprises through information seminars. For Year 3, two information seminars were organized after a new financial institution was identified, which was likely to support the agribusiness sector in our country. Nine national and foreign banks were contacted to consider financing projects submitted by CAE clients.

As a result of these efforts, three business plans received positive feedback from the banks and funds were released. These efforts undertaken by CAE helped mobilize funding for 3 projects in the total amount of 480 million FCFA.

2.6. PPM 6: Institutional support to IER and LCV

Table 6: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Accounting audits completed	#	0	0	-
Improvement surveys completed	#	0	0	-
Staff trained in business plan development	#	9	9	100
Manuals of accounting procedures developed	#	1	1	100
Sub-structures supported by IER's Business Plan Unit	#	4	0	0
Agro-enterprises with access to IER and LCV services	#	4	18	450

Source: CAE

The central element of institutional support provided to IER during Year 3, was the development of manuals of accounting procedures. Through this support, CAE wished to help IER obtain on a regular basis, research activity orders from clients and users of research results. With this new approach, research units need to integrate client research, production, delivery and monitoring of research activities in their contractual conditions. Thus, they may be able to manage new revenues for the development of research.

The Business Unit established within IER will pursue the development of business plans that are specific to certain research Centers and mainly to the Laboratory of Food Technology (LTA) and the Laboratory of Animal Nutrition (LNA). This step was planned to be achieved during Year III of CAE, however, delays in the establishment of the Central Business Plan Unit did not permit this.

As a result of some of the CAE's demonstration tests, which were carried-out in collaboration with some of IER's specialized centers, eighteen (18) agro-enterprises were able to access IER research results, particularly in the area of processing technologies.

2.7. PPM7: Reinforcing the role of private sector in agribusiness

Table 7: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Sectoral policy studies completed	#	1	1	100
Forums organized	#	12	4	33
Consultation framework facilitated	#	4	1	25
Professional groups assisted	#	37	32	86
Constraints analyzed and resolved	#	6	0	0

Source: CAE

One of CAE's objectives in to reinforce the role of the private sector in agribusiness. To achieve this objective, sectoral studies have been conducted, forums have been organized in order to validate results of these studies and further refine analyses of constraints identified during the studies.

Thus, during the third year, and in order to better refine reflection on agro-industrial sectors, CAE, at the request of the MICT through USAID, carried-out a diagnostic survey. This provided results that were discussed by all actors during a workshop held on February 5 and 6. The following may be noted as main results of the study:

1. Comprehensive analysis carried-out on twenty-two agro-industrial sectors, from production to valorization;
2. Development of an ***Action Plan*** aimed at overcoming the constraints, at the same time, it represents guiding strategies for promising sectors; and
3. Identification of priorities for each sector. Investment opportunities for the private sector and priority activities to be carried-out by the Government and support organizations are proposed.

After validation of the study during a national workshop, the next step consisted in multiplying and disseminating the study reports. Investment data sheets are already posted on CAE's Agromali Web site. Supplemental competitiveness studies are envisioned for certain products.

2.8. PPM 8: Harmonizing standards and regulations

Table 8: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Studies completed about constraints	#	1	0	0
Forums held	#	8	0	0
Constraints analyzed and resolved	#	7	0	0

Source: CAE

The main activity recorded as part of the harmonization of standards and regulations for Work Plan III was the establishment, in collaboration with CILSS, of an Observatory of Illicit Practices which impede exchange of agro-food products between countries in our sub-region. After the stage of study preparation, slowness occurred as a result of diverging positions between certain partners. It was proposed that:

1. A regional meeting be organized to launch the process, bringing together the chambers of commerce, transporter unions, interface networks and other operators who have freight, etc.
2. The process be re-defined, mainly in relation to Ivory Coast.

The establishment of this Observatory of Illicit Practice is considered as a pre-requisite for an operational system for transportation and transit. It should become an efficient tool that helps, on the one hand, to feed the dynamic of awareness-raising with relevant information and, on the other hand, to make concrete recommendations that contribute in effective reduction of the constraints.

2.9. PPM 9: CAE performance monitoring and evaluation

Table 9: Rates of achievement of performance indicators

INDICATOR DESCRIPTION	MEASURE-MENT UNIT	ANNUAL TARGET	ANNUAL ACHIEVEMENT	% OF ACHIE-VEMENT
Results Framework developed	#	1	1	100
Monitoring and evaluation reports written and disseminated	#	4	4	100

Source: CAE

After development of the Results Framework document, CAE has regularly informed USAID about the trends of activities through periodic activity reports. This report is the last in a series of four for the entire year.

SECTION I

INTRODUCTION

At the end of its third fiscal year, the Centre Agro Entreprises (CAE) is presenting in this report the results of activities carried-out during the period October 2000 through September 2001. The Work Plan, which served as a framework for implementation of these activities, was developed during the last quarter of year 2000 (October – November, 2000).

The participatory interactive approach was agreed-upon as the methodology for development of this Work Plan. This fostered, on the one hand, the involvement of all technical staff of CAE and, on the other hand, several mid-term discussion sessions and presentations with the SEG/USAID team. The provisional version of the document drafted following these consultations was presented to the SEG/USAID team in late November 2000.

Using the Logical Framework, which is a very useful tool for activity programming and monitoring-evaluation, the CAE technical team defined realistic but very ambitious benchmarks and result indicators in the Work Plan, in order to better measure the impact of the project. These indicators were defined in partnership with actors in the sectors and other organizations, after defining the main activities to be carried-out towards the achievement of specific objectives in the areas of:

- Improvement of agricultural food product processing;
- Improvement of the marketing of these products;
- Training of agro-entrepreneurs;
- Development of enterprises and support to help them access formal financing;
- Making commercial and technical information available;
- Improvement of the agribusiness climate through sectoral policy analyses and activities aimed at reinforcing the private sector actors working in the agricultural food sector.

Among the above mentioned areas, the Centre particularly focused its efforts, during the third year, on the improvement of the processing and marketing of agricultural food products targeted for agricultural food sector development. To this effect, several ***demonstration tests*** and ***pilot projects*** were implemented in order to facilitate the transfer of skills to agro-entrepreneurs. Demonstration tests on processing/storage best practice as well as product sale tests, should be considered as sound strategies to achieve behavioral change among agribusiness sector workers.

This may explain why importance is given to these tests and pilot projects during the third year, considered as a crucial period. Supported by effective communication means (preparation and publication of newsletters, preparation and broadcasting of micro-programs and magazines, seminars and workshops), these demonstration tests and pilot

projects helped and will continue to help the Centre, in the medium and long term, to prepare the basis for a new start-up in the agribusiness sector in Mali.

In addition to sector development activities, the achievements of the first two years in enterprise development (capacity building, fund raising, counseling-support) were consolidated during the third year. Close linkages were established between ***sector development activities*** and ***enterprise promotion activities*** which were considered as cross-cutting activities, touching on all other sectors. Thus, with the objective of improving the implementation of demonstration tests and pilot projects, business plans were developed for the beneficiaries of these activities in order to create collaboration linkages between them and financial institutions. In addition, permanent counseling-support was provided by the Centre's technical team with support from its sub-contracting partners.

Moreover, training activities for agro-entrepreneurs were pursued. However, emphasis was placed rather on capacity building among entrepreneurs in the technical areas of production and processing technologies than on more generic training in accounting and management. Such trainings were maintained, however, in order to teach modules that were already initiated.

In the field of agribusiness climate improvement, collaboration with IER was consolidated, thus further involving the laboratories (LTA and LNA) of this institution in the implementation of the Centre's demonstration tests. Private sector reinforcement and sub-regional trade improvement activities were pursued.

In order to bring CAE services closer to the target groups (agro-entrepreneurs) in the regions of Ségou, Sikasso and Mopti, branches (local offices) were established in Ségou and Sikasso in Year 2000. These two branches significantly contributed in the programming and close monitoring of Work Plan III activities **(cf. activity reports of the two branches in Annex 1)**.

This report, which presents details of the results of all activities, also includes the following chapters:

1. The first chapter describes progress in the implementation of sector development activities;
2. Chapter two discusses cross-cutting activities in the area of Information/Training and enterprise development;
3. The third chapter discusses activities for agribusiness climate improvement;
4. The fourth chapter describes the trends of expenditures under the partnership fund;
5. The last chapter discusses activity monitoring and evaluation.

SECTION II

AGRICULTURAL FOOD SECTOR DEVELOPMENT ACTIVITIES

The agricultural food products supported during the 3rd year through integrated programs for sector development, included the following:

- Livestock sector: sale of live animals and livestock/poultry feed;
- Fruit and vegetable and alternative product sector: mango, potato and shallot;
- Cereal sector: rice, maize and millet/sorghum.

In addition to these agricultural food products, the Enterprise Support Services (ESS) of the Enterprise Development Unit was used as a tool to address enterprise creation or development (business plans) for other products called New opportunities, such as Karité, Honey, Milk, Sweet peas, etc.

2.1. Search for new opportunities for livestock products:

Overall, the livestock sector contributes 10% to 12% in the Gross Domestic Product (GDP) and concerns about 70% of Mali's population as economic activities. The role of livestock in Mali's exports is even higher than its share in the GDP. The two main categories are live animals, which accounted for about 15% of exports, and hides and skins, which accounted for 1% to 2%.

During the last four years, live animal exports ranked third, after cotton and gold, in terms of currency value. In fact, since 1999, the value of live cattle exports has doubled, amounting to 85 billion FCFA in 2001. During the same period, the hides and skins sector experienced a slight growth, as the value of exports increased from 2.7 billion to 4.3 billion FCFA.

It is generally admitted that the lack of adequate nutritional sources to feed animals all the year round and the lack of a well-developed and regulated animal feed sub-sector, are among the main constraints that limit animal production and modernization of the livestock sector in Mali.

Consequently, commercial development of the animal feed sub-sector remains a key and strategic factor for modernization and increased value added for the livestock sector and, to a lesser degree, the cereal sector.

However, changing the animal/poultry sub-sector into a sector that is based on commercial production and efficient use of balanced high quality feed is a complex process. In terms of feed production, manufacturers need to be prepared to provide high quality and balanced feed constantly and at competitive prices. In addition, producers should have the necessary capacity to use these feed in an efficient manner that encourages performance and the planning of marketing in order to increase cost-effectiveness.

The key-issue for producers is to understand the advantages of high quality balanced feed and how to use them as efficiently as possible in order to reach production objectives. There is need to build capacity among producers to help them better manage their production enterprises, particularly in the new feeding practice, the understanding of production costs and the research and exploitation of markets for high quality products. In practice, such feed are products that are almost entirely new in the Malian animal feed market. Although efforts have been made to market nutritionally adequate feed for poultry and, to a lesser degree, for ruminants, the Malian animal feed market remains largely unstructured. In addition, feed and main feed ingredients are seldom submitted to analyses. Despite the existence of feed standards, these are rarely enforced and one would rarely find commercial feed that are clearly labeled for their nutritional contents.

In order to address this issue, the Year III program was composed of several elements that should converge, in the mid-term, towards an increase in the added value in the sector, as a result of sustainable development of processing enterprises by:

- Improving their performance in terms of animal production by making available to them new feeding practices (technical management) and balanced feed;
- Improving commercial performance through better planning of marketing (business plan) by reinforcement of the marketing channels for high quality animals; and
- Promoting investments in existing or new enterprises that would support economic growth in the livestock sector.

The basic strategy of the program was enterprise development, as illustrated by several activities including the following:

Components of the Livestock Program Related to Target Groups

Evolution of the Development of Livestock sector Agro-Enterprises

Private operators working in the informal sector	Professional groups working in the informal sector	Groups/professional Individuals working in the formal sector	Promoters/Entrepreneurs working in the formal sector
Counseling-support for investment projects	Animal fattening-marketing program • Technical support • Management support • Marketing support		(SSE) Business plan development and fund raising • New tannery in Ségou • One-day-old chick and poultry feed enterprise • Animal feed production plant
		Poultry feed quality control program	
		New market development	(SSE) Training: accounting, marketing strategy, production costs
Training of economic operators in management and improved feeding techniques	Training of professional groups in management and improved feeding techniques	Training of groups/ individuals in management and improved feeding techniques Training of private support institutions and resource persons	

Policy:
- Funding for commercial activities
- Commercial strategy for the sub-regional market

Policy:
- Adaptation and sustainability of state technical support
- Quality control for commercial products

The objective of this section of the report is to present a summary of the results achieved through activities that were carried-out during Year III in the livestock sector, constraints encountered and weaknesses observed during implementation as well as guiding lines proposed for Year IV of the program.

2.1.1. "Animal Feeding" Project

Animal Feed Plant

1. Operational Objectives

- To prepare and disseminate an investment booklet for establishment of an industrial plant for livestock and poultry feed production;
- To identify the promoter(s) and financial partners;
- To conduct a survey on the demand and supply of composed feed in the sub-region;
- To finalize the investment project document.

2. *Results Achieved*

- An investment booklet was finalized;
- A group of promoters (Malian and Belgian) was identified. We shared with them the feasibility study and the sub-regional market survey conducted by CAE. They are presently refining this study, following a framework proposed by the European Union, their potential financial partner;
- Through the SSE program, three important projects for the establishment of commercial enterprises for the production of livestock/poultry feed are under review for financing;
- A sub-regional market (Burkina Faso, Ivory Coast and Senegal) survey was conducted in order to assess: (1) market characteristics for high quality composed feed (competition and potentials for export towards Mali); (2) promoters – potential partners for investment in an industrial plant in Mali; and (3) potential sources for some of the ingredients (raw materials).

Overall, this study resulted in the following conclusions:

- Senegalese and Ivorian manufacturers are not sufficiently prepared to compete in the Burkinabe and Malian markets;
- Maize and cotton cattle-cake (about ¾ incorporation) is cheaper and/or of better quality in Burkina Faso and in Mali, in comparison with Senegal and Ivory Coast; and
- Senegalese and Ivorian manufacturers have high local demand in urban areas with high purchase powers, while the demand in Bamako and Ouagadougou reflect a less numerous and rather money-less population.

3. Guiding lines Year Four

During Year IV, this activity will be focused on the production of an investment booklet (in printed format) in the same framework adopted for follow-up of sector studies requested by the Ministry of Industry, Commerce and Transportation. Consequently, CAE is hoping to complete the investment booklet and to ask the Ministries of Rural Development and of Industry, Commerce and Transportation, with support from

SEG/USAID, to take responsibility for the identification of investors. The likelihood is high that this approach be supported, in collaboration with the livestock program of SEG/USAID.

Demonstration Tests for Balanced Feed

1. Objectives

These demonstration tests aimed at demonstrating to producers, the production-stimulating qualities of these feed products when they are used in monitored, but practical animal raising conditions. The goal is to create a clientele for the commercial high quality feed stuffs and to develop an operational activity for the promotion of animal feed products which could be integrated into the marketing program of an industrial plant for animal feed production.

Specifically, these demonstration test have three main objectives:

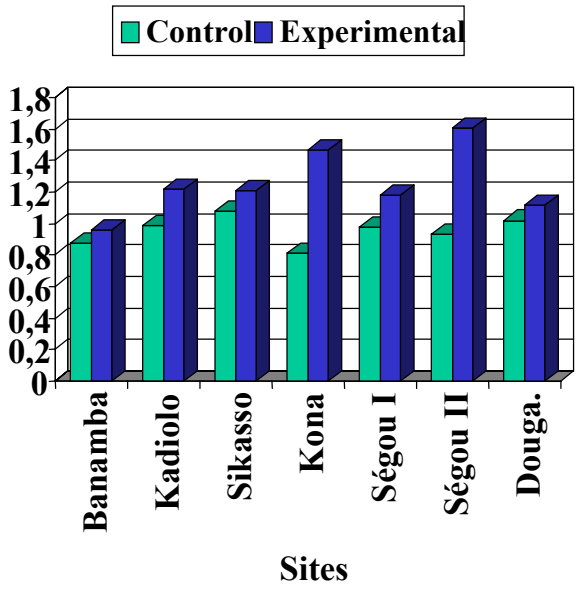
- To demonstrate for target producers the productivity improvement that results from the use of balanced and higher quality feed;
- To demonstrate for target producers, how feed and improved feeding practice may increase their incomes;
- To set the basis for development of a larger scale marketing program for the animal feed industry.

The tests were performed on six sites (Konna, Ségou, Sikasso, Kadiolo, Dougabougou and Banamba) with a total number of 292 animals.

2. Results Achieved

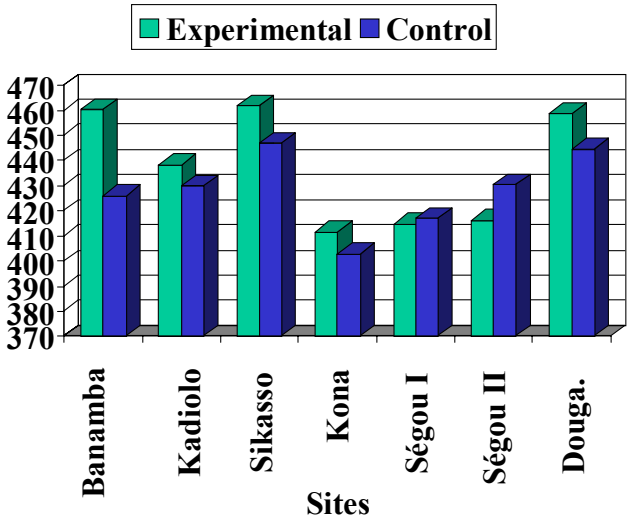
Regarding the pondered evolution and the average daily earning, the experimental lots had an average daily weight gain that was higher than the control lots (see Chart No.1 below). However, it should be noted that the weight gaining variation coefficients within each lot were very high, resulting in a reduction of technical and commercial performance of the animals. In fact, the management of small size animals proves to be difficult when there are larger size animals in the same paddock.

<u>Chart No.1</u>: Average Daily Weight Gain of Animals in Kg



Concerning the cost price of animals, it was observed on all sites that the costs recorded for experimental lots, where animal received the CAE condensed feed, were higher than for control lots (see Chart No.2 below). This may be explained, partially, by the use of the CAE condensed feed in larger proportions. In fact, considering difficulties at the beginning of the activity (three month delay), partners no longer believed that the test would start. When they were informed in mid-March of the release of feed, there was almost no more bush grass in Kadiolo, Sikasso or Ségou. Therefore, as the partners did not have any fodder, they fed their animals with the CAE condensed feed.

<u>Chart No.2</u>: Cost price of One Kilogram of Red Meat in FCFA

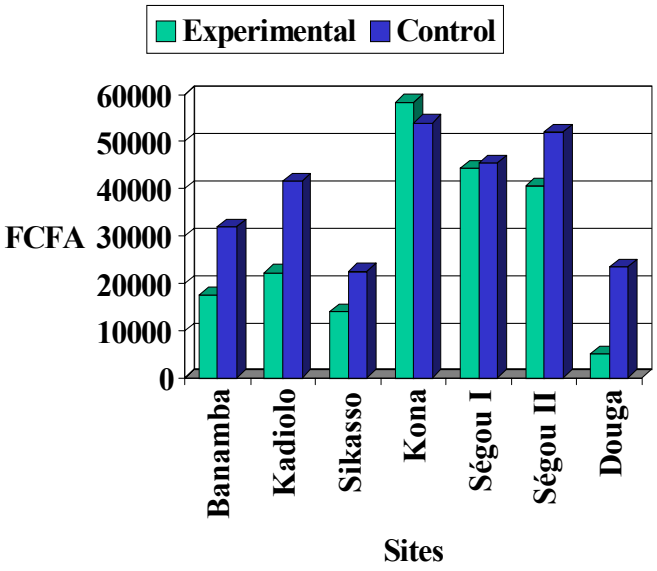


The gross profit margin earned was very low in Sikasso and Dougabougou. For other sites (see Chart No.3 below) it was quite interesting (ranging between 17,000 and 25,000 FCFA per animal). However, gross margins obtained with experimental lots were lower than with the control lots. This may be explained by the cost price recorded for the experimental lots, which was higher than that for control lots. This situation resulted from massive utilization of the CAE condensed feed as substitute for fodder at a period when fodder was scarce in the market. *This practice was mainly a logical consequence of delays in the start-up of the activity*.

Another aspect which jeopardized performance on experimental lots was the fact that the animals were not sold strictly on the basis of quality. In general, animals were sold in non-homogeneous groups, so that smaller sized ones were more easily sold due to the influence of larger sized ones to the detriment of the latter.

In order to maximize the margins, it is recommended that partners use more fodder (60% to 70% of total feed).

<u>Chart No.3</u>: Gross Margin Earned by Animal – in FCFA



In conclusion, overall, the tests achieved most of their objectives and in general, the margins earned (20.3%) were higher, compared with gross margins normally cited for cattle fattening. They also encouraged partners considerably to undertake extensive cattle fattening, particularly for the use of balanced feed. Some villages, such as Banamba which had abandoned extensive cattle fattening due to health problems, resumed this activity with support from CAE and even after completion of the CAE test, they continued fattening more than 200 additional animals.

In Konna and Ségou, cattle fattening activities provided higher gross margins (32% in average) among all groups due to adequate utilization of coarse feed (Konna) and improved marketing strategy (based on quality – for both groups). Finally, it was noted that the partners resumed animal fattening with more enthusiasm and wished to obtain 100 tons of CAE improved condensed feed each. Moreover, the test helped all animals in all lots to reach weight standards (at least 200 Kg of carcass) required for exports.

Finally, it is recommended that for intensive cattle fattening, one should never use more than 50% of condensed feed and that the optimum rate is determined at about 35 to 40%.

3. Guiding Lines for Year Four

Based on results obtained from the tests and on constraints encountered during implementation of the program, it is envisioned to:

- Take measures to inform all partners in advance in order to start the tests on a timely basis;
- To manufacture balanced feed locally, based on the quality criteria established and enforced by CAE;
- To sell the feed at the actual production cost to partners;
- To help partners assume responsibility for the monitoring costs, based on the plan developed by CAE and themselves; and
- To ensure technical support on an as-needed basis throughout implementation of the activity.

<u>Quality Control for Poultry Feed</u>

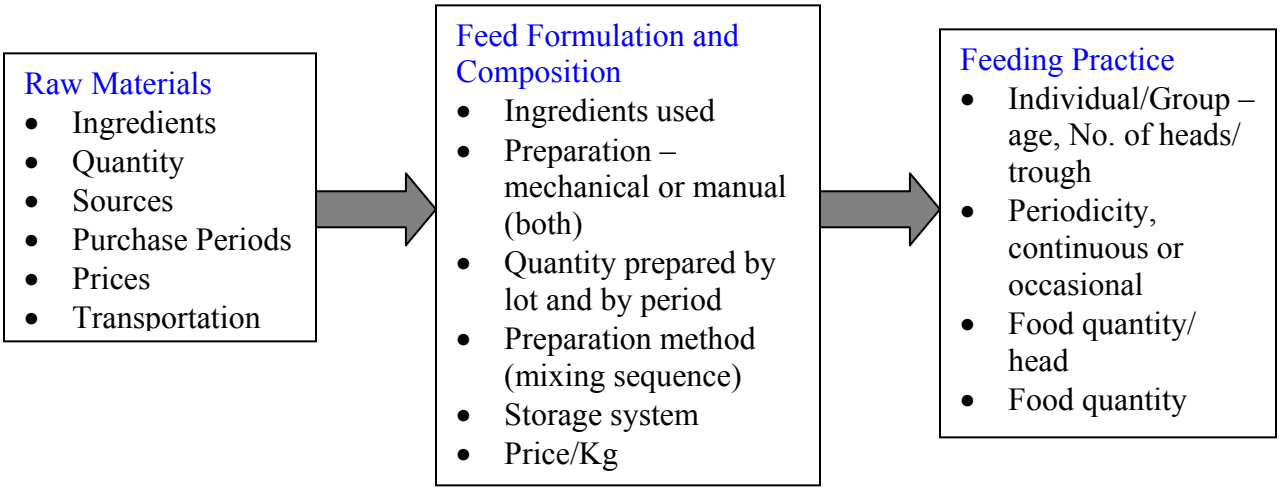
1. Objectives

To further sensitize poultry farmers about the efficiency of establishing a quality control system for themselves (at farm level);

- To establish partnership between poultry farmers on the one hand and between LNA and LCV on the other hand;
- To start introducing the notions of nutritional norms and standards in the local market regarding raw material and composed feed marketing for poultry; and
- To help producers establish a more efficient feeding plan (based on quality and best practice), so as to achieve their production objectives at lower costs.

2. Results Achieved

A detailed analysis was conducted for each product in order to better assess the existing feeding plan based on the framework below:



This program takes stock of the status of modern poultry farming enterprises in Bamako sub-urban areas and of egg-poultry feed sale in terms of bio-security, prophylaxis and feeding system. Results of the nutritional and bacteriological quality control helped determine the causes of problems related to poultry nutrition.

The aspergillus and afltoxin B1 that were found in almost all cases, the poor quality of fish which is an indispensable source of protein and the poor quality of inadequately processed shells, may in the long term continue to affect operating incomes, if adequate measures are not taken upstream on a timely basis so that profit margins will not continue to be negatively affected. Functional results achieved should encourage the authorities responsible for legislation to take action in this area so as to convince all operators in the poultry farming sector to decide for the use and consumption of high quality products, a condition that is needed if the country wishes to become competitive in the market.

To achieve this, a set of measures is planned for the 2001-202 year, including the following:

a. To undertake a second sampling of animal feed that will be well targeted in the six farms in order to ensure the impact of awareness-raising and counseling-support carried-out after the analysis phase with the firs samples, although certain operators have already started submitting samples for quality control.

b. Awareness-raising among concerned actors, farmers, grinding mill Operator about the purchase and delivery of high quality ingredients, for example:
   - Improved processing of ingredients, mainly fish, cotton, peanut, or soybean cattle-cake or shells by the users.
   - Improved processing and storage conditions with suppliers, mill operators and poultry farmers.
   - Introduction and/or enforcement of a legislation in the field of poultry feed or feed ingredients, leading to the supply and utilization of high quality products for all actors in the sector as well as by the consumers.

- The importance of submitting feed or feed ingredient samples to reference laboratories for nutritional and bacteriological quality control.

c. Considerable efforts are need upstream to assist feed manufacturers with fish, which is presently an unavoidable ingredient, particularly for processing, transportation and storage. This should also be the case for shells.

d. To undertake promotion activities for actors in the sector who would agree to enforce various future measures to be decided by the legislation.

3. Guiding lines for Year Four

A second well-targeted sampling is envisioned in order to verify the impact of measures already taken by producers. In addition, an awareness-raising program will be implemented which will consist in the development of pedagogical materials for the dissemination of results through private radio stations and the national television. These materials might be used by regional services of the support agency and the PDAM project, so as to carried-out scale awareness-raising on a larger scale. It is also envisioned to collaborate with the Direction Générale de la Réglementation et du Contrôle for the establishment of an appropriate institution responsible for quality control of raw materials and composed feed products sold in the national market.

2.1.2. "Marketing Test" Project

<u>The Sheep Stock Exchange</u>

1. Objectives

- To build capacity among professional associations to help them create a marketing approach that would be supported by national and sub-regional buyers in order to better sell high quality sheep for the Tabaski feast;
- To increase high quality animal sales;
- To increase the profit margin by unit for high quality animals.

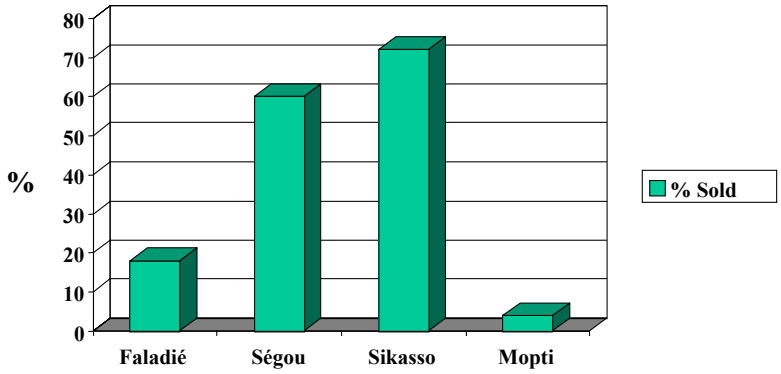
2. Results Achieved

The marketing of small ruminants represents a real opportunity for the promotion of value added, with Tabaski feast as the most important. Therefore, CAE's efforts were focused on Tabaski and the organization of the sheep stock exchange in Bamako, Ségou, Mopti and Sikasso. The stock exchanges were organized in collaboration with the CRA (agricultural research centers) in Ségou, Sikasso and Mopti as well as an advertising tour that was carried-out four weeks prior to the opening of the Stock Exchanges, with the goal of informing potential partners in Abidjan and Dakar.

During the period covered by the Stock Exchange, 28,101 animals were presented, of which 6,650 were sold, yielding an overall turnover of 222,016,410 FCFA. For next

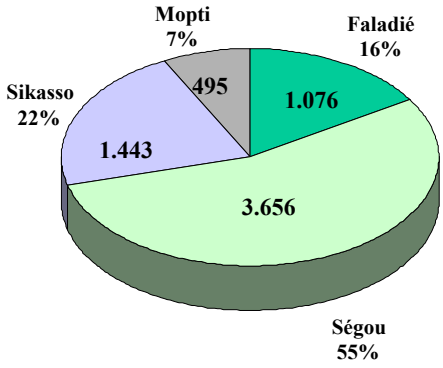
year, CAE's efforts will be coordinated with those of USAID/SEG to reinforce the marketing aspects and contacting between Malian operators and their partners in the sub-region.

Chart N°. 4 - Percentage Sold*



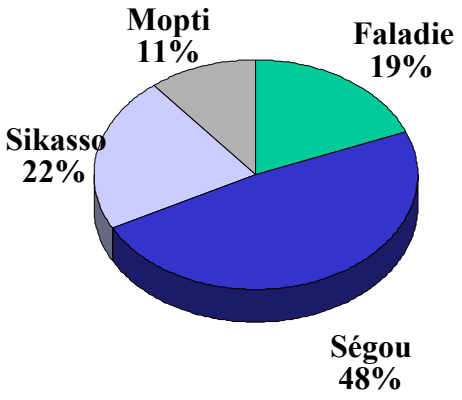
* Number sold / number presented

Chart N°. 5 - Number of Animals Sold by Site



* Total number of units sold = 6 650

Chart N°6 - Percentage of the Turnover*



Total Turnover = 222,016,410 FCFA

3. Guiding lines for Year Four

Considering problems encountered this year regarding the delivery of balanced feed on a timely basis in order to perform a demonstration test on cattle fattening, it is recommended to perform a cattle fattening demonstration for Tabaski 20002 in Ségou and Sikasso, the two sites which performed better this year. Organization of the sheep stock exchange will be the responsibility of partner professional groups while CAE's efforts will be coordinated with those of USAID/SEG to reinforce the aspects of marketing and contacts between Malian operators and their partners in the sub-region.

Marketing of High Quality Animals

1. Objectives

- To build capacity among professional associations in order to create a marketing approach supported by national and sub-regional buyers so as to sell best quality fattened cattle;
- To encourage animal fattening entrepreneurs to adopt improved feeding practice and to better control production costs;
- To increase the sale of high quality animals;
- To increase the profit margin by unit for high quality animals.

2. Results Achieved

Marketing activities were conducted with all professional groups, based on their business plans which were developed and approved before start-up of the program.

Table No.1 (below) illustrates the implementation of the business plan. In terms of gross profits the Agro-Pastoral Association in Farakala earned 29,191 FCFA by animal,

followed by Konna Animal Raisers with 21,359 FCFA and the Animal Merchant Cooperative with 20,593 FCFA. The average gross profit of 14% (without considering Sikasso Animal Fattening Cooperative and COBAS), is a bit higher, compared with the gross profit usually associated with cattle fattening. However, it should be noted that the average gross profit earned from the sale of animals fattened with balanced feed was higher (20.3% in average) than for those fattened under the marketing program. This difference may be explained by the following three factors:

- Animals sold following the demonstration tests for balanced feed were better fattened than animals sold under the testing program during the marketing;
- Costs were higher under the marketing test program than for the demonstration tests because of the increase in prices for animal feed at HUICOMA as of June and increased purchase price of animals; and
- The price of well-fattened animals in Bamako market, which received about 60% of animals sold under the two testing programs, was higher in May/June (the sales period for the demonstration tests) than in July/August (the sales period for marketing tests).

Five hundred and eighty four (584) animals were sold in Bamako markets (about 60%) and in Ivory Coast market (about 40%) under this activity. In addition, support from professional groups which participated in the implementation of the program was solicited by other professional groups in the sector, in order to reinforce their technical skills and their performance as well as to increase marketing of high quality animals and to reinforce their capacity to better negotiate with financial partners.

Summary Table: Implementation of the Business Plan under the Marketing Test Program

Professional Groups	**Planned for in the Business Plan**					**Achieved through Implementation of the Business Plan**					**Loan Reimbursement**	
	# of Animals	**Purchase Price**	**Sale Price**	**Place of Sale**	**Gross Profit**	**# of Animals**	**Purchase Price**	**Sale Price**	**Place of Sale**	Gross Profit	Amount in FCFA	% of Loan Reimbursed
Konna Animal Raising Association	61	125,000	200,000	Locally, Bko, CI	1,473,570	62	117,000	183,000	Locally, Bko, CI	1,324,295	10,000,000	100
Ségou Animal Merchant Cooperative	80	135,000	250,000	Locally	3,299,600	88	120,823	190,000	Locally	1,812,200	15,000,000	100
Farakala AgroPastoral Association	37	100,000	165,000	Sikasso, CI, Bko	857,800	40	90,325	138,000	Locally, CI	1,167,650	5,000,000	100
Kouro-Barrage Animal Raising Cooperative	38	100,000	165,000	Beleco	639,155	38	103,000	115,175	Locally, Bko	(649,110)	5,000,000	100
Sikasso Animal Fattening Cooperative	38	100,000	170,000	COBAS	971,625	35	100,000	19 heads at 128,000*	COBAS	-	2,060,000	41
COBAS, Sikasso • Animal Fattening/ Marketing • Marketing	35 210	105,000 160,000	183,000 180,000	Locally Locally, CI	1,209,910 1,143,000	34 247	127,000 76,265	30 units at 154,000 83,675	Sikasso Bko, CI Sikasso, Bko, CI	(726,339) on-going	5,000,000 4,620,000	100 46
COMBEN, Niéna, Sikasso	40	100,000	162,000	COBAS, CI	692,875	40	110,000	145,000		347,325	5,000,000	100

* 15 heads of fattened animals of the Cooperative are under seizure by the first instance tribunal of Sikasso as a result of outstanding loan between them and the GIE "Interagro".

3. *Guiding lines for Year Four*

During Year IV, this activity will aim at reinforcing economic advantages resulted from improved animal fattening practices, using balanced feed, as demonstrated during year 2000-2001 and to better plan a marketing strategy that targets markets for high quality animals. The impact expected is to take advantage of comparative advantages of the livestock sector in Mali through maximization of the profit margin for economic operators by:

- Increased control of production costs;
- Better planning of marketing and the implementation of a commercial strategy that helps reinforce marketing channels for high quality markets at both national and regional levels;

In comparison with Year Three activities, several changes will be made in Year Four, including the following:

- Direct involvement of the banks (BNDA) in the financing of activities;
- Producing the CAE test feed locally by small production plants in Ségou and/or Sikasso or by the IER grinding mill in Sotuba;
- Providing management training (production costs and business plan) to targeted small plants.

2.1.3. The "Hides and Skins" Project

Facilitating Establishment of a New Tannery in Ségou

In July 2000, CAE was approached by an American businessman and his Malian collaborator for the establishment of a tannery in Ségou. Considering difficulties encountered by TAMALI regarding its processing capacity and in order to secure and increase high quality hide and skin supplies for the American, Spanish and Italian markets, they decided to create a tannery in Ségou which will be, at first, the central site for the processing of hides earmarked for the American and Spanish markets.

Current hides production is estimated at about 68,000 units per month, valued at about 127 million CFA. The new tannery should increase this production by 30% during its first year of operation. In addition, the increase in effective capacity for TAMALI, by transferring the hide processing function to the new tannery, will help improve the processing of skins to be sold in the Malian market.

It should be noted that the increase in effective capacity of TAMALI for skin processing will help solve current losses, as many of the high quality skins will be processed, while considerable numbers of high quality raw skins are presently sold in Ghana at the same price as those of poorer quality.

For establishment of this new tannery, the promoters asked for CAE's future support for the implementation of preliminary, technical and financial studies and to facilitate (in collaboration with SEG/USAID) formal registration of the new enterprise with the Government and the establishment of contacts with potential financial partners.

1. Objectives

In general, the goal of CAE support was to help promoters finalize their investment project documents in order to start the worksite construction so that the new tannery will be operating by early 2002. CAE needs, in partnership with the promoters, to conduct two technical studies, including a civil engineering study for construction of the facility and a technical and financial study. In addition and in collaboration with USAID/SEG, CAE should facilitate contacts between the promoters and national and regional authorities in order to have the documents approved within a short period of time.

2. Results Achieved

The two studies were finalized and added to the document to be transmitted to national and regional authorities. USAID/SEG committed themselves to financing the environmental study, which is the last study to be conducted to complete the dossier. Several meetings were held between the promoters, the staff of the Multilateral Investment Guarantee Agency (MIGA) and the ministry in charge of environment.

3. *Guiding lines for Year Four*

Activities proposed under the forth work plan actually consist in pursuing Year Three activities that should lead to the establishment of the tannery. Once the tannery becomes operational, its production will be monitored along with project results and, if needed, CAE will consider marketing and market development support as well as support for the preparation of an investment plan to upgrade the tannery.

2.1.4. The "New Market Promotion" Project

Exportation of animal products towards new foreign markets requires certain skills from the exporter about various stages of the export channel, the dynamic and operation of the targeted market, knowledge about various actors and potential partners, administrative formalities and existing financial institutions. To obtain and share this information with economic operators interested in undertaking sub-regional trade, CAE decided to carry-out test promotion activities. This type of activity helps CAE be flexible enough in its programming and respond to opportunities as they are identified.

This strategy adopted to penetrate and secure the market share for Malian animal products in export markets in the sub-region through testing promotion is deemed to be the most pragmatic in order to obtain concrete results. These tests will be implemented by economic operators having experience in the area of animal product exports and who

have some knowledge of targeted markets. These tests will be focused on products and markets deemed to have real opportunities.

1. Objectives

During year Three, CAE financed a testing promotion for cattle legs and nutritious hides for export to the Ghanaian market. The objectives of this test included the following:

- To document and better understand various stages of the export channel for these two products towards the Ghanaian market;
- To assess the potentials for developing firm export contracts;
- To identify opportunities for Malian exporters to penetrate and secure a niche in the Ghanaian market for other animal products.

2. Results Achieved

A feedback meeting was held in the first week of June about the promotion testing for cattle leg and nutritious hide exports to the Ghanaian market. Eleven economic operators of the sector participated in this meeting facilitated by the entrepreneur who conducted the test. Discussions also concerned other animal products that may penetrate the Ghanaian market, especially well-fattened animals. For the implementation of commercial exchanges through contracts, the main problem that was mentioned by participants related to the fluctuation of the exchange rate of the cédi (the Ghanaian currency) with the FCFA and the repatriation of funds through the formal banking system. It should be noted that funds provided by CAE to the promoter to help him conduct the test, were entirely reimbursed.

3. Guiding lines for Year Four

To obtain information about new markets and share them with economic operators interested in undertaking sub-regional trade, CAE, in collaboration with SEG/USAID's livestock program, envisions to support activities that would help economic operators to be in a better position in relation to sub-regional markets. For high quality cattle, the Senegalese market is mainly targeted, while other animal products will target other sub-regional markets in collaboration with SEG.

The Agribusiness Climate

The livestock program took into account several political aspects. To this effect, particular emphasis was placed on capacity building among targeted GOM institutions, consultant firms and professional organizations in order to improve their service delivery capacities.

In general, all support provided by CAE to reinforce technical, commercial and financial management for professional groups aimed at resolving, over time, the issue of financing for enterprises in the sector. The more enterprises are capable of transparent

management, to upgrade from informal to formal sector, the more they become creditworthy in the eyes of financial partners. At the same time, this approach took into account the need to reinforce capacity for various support institutions, whether public or private, to help them better assist professionals to develop their enterprises.

In addition to the financing issue, the lack of a quality control system for raw materials used in the manufacturing of composed feed for livestock and poultry, as well as the feed products sold in the national market, is a serious constraint which impedes development of the commercial animal feed sub-sector. This constraint was addressed by the quality control program for poultry feed this year, but this will be reinforced through implementation of the joint CAE-SEG program. This program which will start in the forth quarter of year 2001 and which will involve the DGRC, LNA and LCV, aims at establishing a permanent quality control mechanism for certain raw materials and final products (composed feed). (See PPM No.7)

Regarding GOM support institutions, the activity of quality control for poultry feed aims at, among other objectives, reinforcing partnership between the IER's Laboratory of Animal Nutrition, the Central Veterinary Laboratory and their potential clients in the sector. The activity started with a group including the largest poultry farmers in the Bamako suburbs, as they were considered to be the short-term potential clients for LNA.

Implementation of this activity directly involved the LNA director and helped better understand practical field problems and reinforce contacts between the laboratory and poultry farmers. In addition, this support will be further reinforced next year through CAE support aiming at the development of a "business plan" for LNA under its joint program with IER (the SSE program) and through their involvement in the joint CAE-SEG program on quality control for animal feed with the DGRC (see PPM No.6).

As for national professional institutions, CAE provided support during two years, to the FEBEVIM which was created in 1999 with the objective of becoming a real promotion force for the sector and of negotiation with other partners (State, external clients, financial institutions, etc.). As part of this collaboration effort, CAE has financed a study this year at the request of FEBEVIM to conduct an assessment of opportunities for financial resource generation the FEBEVIM may undertake to ensure its operations in the future. The findings and recommendations of this study will provide a framework of collaboration between FEBEVIM and CAE for next year.

Finally, the development of cattle trade in the sub-regional market, which was a priority objective for the CAE program, is strongly related to the organization of cattle marketing by Malian professionals and to their ability to implement a commercial strategy that is adapted to sub-regional clients' needs. To this effect, the objectives of CAE's technical and organizational activities include further reinforcing of the border market project in Sikasso through upstream activities (demonstration activities) aimed at better supplying this market with high quality animals and support to the SOGEMAF, the new company responsible for the management of the border market, for the development and implementation of their marketing strategy.

The Enterprise Development Program

For most enterprises in the sector, which are collective by nature and operate in the informal sector, the strategy is to create professional groups that are creditworthy for commercial and financial partners. For other enterprises which are individually owned in general and operate formally, activities were focused on counseling-support (SSE program) for the development of business plans and identification of financial partners.

For the livestock sector, priority for counseling-support through the SSE program was defined based on the type of enterprise. To this effect, particular emphasis was placed on enterprises having potentials for increased value-added in the areas of:

- Production of high quality animal feed;
- Production of high quality fattened animals for exports; and
- Production of high quality products from the poultry farming sector (egg and flesh chickens).

To achieve this, CAE is finalizing, with assistance from consulting firms, business plans for several promoters including:

- A one-day-old chick production and poultry feed production enterprises;
- Two commercial enterprises for animal feed production; and
- Four documents for business plan preparation to create intensive cattle fattening and export workshops.

(It is interesting to note that several requests for intensive cattle fattening were submitted by private individuals who are also members of professional groups that collaborated with CAE for two years.)

Training: Induced Effects for Partners

The involvement of individual consultants, as well as consulting firms and specialists working for government institutions, in the implementation of CAE activities helped reinforce their technical skills to provide counseling-support that is more efficient and better adapted to the needs of professional groups and individual entrepreneurs. For example, one nutritionist from the Sotuba CRA worked closely with CAE in the implementation of the animal fattening-marketing demonstration program. He not only availed his professional experience to professional groups, but also benefited from the collaboration with CAE to further reinforce his business management skills (business plan preparation) and skills in production cost mastery. In addition, this activity enabled him obtain sound technical and financial data helping with the writing and publication of articles for the extension of improved animal fattening and marketing practices for high quality animals.

Likewise, collaboration between CAE and consulting firms helped reinforce capacities of the latter to better translate their traditional training programs into action. For example, all firms which supported the animal fattening-marketing program (ACOD, G-Force and SABA) already had considerable pedagogical experience with village associations and grassroots groups, but none of them had ever developed or implemented a business plan for a professional group in the livestock sector. Collaboration with CAE helped them build on their experience as trainers and move beyond and use this knowledge to support professional groups in the livestock sector, to develop and implement a business plan and reinforce their professional contacts with financial partners.

Lessons Learned

- The success achieved by CAE depends, to a large extent, on CAE's capacity to implement its activity on a timely basis and according to its partners' needs. To this effect, implementation of the program suffered from considerable delays that jeopardized expected results due to inadequate planning, considering administrative, logistical and technical complexity of program implementation: **Efforts should be made for better planning;**
- The program was inadequately monitored with certain professional groups which did not meet the conditioned they signed with CAE: **A mechanism for closer monitoring should be established;**
- The fact that CAE could not implement media activities jeopardized the potential impact of activities, that is, awareness-raising and dissemination of results among other professionals who were not directly involved in the program: **The implementation of a media program is necessary to maximize the potential impact of activities**.
- Results achieved demonstrate the importance of CAE field investment for the creation of an economic development pool around which enterprises in the sector, which are mostly collectively owned by nature and operate informally, could become modern enterprises: **CAE strategy to develop the livestock sector enterprises is well adapted to reality on the ground.**

2.2. Search for new opportunities for fruit and vegetable:

2.2.1. Search for new opportunities for potato

The overall objective of the activity program under Work Plan III in the potato sector was to increase the incomes for producers supported through improved storage and marketing. Specifically, the objective was to:

1. organize potato producers in ten villages in the Sikasso region into professional groups;
2. train these producers in production techniques and potato storage best practice;
3. inform actors in the potato sub-sector in Sikasso about the evolution of prices in the national and sub-regional markets and about financial products available with the banks;

4. test the collective sale of high quality potato through introduction of a prototype of storage warehouse.

To implement this activity program, CAE sought support from three sub-contracting partners, including the following:

1. An NGO specialized in farmer organization: ACOD Nyetaso;
2. An NGO specialized in the training of potato producers in production techniques and storage technologies: AMATEVI; and
3. The Observatory of Agricultural Markets (OAM) for the collection and dissemination of market price information.

<u>Establishing potato production professional groups and training of their members</u>

1. Operational Objectives

Being aware that organizing potato producers is by far the most important constraint impeding promotion of this sub-sector today, CAE in collaboration with NGO ACO, which is specialized in farmer organization, established ten professional groups in ten villages (one group per village) in the suburbs of Sikasso city. Through this activity, CAE intended to establish the basis for a true attempt at organizing Sikasso potato producers. Hence, the idea to start with a nucleus of ten (10) villages selected on the basis of criteria that would help achieved expected results in the short-term. By doing this, CAE would contribute in improving the conditions of input supply (seeds, fertilizers, pesticides, etc.) and the marketing of potato in Sikasso. To achieve this objective, the NGO ACOD defined the following steps:

- To select ten village in the suburbs of Sikasso-city on the basis criteria determined by CAE;
- To inform and sensitize producers in these village about the objectives targeted in creating producer groups;
- To establish and organize a producer group in each of the ten villages;
- To provide training in the cooperative approach and in management/ accounting to organizational bodies set-up by these groups.

2. Results achieved

After the selection of villages to be supported and information/awareness-raising efforts, ACOD performed the following:

1. the development of statutes and by-laws for each group;
2. organizing constitutive General Assembly meetings;
3. setting-up boards, monitoring and management committees for the professional groups; and
4. training of committee members in cooperative techniques.

It should be noted that for the development of statutes and by-laws, ACOD only played a facilitation role during the working session. The methods of group management defined in these documents were determined by members in each association. ACOD only ensured their compliance with Malian law governing cooperative establishment. The following table summarizes membership for each group as of the end of September 2001.

Village	Number of Group Members	Number of Members of the Board of Directors	Number of Member of the Monitoring Committee
Bogotiéré	120	8	3
Bamadougou	108	8	3
Niétiorobougou	43	8	3
Socourani	30	8	3
Sabénébougou	52	9	5
Famacourani	17	8	3
Fatédiassa	22	9	3
Zanikodougou	40	8	3
Gnagansoba	111	10	3
Diakorola	36	9	3
TOTAL	579	85	32

Source : ACOD activity report

This table indicates a great difference between the villages in terms of group membership. This may be explained by the "volunteering" option ACOD encouraged for membership for each association. We believe that this option is the sole guarantee for successful establishment of a professional group with members truly committed to the goal. The group which has the larger number of members is the one in Bogotiéré village, with 120 members. The group with the smallest number of members is the Famacourani group with 17 members.

After establishment of the management bodies for each group, the partner undertook training of the elected officials (Board of Directors or Board, Surveillance Committee and stock management Committee). The objective of these training workshops was to help elected officials better understand their roles and responsibilities in order to avoid role conflicts and render the group more dynamic.

One of the aspects of this training for elected officials, particularly members of the stock Management Committee, concerned the development and utilization of Management Information Systems (MIS) for NGO ACOD. The goal was to train the officials in order to help them improve the management of their organization, giving more importance to writing skills so as to ensure transparency in the management of their affairs. Specifically, the training addressed the following themes:

1. Identification of those positions which require one or more management documents;
2. Identification of the documents for each position;

3. Identification of information to be included in each document;
4. Developing the documents.

Training the officials in the use of these documents.

Table 2: Summary of trainings received by the officials of the 10 groups

Training themes	Members trained
Developing group Statutes and By-laws	45
Training for board members	85
Training for Surveillance Committee Members	32
Training the officials in the development and utilization of management documents	117
Training in meeting minutes taking	20
Training in needs assessment	10
TOTAL	**309**

Source : ACOD's activity report

The results of this activity of potato professional group establishment include the following:

1. Existence in each village of an organization that is opened to all potato producers with free membership;
2. Existence of management bodies within these organizations (board, surveillance and stock management committees) whose members are well trained to play their roles and responsibilities within the group;
3. Existence of basic documents (statute and by-laws) and group business management documents.

Today, these established organizations are operating as true professional groups, holding statutory meetings sanctioned by meeting minutes. In some of the villages, the groups were able to take-over the awareness-raising activities on the adoption of storage best practices (the use of wooden boxes for product preservation, etc.). However, considering the relatively short intervention period for ACOD in the ten villages, other training or capacity building needs for the groups were assessed by CAE's partner at the end of its contract.

3. Guiding lines for Year Four

Following training on the last module that concerned the identification of groups' needs, ACOD held a general assembly meeting in each village to discuss the needs and orientation of the group for the 2001-2002 campaign. These meetings resulted in the development of action plans for each village determining the following:

1. Additional training to be provided to the group;
2. Outstanding activities to be implemented for capacity building among the new groups.

The following was approved as common tasks defined by the ten action plans:

1. Review of the basic documents (statute and by-laws);
2. Development of three year development plans;
3. Training in the basic notions of business plan management and monitoring.

These themes emphasize the capacity building needs of the newly established groups and oblige CAE and its partner to pursue the activity of establishment of these potato production professional groups during the 2001-2002 campaign.

Training of producers in production techniques and storage technologies

1. Operational objectives

One of the major constraints of the potato sub-sector may be a result of storage difficulties caused by the poor understanding of production and storage best practices by the producers. In addition, there is a lack of adequate storage facilities. These difficulties may explain the abundance of potato supply in our markets during the harvesting period which result in low prices at producer level and the scarcity by the end of the marketing campaign. From the status of exporters at the beginning and in the middle of the marketing campaign, Mali becomes a great importer of European potato through Ivorian or Senegalese operators.

In order to solve these storage difficulties for farmers in Sikasso and to extend sales throughout the whole campaign, CAE resumed its collaboration with AMATEVI, which is specialized in the training of potato producers in production and storage best practices. The mandate of this NGO during Year Three mainly concerned producer training in the ten villages in production techniques and storage technologies. The objective of these training sessions is to improve the quality of potato stored in the ten villages supported by CAE.

2. Results achieved

Theoretical training sessions in production techniques and storage best practice were held in the ten villages, targeting volunteer producers, whether they are members or not of the groups.

These training essentially addressed the following themes:

1. Variety selection based on production objectives;
2. Soil selection and preparation;
3. Fertilizer quality and dosage;

4. Irrigation methods;
5. Harvesting period and techniques;
6. Conducting post-harvest operations;
7. Storage best practice (techniques for tubercle screening, anti-germ application and conditioning, using 25 kg wooden boxes, stock monitoring processes).

A total of 5,000 boxes were made and distributed in the target villages as inputs for the training in storage best practice. These boxes were managed by the boards of the newly established groups, distributing them among voluntary members. Each group defined its own distribution criteria. The following table summarizes the number of producers who received the training in the ten villages.

Table 3: Summary of producers trained in production and storage best practices in the ten villages

Villages	Number of producers trained in production best practice	Number of producers trained in storage best practice
Zanikodougou	67	21
Fatédiassa	33	40
Diakorola	39	10
Sabénébougou	40	32
Bogotiéré	65	54
Bambadougou	56	17
Fama Kourani	14	11
Gnagansoba	47	51
Niétiorobougou	44	53
Sokourani	49	50
TOTAL	454	339

Source: AMATEVI activity report

As of September 30, 2001, theoretical training sessions in production best practice covered 454 voluntary producers in the ten villages. Delay in the start-up of Work Plan III did not allow for the delivery of practical training in production techniques. The training partner only provided theoretical training in the above mentioned modules on production techniques.

Unlike production, the training sessions in storage best practice were completed both theoretically and practically. Practical sessions were provided to volunteer farmers who received the training on September 30, 2001.

The following table indicates the quantity of potato stored by the producers during practical training sessions on storage techniques.

Table 4: Summary of the numbers of producers trained in production and storage best practice in the ten villages

Villages	Tubercle weight at entry (kg)	Tubercle weight at exit (kg)	% of loss
Zanikodougou	8075	7530	7
Fatédiassa	8750	8055	8
Diakorola	2292	2163	6
Sabénébougou	5925	5663	4
Bogotiéré	8600	8248	4
Bambadougou	5150	4857	6
Fama Kourani	6400	5943	7
Gnagansoba	8750	8003	8
Niétiorobougou	8750	7846	10
Sokourani	7675	6774,3	11
TOTAL	**70367**	**65082,3**	7

Source: AMATEVI activity report

The figures in the last column of the table indicate that the loss rates after 3 to 4 months of storage in the boxes for potato treated with the anti-germ in traditional warehouses in the ten villages varied between 4 and 11%. This is a very low rate, compared with the traditional technique which results in 20 to 40% loss rates. The relatively high loss rates recorded in Niétiorobougou (10%) and Sokourani (11%) may probably be explained by the utilization of ill-designed storage huts.

Remarkable results are already perceptible in villages supported in terms of adoption of cultivation and storage best practices. For example, in order to prepare the 2001-2002 campaign, the board of the Sabénébougou group assessed the needs of the its members for storage boxes in the number of 800 boxes of 25 kg each. They established contact with a wood joiner in Sikasso for the construction of the 800 boxes at their own cost. Other villages, including Bogotiéré and Bambadougou are in the process of need assessment for their members. It is worth noting that during the previous years, the producers were supplied with boxes by CAE as part of the demonstration tests.

3. Guiding lines for Year Four

The above mentioned results indicate that CAE's two years of efforts for training and sensitization/information for the adoption of best practices are now yielding fruit. In order to reinforce this accomplishment, the Centre is envisaging, under Work Plan IV, to introduce an information/sensitization program the key-element of which will be the preparation and dissemination (in French and Bambara languages) of a newsletter about potato production and storage techniques. For this new work plan, formal training activities in production and storage best practices will take an end.

Market price information collection and dissemination

1. Operational Objectives

The unavailability of commercial information is a disadvantage for potato producers during their transactions with commercial middlemen. They have weak negotiation power for sales, as they do not have access to information on price levels in the most important markets.

This observation urged CAE to introduce in Year III, in collaboration with the Observatory of Agricultural Markets (OAM), an information collection and dissemination mechanism on potato prices. Direct beneficiaries of this mechanism include potato producers in Sikasso and the commercial intermediaries in various markets in the country. Other actors in the sub-sector (banks, input suppliers, support services) also benefited from this activity through monthly reports published by the OAM.

The overall objective of this activity was to improve the operations of national potato markets by radio broadcasting of prices collected in the national and sub-regional markets. Specifically, OAM was asked to:

1. collect potato price information in national and sub-regional markets;
2. analyze information collected;
3. periodically (weekly) radio broadcast (ORTM and local radio stations) information about the trends of prices.

2. Results achieved

To establish the mechanism, OAM carried-out a survey during the 1st quarter of 2001 on the potato market. This survey helped determine the structure of the potato market and assess the actual information needs for various actors in the sub-sector. Following this survey, the OAM provided training for its survey team in the techniques of market price information collection. Actual information collection and dissemination started in early April 2001.

The survey was conducted in the production markets in Sikasso and Kati as well as in the distribution markets in Kayes, Sikasso, Ségou, Mopti, Timbuktu and Gao. Also, information from certain sub-regional markets were disseminated when available. The OAM receives this price information from its counterparts, members of the MIS network.

This CAE and OAM initiative was well appreciated by various actors in the sub-sector, particularly producers in Sikasso and Kati as well as commercial intermediaries. Through their Chamber of Agriculture, producers in Kati expressed their desire for sustainability of this price dissemination activity. It should be noted that CAE and its partner, OAM, had already identified measure towards sustainability of this activity.

3. Main orientation lines for Year Four

To ensure sustainability of this activity, OAM will receive financial support from CAE until December 2001. From January 2002 onward, the OAM will take responsibility for its own operating costs in order to maintain the potato and shallot price information dissemination mechanism. In addition, producers in Kati asked CAE, during the official launch workshop of the potato program in Sikasso in July 2001, to extend our intervention zone to Kati. Discussions are underway within CAE and in collaboration with the OHVN in order to respond to this request. A similar program is under preparation for the Office du Niger area, in collaboration with the Agribusiness Unit of Office du Niger.

<u>Introducing a storage warehouse prototype to encourage collective sale of potato</u>

1. Operational Objectives

Two of the ten villages supported by CAE under the Year III potato program received a storage warehouse prototype of 37.5 tons for testing purposes. The introduction of this prototype of storage warehouse was considered as a prerequisite in encouraging the newly established groups to sell their products collectively.

2. Results achieved

Energy characteristics of the warehouse prototype are as follows:

Storage temperature:	26°C approximately
Internal air humidity rate:	87.5%
Duration of storage:	6 months
Air debit:	$1m^{3/}$s approximately
Loss rate (in weight)	4%

Testing of the prototype began soon after its technical reception in May 2001. Volunteer group members in the two beneficiary villages provided the quantity of potato required to test the warehouse. The prototype was to be validated after 6 months of potato storing. Unfortunately, this was not possible because of the delay in the start-up of Work Plan III activities and aggravated by further delays by the construction enterprise which delivered the two buildings beyond the contractual time frame. It should be noted that the storage period in the two warehouses did not exceed 3 months (June-August) instead of 6 months as initially planned. However, loss rates recorded over the three months in both warehouses did not exceed 1.75% of the stocks.

During these three months however, temperature and hygrometric records inside the two warehouses confirmed the theoretical estimates (about 26°C and 87.5% respectively). It should be recognized that these two atmospheric parameters are determining factors for validation of the prototype. Based on this, we can assert that there is high likelihood that

the prototype will be suitable for storing the product for 6 months, with a loss rate of only 4%.

Producers in the two villages unanimously agreed that the CAE prototype was much better, compared with other types warehouses (traditional or improved) for potato storage. The high level of aeration in the warehouse, the control of internal temperature at about 26-28°C, coupled with conditioning best practice (utilization of the anti-germ and wooden boxes), undoubtedly help reduce loss rates.

In order to facilitate the sale of stored or non-stored stocks in the ten villages supported by the program, CAE requested its partners, ACOD and AMATEVI, to support producers in market research at both national and sub-regional levels. As part of this activity for commercial relationship establishment, the two partners established contacts with village private operators (traditional potato buyers in the villages), national formal organizations such as "Mali Yiriden", which is specialized in the marketing of fruit and vegetable, to inform them about the availability of potato in the ten villages.

As a result, Mali Yiriden received an order for 1,500 tons from the Union of Cooperatives in Burkina Faso (UCOBAM). Unfortunately, the lack of marketing funds prevented this company to deliver the products ordered, which would have been an opportunity to engage official transactions with sub-regional markets. Based on this experience, CAE is proposing to support this company during the 2001-2002 campaign for the development of business plans, so as to facilitate their access to bank credit.

At the national level, contacts established with commercial agents helped the ten villages sell ***2,781 tons*** of potato from which ***2,657 tons*** were not stored; ***124 tons*** of potato that had been stored for 3 to 4 months (including ***59 tons*** of tons which were stored in the two warehouse prototypes).

3. Guiding lines for Year Four

In order to fully validate the warehouse, it was proposed that the two villages continue observation of the facilities during the 2001-2002 campaign, with the purpose of storing the product for the 6 month-period initially proposed by the engineers who designed the prototype.

Our discussions with the users and both DRAER and DRAMR staff, who will be involved the extension activities after the prototype is validated, revealed the following minor problems:

1. insect infiltration through the blades of the metal door;
2. maintenance difficulties for the straw displayed over the corrugated iron roof due to the wind and the rains.
3. possible passage of small animals such (bats, mice and cats) through air disseminators.

The DRAER agents proposed solutions for these problems in the final construction plan of the prototype. In fact, the following improvements will be carried-out:

1. installing a screen on the door in order to prevent the passage of insects;
2. replacing the straw on the roof with an insulating material to be installed between the corrugated iron and the ceiling;
3. equipping the external part of air disseminators with screens to block the passage way for small animals.

Lessons learned

The potato activity program under Work Plan III indicated that this sub-sector represents a great business opportunity for producers and commercial agents. However, numerous constraints identified within the three segments of the sub-sector (production, storage and marketing) make it difficult to exploit this opportunity. To overcome these constraints, support organizations, banks and input suppliers need to join forces in order to:

1. encourage producers to organize themselves into village groups;
2. facilitate access to bank credits for these groups;
3. ensure adequate supply of these groups in high quality inputs;
4. build capacity among producers in production techniques and storage technologies;
5. facilitate access of producers to storage/sales equipment and materials (warehouses, weighing machines, etc.);
6. ensure establishment of commercial relationships between Malian exporters and sub-regional clients (Ivory Coast, Senegal, Burkina Faso, Mauritania).

2.2.2. Search for new opportunities for Shallots

The goal set forth for Work Plan III was to increase incomes for shallot producers in Bandiagara and Foabougou village in the Office du Niger (ON) area through improved storage/processing and marketing of the shallot. Two sub-projects translated this goal into objectives as follows:

1. To introduce collective sales of fresh shallots in Foabougou village, thus demonstrating the benefits of joining efforts together for product sales, as facilitated by the construction of a storage warehouse of 100 ton capacity;
2. To improve the marketing of the Dogon Plateau dry shallot slices (EST) through support for improved presentation of the product, respecting hygiene standards during the drying period and increased quantities of production.

Introducing a shallot storage warehouse in Foabougou

1. Operational Objective

There is no strategy developed for shallot marketing in the Office du Niger area. The decision to sell the product is based either on cash needs or insufficient storage capacity. This lack of strategy causes significant price variation between the production season and the non-production months. The objective of collective sales of fresh shallots will help CAE reduce this price variation by introducing a storage warehouse prototype of 100 tons.

2. Results achieved

The 100 ton warehouse prototype in question was designed by teacher-researchers from the National School of Engineering (ENI) in Mali. Following this designing, it was validated by a tandem composed of an energy specialist and a food technology specialist, both Burkinabè and the two Malian researchers. Theoretically, the prototype should help store 100 tons of shallots for 6 to 8 months with a loss rate of about 5%.

The delay in construction of the warehoused resulted in the postponing this activity to Year IV work plan. However, progress in the works allowed the beneficiary group (Djanto Yerela women's group in Foabougou) to constitute operational sub-groups in order to organize the storing activity. Five sub-groups were set-up which would utilize various compartments of the warehouse and each of these established a board whose members will receive training in the improvement of shallot quality for storage during the first quarter of Year IV.

3. Guiding lines for Year Four

CAE will provide support to the warehouse beneficiary group in order to:

- facilitate their access to revolving funds for the purchase of 100 tons of shallots to be stored;
- organize warehouse utilization (organization and management) through close monitoring and counseling.

In order to validate the thermo-hygrometric characteristics of the warehouse, temperature, humidity rates and air speed data will be regularly recorded.

Improving the storage capacity for seed shallots through introduction of a Retail-type storage hut in the Dogon Plateau

1. Operational Objective

To increase seed storage capacities of fresh shallot production groups in the Dogon Plateau. The results expected from this activity included, on the one hand, the

introduction of an income generating activity through term sale of 10 tons of stored shallots and, on the other hand, to reduce fresh shallot production costs for drying groups by providing them with seeds.

2. Results achieved

The socio-economic survey conducted before implementation of this activity provided an opportunity to make progress in the partnership between CAE and NGO SABA. The results of this survey confirmed the need to undertake long-term awareness-raising in order to ensure successful implementation of the activity. In fact, seed storage in the Dogon Plateau is an individual activity and in order to have this income generating activity implemented by the group, some pre-requisites need to be fulfilled. Because the period of time required extends beyond 2003, it was decided to postpone this objective.

3. Guiding lines for Year Four

CAE may provide practical counseling for shallot storage. Based on expressed demand, it may be possible to organize an exchange visit for a few pilot producers to Niono where producers are more experienced in storage techniques.

Testing the market with 3.5 tons of EST

1. Operational Objectives

The objective of this testing is to identify at least two promising markets for EST produced by Bandiagara drying groups. Identification of these outlets should be carried-out along with establishment of a high performing distribution channel in each of the proposed markets.

All activities carried-out as part of this testing were coordinated by a consultant. The consultant helped ensure:

- the purchase of dry shallot slices;
- the conditioning of the product in packaging designed for the test;
- target market surveys in Bamako, Bouaké and Conakry; and
- supplying of these markets.

2. Results achieved

Out of the initial plan for 3.5 tons, 2,680 kg were tested. This gap may be explained by strict respect of standard organoleptic characteristics of the Dogon Plateau EST by the time the product was delivered. The channels that were prospected avoided the de-facto monopoly detained by Dogon merchants over the sale of shallot produced in the district of Bandiagara. In Bouaké, the wholesale market was retained as convergence center for shipments before they are dispatched in other regions of Ivory Coast. In Guinea, the two wholesalers in the traditional markets seem to be better positioned to receive the EST.

3. Guiding lines for Year Four

The activity is underway and the results are expected during the first quarter of the next work plan. Following identification of the outlets, the next step logically is to establish commercial contacts between producers and the wholesalers identified during the test.

Informing Bandiagara and Officer du Niger area shallot producers about price trends in the main national markets

1. Operational Objective

To assist actors in the shallot sector in Bandiagara and Niono in obtaining commercial information that would help them negotiate better cost or sales cost prices.

2. Results achieved

As was the case for potato, implementation of this activity is ensured by the Observatory of Agricultural Market (OAM) on behalf of CAE since May 2001. This collaboration helped OAM establish a price dissemination mechanism for shallots in the main production areas and in the main outlet markets. Initially planned for dissemination in the Niono and Bandiagara areas by the en of work plan 3, prices information were ultimately disseminated as well in Bandiagara and Niono as in Bamako, Mopti, Ségou and Sikasso. Initial planning targeted 176 broadcasts by five outreach radio stations, but a total of 305 broadcasts were achieved. The broadcasting in Bamako, Ségou, Sikasso and Mopti may be considered as induced effects, as it is the CAE contract which helped OAM train its agents for shallot data collection.

3. Guiding lines for Year Four

In common agreement and being aware of its mission, it has been decided that from January 2002 onwards, OAM will be responsible for price information dissemination.

Providing training in business management and in storage and processing technology to shallot producers in Bandiagara and Office du Niger area

1. Operational Objectives

To improve the quality of EST produced in the Dogon Plateau and build capacity among producers for the organization of shallot storage.

2. Results achieved

As part of the activity for support to the Dogon Plateau producers to improve the quality of dry shallots, a training module on production and hygiene best practice (BPPH) was designed by a food technology specialist with having good experience in shallot

production, along with two animators supporting the beneficiary groups. Following the designing of this module, 769 producers in 24 shallot producing villages received the training from May 7 through 11, 2001.

Establishment of the management committee for the Foabougou warehouse could not be achieved because of the delay in the construction works.

3. Guiding lines for Year Four

As the training in BPPH aroused interest among many producers, it is envisioned for next year to reinforce the skills acquired in villages which received the training and to extend it to other villages which have not yet received it. The training must be conducted before the drying campaign which starts in February 2002.

Lessons learned

In programming activities, it would be necessary (especially for infrastructure construction) to ensure that deadlines are respected. Delays in the construction of the Foabourougou warehouse directly affected the implementation of subsequent activities.

2.2.3. Search for new opportunities for Mango

The goal of the mango sector activities under Work Plan III was to increase the quantity and to improve the quality of mangoes exported by entrepreneurs who work directly with CAE. This goal was translated by the following indicators: to help exporters export 600 tons of mangoes through a program which provided technical assistance, training and a revolving fund; to sell at least 50% of mangoes at an average price that exceeds the average price of other comparable products in the European markets.

The first objective was reached: 621.8 tons were sold through companies which received direct assistance from CAE. The total quantity sold by the four exporters who participated in the Dogon trademark amounted to 543.8 tons of which 336.9 tons were exported under the newly created Dogon label and the remaining under trademarks specific to the companies. 77.8 tons were shipped in cardboard boxes which were pre-financed by the Centre. Taken as a group, the four exporters increased their quantities by 34% as compared with last year, despite the fact that they intervened in the structured markets only from the third week of April up to the third week of June. The four members of the Dogon trademark accounted for 60% of total exports of Malian mangoes, compared with 40% during the 2000 campaign.

The second objective was not achieved, despite visible and largely recognized improvements over the packaging and presentation of mangoes exported under the Dogon trademark. The inherent quality of mangoes was poor this year and the exporters, for reasons that will be detailed later, were not able to improve the quality of mangoes they provided through their supply chain. When the market was favorable, exporters made a lot of money but not as much as they could make from first quality products.

When the market was saturated, the exporters were unable to avoid price decreases, given that the quality of their product did not allow them to make enough difference with other suppliers.

Establishing a phytosanitary control network

1. Operational Objectives

As early as the second year of the project, CAE introduced a consultation conducted by an entomologist from CIRAD. Assisted by an IER researcher, the objective of his mission was to analyze different options in the fight against mango farm infestation by fruit flies. Tardy start-up of the program and the need for scientific confirmation of the results achieved, resulted in the postponement of the activity for Year 3 of the project.

2. Results achieved

Of the 9 sites initially planned for, only 3 received authorization to start research activities: Kati, Madina (Bougouni) and N'Gorodougou (Sikasso). The entomologist consultant proposed by CIRAD stayed in Mali from February to August 2001. As during the past campaign, an IER researcher actively participated in the activities. The main results obtained included: updating of the inventory of various species of fruit flies which attacked the mango trees, with observation of their development stages and reasonably adapted treatment; estimates of the attack and infestation rates by period; and a behavioral study on the Ceratitis Cosyra species which is the most predominating species (more than 90% of species inventoried).

Parallel to these research activities, training/awareness-raising activities were undertaken in each of the experimentation sites. The training sessions emphasized farm maintenance activities which are essential for successful spot treatment.

3. Guiding lines for Year Four

To ensure judicious utilization of the results obtained during the two years of research, CAE will continue creating necessary conditions for implementation of this activity by IER. In fact, this organization is in a better position to conduct the pre-extension and extension activities with the perspective of valorizing important research.

Creating a new trademark for the Bamako pool and developing improved packaging

1. Operational Objectives

At the beginning of the project, the strategic decision was made by the CAE staff to work primarily with private sector partners who we thought were best positioned to build on the services offered by the Centre. Generally, these entrepreneurs were leaders in their respective sectors. This decision was based on four considerations:

- the Centre had contractual obligation with USAID to obtain results;
- the results were necessary for the Centre to gain legitimacy as primary source of technical assistance in the sector;
- the overall impact of technical assistance is often greater for a sector when it is provided on an individual and contractual basis;
- there was greater opportunity for obtaining a replicating effect in the sectors in which the Centre has experience, given that there is a small number of economic operators in whichever sector (e.g., rice husking, animal fattening in suburban areas, mango exports).

The strategic approach dictated the selection of four mango exporters who would directly benefit from technical assistance, training and financial support from CAE during the 2001 exports campaign. This approach should help CAE achieve the operational objective of exporting 600 tons of mangoes during the campaign and to significantly improve product quality at exports.

2. Results achieved

The Dogon trademark was designed as an association of the export companies possessing the same quality standards, in order to achieve economies of scale on input purchase and to develop a sufficient export volume so as to forge a trademark identity and a wide range recognition. This should be achieved while maintaining financial independence of each company.

Each exporter had his own importers. Only shipments to two British companies, "Unique Fresh Produce" and "Paul's Fruit and Vegetable" were to be shared among the members of the Dogon trademark. It was decided that the orders would be supplied by rotation, based on the monthly program submitted by the importers.

Although all mango sale incomes were transferred into the bank account, a separate "virtual" account was maintained for each exporter.

Two of the four companies, "Flex Mali" and "Mali Primeurs", chose to continue to export their own trademarks while exporting mangoes under the Dogon trademark at the same time. Exports under their own trademarks were not eligible to financing from the revolving fund. Therefore, support for revolving fund securing was focused on shipments exported under the Dogon trademark. However, CAE's technical support for this activity program targeted all mango exporters throughout the country (for the aspects of quality control, training for better operation of the conditioning stations, counseling support for better management of the export campaign, fruit fly control program, etc.) and the on-farm buyers for harvesting techniques.

During the months of October and November, CAE frequently met with the four exporters to develop an export strategy and identify input needs. Identified and then purchased inputs included consumables, the costs of which were to be reimbursed by the

exporters and non-consumables which were leased to the exporters for the duration of the campaign.

Consumable inputs included the cardboard boxes, the pallets and corner irons, tying materials for pallet preparation, stickers for identification of the variety/origin/ transportation method as well as the curlpaper. The exporter agreed among themselves upon the name "DOGON" as trademark name and a local graphic artist was engaged to design the boxes. The prototype was sent to a manufacturer based in Dakar who produced a first lot of 64,000 boxes.

In order to have feedback on the behavior of the Dogon trademark in the main destination market (Rungis), an expert in market monitoring was recruited. The function of Mr. Pierre Gerbaud, the consultant, was on the one hand, to make comments on the product quality (presentation, visual aspect and packaging) and, on the other hand, on the marketing campaign process. Thus, for 13 weeks, a weekly report on prices and competitiveness of Malian mangoes was submitted to CAE.

The Dogon trademark exporters increased their volumes by 25%, compared with last year, thus achieving the quantitative objectives. Exporters diversified their markets, exporting twice more than ever to the United Kingdom.

3. Guiding lines for Year Four

Activities will focus on consolidation the achievements for the Dogon trademark. Quality improvement activities will be extended to all exporters for the aspects of training for on-farm buyers, conditioning station agents and station managers.

Establishing a system of income advance for members of the pool

1. Operational Objectives

Malian mango exporters are confronted with a crucial problem of financing. The consequences of this difficulty include irregular quantities shipped, and the impossibility of scheduling shipments. The operational objectives of this activity include the following:

- To ensure regularity of shipments in order to ensure continued presence of the product in the market;
- To encourage the financial institution Nyesigiso to be more active in the fruit and vegetable export sector.

2. Results achieved

Financial assistance provided by CAE was twofold: pre-financing inputs for harvesting and conditioning and the establishment of a revolving fund amounting to 50 million FCFA.

The revolving fund was established in order to provide cash for mango purchase and to ensure salary payment for conditioning station workers. It was anticipated that the importers would transfer the revenues from product sales within the five weeks following delivery of the individual shipments.

The revolving fund was to be used to pay advances over the revenues anticipated at the rate of 200 FCFA per kilo exported. Various clients of the exporters of the Dogon trademark were to transfer revenues in a common bank account (the importers were informed about this financial management mechanism by fax). CAE was to deduct the amounts of advances made in cash and in-kind (200 FCFA/kg for cash advances + 108.8 FCFA/kg for in-kind advances covering the costs of the boxes, stickers, curlpaper, straps and pallets). The remaining of the revenues, less 20% retained by CAE until the end of the season, was to be distributed among the individual exporters all over the season.

The exporters were to receive their advances of 200 FCFA/kg upon presentation of their bills of lading, a bill provided by the air transport company to the exporter, stating the weight and cost for each shipment. Nyesigiso agreed to make advances four times a week in the morning in order to ensure constant cash availability during the campaign.

Fifty-five millions FCFA (55.2 million FCFA) were used by the four exporters under this advance system. This amount helped export 336,393 kg of mangoes towards Europe.

This experience revealed some constraints to be solved in order to ensure success of such an activity:

- constant delay in fund recovery with European importers: the time frame for returning the funds should be extended enough (more than 5 weeks) to prevent the financing mechanism (revolving) from being blocked;
- difficulties that are inherent to railway transportation via the "Régie du Chemin de Fer du Mali (RCFM)" and to sea freight containers: the tests on railway exports could not be completed due to RCFM. Also, the transit for road transportation by container took too much time (more than 20 days) on the road to Abidjan and almost impossible by the road to Dakar. In fact, only the shipments sent-out through an Ivorian exporter (using the OCAB boat) took less than 20 days to get from Bamako to the French port.

3. Guiding lines for Year Four

CAE is not planning to resume the revolving fund system during Year IV of the project. Activities will be designed to encourage financial institutions to grant credit facilities to fruit and vegetable export enterprises. With this momentum CAE is actively participating in the establishment of a guarantee program with some of the existing banks.

Establishing of a specialized expertise for conditioning stations

1. Operational Objectives

The 2001 program clearly emphasized the improvement of product quality and more receptiveness to needs expressed by importers. The objective pursued by CAE is to make available to the Dogon trademark exporter, an expert possessing competence in fruit and vegetable conditioning and a thorough understanding of quality requirements in the European markets.

2. Results achieved

To achieve this, CAE engaged a mango conditioning expert (Ms Jackie Boardman) during the entire mango export campaign. She had extensive experience working both as technical specialist for large-scale European importers of tropical products and as counselor for fruit and vegetable export companies in Africa, Asia and Europe.

The expert carried-out a two week mission (in October-November 2000) to assess the facilities, collection and grading systems, inputs and recording procedures. This mission helped her prepare the technical assistance and appropriate training modules to improve the quality of mangoes exported during the season.

From February to June 2001, Ms Boardman worked with the four exporters of the Dogon trademark. She worked on shipment scheduling, insisting on the professionalism of exporter-importer rapports and on training/awareness-raising in the conditioning stations. Emphasis was mostly placed on: the quality control approach (products received, products shipped, copy of the quality control record received from the client); establishment of a traceability system and a hygiene system in the conditioning station; the rules for product and packaging handling; hygiene principles for staff members and visitors at the conditioning station and staff training.

These activities helped achieve remarkable progress in the adoption by conditioning stations of best practice for conditioning, hygiene, traceability and services to the clients. This resulted in an increased number of professional enterprises capable of meeting the increasing challenges in this highly competitive sector.

The replicable effect of CAE technical assistance in mango conditioning was obvious. Importers noticed that exporters of the Dogon trademark considerably improved the presentation of their products. More attention was paid to conditioning and packaging of the fruit. The practice adopted by members of the Dogon trademark effectively improved the standards in the sector as a whole.

3. Guiding lines for Year Four

During Year III of the project, the fruit and vegetable conditioning expert was seconded by a local consultant during her interventions. During the next campaign, it is anticipated

that this local consultant will be re-engaged to be responsible for reinforcing the achievements and eventually extending intervention to other interested exporters.

Training producers, on-farm buyers and harvesters in harvesting techniques and on-farm conditioning

1. Operational Objectives

The quality of export mangoes is largely dependent on the expertise of on-farm buyers and harvesters who supply the conditioning stations. This observation resulted in the need to provide this training with the objective of helping these privileged intermediaries to provide exporters with mangoes that meet the standard requirements in international markets.

2. Results achieved

CAE engaged the services of a local consultant (Mr. Bouaré) experienced in mango production who had in-depth knowledge of this sector and good experience working with producers and on-farm buyers. He was engaged for the period February to June 2001 and was responsible for the training of on-farm buyers and to assist the conditioning expert with the practical training sessions in the conditioning stations.

The training of on-farm buyers was carried-out in two-day sessions, one of which was spent in the farm. She endeavored to train this important link of the chain which supplies the conditioning stations in (a) the rules in mango export markets, (b) clear distinction between export mango varieties, (c) understanding minimum quality characteristics, (d) understanding of the maturity stage, (e) the harvesting and transportation methods, (f) phytosanitary requirements and mandatory conditioning before exporting, and (g) the up-coming requirement of mentioning traceability on each box of exported mangoes.

92 on-farm buyers or conditioning station agents (including 66 women) received this training.

3. Guiding lines for Year Four

Being aware of the interest resulted from this training, it is envisioned to conduct it again in Year IV. However, it will be extended to on-farm buyers who supply other interested conditioning stations.

Establishing a traceability system used by members of the Bamako pool

1. Operational Objectives

Traceability is a requirement which will be more and more imposed for the export of fresh products. It is designed to respond to a concern for accountability of the producer and commercial intermediaries for the quality of product sold in the market. It helps

determine with accuracy, from the box of mango that reaches the importer, the place in Mali where the mangoes were produced and even the farms where they were harvested. The objective of this activity is to support the Dogon trademark exporters in the establishment of an adapted traceability system.

2. Results achieved

A transparent and reliable system is indispensable to demonstrate traceability. It has been agreed to keep the following documents as a basis for a traceability system for mango exporters working with CAE in Mali. This record keeping should be enforced in each conditioning station through updating of the following:

a. a record of contact information – name, address and code number for each on-farm buyer;
b. a recording of the name, address and code number for each of the farms where on-farm buyers buy mangoes.
c. a notice sheet in each mango box that arrives from the farm, mentioning the mane (or the code) of the farmer who produced the mangoes;
d. a report on the products received every day from each on-farm buyer, indicating the quantity purchased from each producer and the quality of this product;
e. a traceability system for each small box, from the farm to the conditioning station up to the point where the number of the producer is written on each box.

Despite the development of these basic documents, difficulties persist for strict enforcement of this record keeping, which we hope will be progressively become a habit.

3. Guiding lines for Year Four

CAE will continue to encourage mango exporters to establish a performing traceability system. This encouragement will be based mainly on awareness-raising among actors.

<u>Supporting establishment of an industrial mango drying plant</u>

1. Operational Objectives

An opportunity study initiated by CAE and conducted by CIRAD in 1999 helped identify mango drying as an appropriate activity for valorization of mango for export in Western markets. Therefore, the operational objective assigned to this component is to carry-out a feasibility study designed to confirm this opportunity and to identify a promising entrepreneur for this project in order to support him in the preparation of his business plan.

2. Results achieved

CAE has ordered a technical and financial feasibility study for a mango drying plant in Mali. This study was carried-out by Mr. Themelin of CIRAD, a drying technology expert and by Mr. Mokam of Agro-PME, a financial analyst. The report was finalized in December 2000.

The project integrates the functions of fruit and vegetable export and processing. Thus, in order to ensure cost-effectiveness of the enterprise and optimal utilization of the materials, the following activities will be carried-out: fresh mango exporting, mango drying, shallot drying, hibiscus drying and okra drying. The achievement of this activity will help the enterprise to operate 11 months a year.

After dissemination of the study report among certain promoters, the company "Tam Fruits et Légumes" appeared as the promising and appropriate enterprise for this project. A customized business plan co-financed by APDF and the promoter is being prepared by the above mentioned financial expert. Considering the commitment of the promoting enterprise and interest granted to the project by various support organizations, the project may start during the 2002 mango export campaign.

3. Guiding lines for Year Four

After the business plan is finalized, CAE will support Tam Fruits et Légumes in their negations with the banks they will have chosen to guarantee the technical and financial viability of the project. The promoter will also receive assistance in starting the activity.

Lessons learned

During the first three years of the project, CAE carried-out varied and relevant activities in the mango sector. Strategically, it has been decided that future activities should mainly focus on building on the achievements. The following points summarize the lessons to be learned from the mango program activities:

- With the current supply system, by which independent on-farm buyers are the only suppliers for Malian exporters, exporters have limited capacity to control the quality;

- This year, the design of the boxes, although it was largely appreciated for its esthetic attraction, presented problems due to the fact that the clients could not differentiate air freight and sea freight;

- Distribution of the Dogon trademark mangoes by seven French companies seriously constrained the obtaining higher prices, because for the same box of mangoes in the market, prices are aligned on the lowest level;

- The shipments of the Dogon trademark mangoes in Middle East markets, considering current air freight costs and prices generally proposed at the destination, are not financially viable;

- The highest transportation costs for small volumes (less than 2.5 tons) of shipment serious jeopardized cost-effectiveness;

- The Air France cargo planes should be scheduled only for the beginning of the export campaign, as mangoes are not well matured at this period;

- Sea freight tests by containers continue to be non-beneficial when departing from Bamako, while improvement options for cost-effectiveness and transit time are very limited;

- The time frame for payment by the importer should be estimated at seven weeks, instead of five weeks, as scheduled during the 2001 campaign;

- Successful implementation of a mango exports campaign is strongly related to the identification of proper competitiveness period for exporter's shipments to the target market. For Malian exporters targeting European markets, the best period is the beginning of the campaign, that is, before the arrival of the "colored boat mango" from Ivory Coast, for instance;

- The fight against fruit flies remains a relevant activity for the promotion of Malian mango. For example, the Dogon trademark exporters were victims of two seizures during the 2001 campaign because of fruit fly infestation, costing about 8 million FCFA to the pool members.

2.3. Search for new opportunities for cereals

2.3.1. Search for new opportunities research for Rice

Several analyses on the rice sector indicate the need to improve the quality of rice through introduction of better post-harvest practices. In its Year III Action Plan, CAE envisaged to introduce improved methods and methods for paddy rice processing in the Office du Niger area and to analyze various market segments in order to gain better understanding of quality and price factors for rice. The activity particularly targeted the small-scale processing of paddy rice and market segments that are appropriate for the marketing of improved quality rice here in Mali and in the sub-region.

Identifying and introducing better performing new technologies

1. Operational objectives

The approach of the work plan suggested the introduction of better performing husking machines in order to improve small-scale processing practices. Specific objectives targeted by this activity included the following:

- To increase overall processing yields;
- To reduce the grain breaking rates;
- To increase productivity through small-scale modern plants with the possibility of reaching annuals volumes of 750 to 1,000 tons of paddy rice;
- To improve the quality of the final products (white rice and rice bran) in order to meet the needs of certain urban market segments (local and sub-regional) which are generally more demanding.

2. Results achieved

The processing of about 260 T of paddy rice as part of the testing was carried-out in the four previous sites (Coloni, Nango, Siengo and Seriwala). This helped further detail and confirm data on paddy rice processing. Observation of the technical parameters was pursued with the purpose of confirming data collected in 2000, which are being published under the title of "Summary of the Test for Rice Quality Improvement in the Office du Niger Area".

The introduction of a higher level of better performing technologies, as part of demonstration tests in two sites, was abandoned during the year due to budget constraints. The activity for determination of references was limited by the cancellation of the order for two compact modules of small-scale rice processing equipment from Italy, which were designed for installation in two new sites of technological demonstration.

Thus, different options were explored to help select a technology based on the adaptability to existing industrial conditions and the financial capacities of promoters interested in investing. As this activity came to an end, the Centre was able to provide various information to future promoters about technical proposals which integrate various technology selection parameters for rice husking.

These information concern production cost simulations, from the traditional method to the industrial method, including the large scale of combinations that correspond to the concept of small-scale rice processing plants, which is particularly emphasized by the Centre as being a solution for valorization of Malian rice.

Improvements over the screening machines for white rice were obtained from the designer, namely CAFON ("Coopérative Artisanale des Forgerons de l'Office du Niger"). These developments derive from the results and observation of testing and

concern improvement of the small-scale screening performance (increased debit, addition of stone-removing module, adaptation of the sieves in order to obtain more homogeneous products: entire grains – average breaks – fine breaks).

Emphasis was placed on this aspect of coupling a locally manufactured and better performing screen with system of small-scale husking, taking into account the importance of granulometric homogeneity criteria at the final assessment of rice quality. With small husking plant, the machine may help screen 500 to 750 tons of rice per year, depending on the rice variety.

Various discussions and negotiations undertaken by the counseling for the supply of 260 tons of paddy rice, provided an opportunity for awareness-raising on the theme dealing with the importance of paddy rice quality. The purpose was simply to grant more formal consideration to product characteristics as purchasing criteria and the introduction of a of conditions previously agreed-upon.

Commercial negotiations for mobilization of paddy rice covered 39 potential suppliers around Niono, including 27 farmer organizations, 11 private small producers and the M'Bewani Experimental Farm (currently managed by Chinese technicians).

In terms of approach, the following steps were followed for paddy rice purchase:

- Organization of the process and publication of the bidding document;
- Identification of offers;
- Certification of paddy rice quantities supplied;
- Stock reception and constitution.

Practical learning and training in production management (equipment control and best practices) were maintained for technical capacity building for the production personnel in the testing sites and, as far as possible, other husking plants which expressed interest.

3. Guiding lines for Year Four

Under the next Work Plan, interventions will be focused on the main lines of activity that will help perform the following:

1. Dissemination of information about technical and economical references for active rice processing plants in order to attract new investors;
2. Mobilization of investment resources (technical support for technology selection and financial support for intermediation with credit institutions).

Testing the sale of rice in national and sub-regional markets and informing the actors

1. Operational objectives

This activity consisted in providing commercial promotion support for merchants who undertook the sale of rice processed in the four processing sites.

2. Results achieved

Commercial promotion support allowed for wide range dissemination of information about the improved quality rice produced in the sites. Introduction of this product aroused great interest among cereal merchants and several consumers. Merchants' interest was confirmed through the establishment of commercial relationships during the testing, as purchasing intentions were recorded and collaboration protocols were signed between certain sites and some merchants. In addition to the quantities directly processed under the testing activity, the high demand for improved products urged production in the sites at full capacity.

The 115 tons of white rice screened to obtain full grains and breaks were distributed in the urban centers of Niono, Ségou, Bamako, Mopti and Sikasso. A dozen cereal merchants, identified according to professionalism criteria, directly participated in this operation.

The product was packaged into woven PP bags of 50 kg and 25 kg with the trademark of "Etoile du Delta". Emphasis was placed on quality criteria such as homogeneity and cleanliness and prices obtained in the Niono sites amounted to 275,000 FCFA/T and 240,000 FCFA./T respectively for full grains and breaks, with an average price of 252,000 FCFA/T, compared with 225,000 FCFA/T for the DP rice during the same period.

Unlike Year II, the activity was subject to intense media coverage. However, merchants were invited to participate in the marketing test through published advertising. Sub-contractors (Nyeta Counseling Group / Afrique Verte) played the relaying role between various actors for management of the information mechanism.

Follow-up activities targeting these merchants helped collect data for analysis of market trends in terms of quality preferences. Commercial policies to be adopted were fully discussed during commercial meetings by the processing entrepreneurs and merchants regarding better management of the quality/price ratio at both producer and final consumer levels.

Thus, during a commercial meeting between the sites equipped and supported by the counseling firm and merchants from Bamako, Sikasso, Ségou and Mopti, purchasing intentions were recorded for 10,000 tons of quality rice, equaling the entire production in

the testing sites at an average price of 250,000 FCFA per ton. This represents a turnover of 2.5 billion FCFA.

However, this also means the existence of a network of about fifteen small-scale rice processing facilities equipped with compact rice processing plants, representing about 250 million FCFA of fixed investment.

Some merchants, being aware of the importance of adequate paddy rice supply, engaged discussions with the test sites in order to establish protocol agreements concerning:

- Pre-financing for paddy rice purchase;
- Price determination;
- Definition of quality rice and conditioning standards; and
- A delivery schedule, etc.

Producing improved rice

In the local market, the demand for better quality product has remained constant during the entire campaign in the test sites. The accumulation of processed paddy rice currently amounts to about 2,100 tons by the test sites in the form of service delivery. The main clients of the sites include individual paddy rice producers, merchants who buy paddy rice and certain Village Associations which are geographically located close to the sites.

Fundamentally, it is the quality of processed rice in the testing sites (better yields with an average of 63% and a maximum of 70% observed; the low rate of breaks; the adequate level of whitening) which may explain enthusiasm observed mainly in the two plants located in Coloni and Nango. It is currently estimated that 1,300 tons of white rice from services delivered in the testing sites obtained quality premiums averaging 15 to 25 FCFA per kg. This additional income may also explain the high demand recorded in the test sites.

3. Guiding lines for Year Four

Considering the uncertainty for creation of normal conditions for test implementation, including the acquisition of adapted production tools and the availability of quantity and quality exportable products for high quality rice, the sub-regional marketing component was discarded from Work Plan III. Sub-regional market surveys were not undertaken. However, research will be undertaken on market indications in Sikasso for eventual transactions with borderline merchants from Burkina Faso and Ivory Coast.

Providing assistance to entrepreneurs for investment options

1. Operational objectives

CAE provides support in the form of counseling services, notably the dissemination of technical and economic references and assistance to entrepreneurs with project ideas for

business plan development and investment resource mobilization. During Year III, potential investors received such counseling support for the introduction of paddy rice husking plants.

2. Results achieved

Over twenty promoters received technical and commercial information about equipments (manual, semi-industrial or industrial types) and about the investment levels corresponding to each type (cost estimates and addresses of manufacturers in Europe and Asia as well as West African retailers).

Five promoters in the stage of pre-investment studies received direct counseling about equipment selection and relevant commercial information. The pre-investment studies were conducted with assistance from two counseling firms approved by the Enterprise Support Service (SSE/CAE). These studies are being promoted at the stage of fund-raising.

It is considered that the testing helped more than a hundred actors (producers, processing entrepreneurs and merchants) realize the advantages of adopting better rice processing techniques and practices. Dozens of private and group promoters have already adopted the approach, as they come to the Centre to request information and counseling support, either directly or through sub-contractors who contributed in the monitoring of the demonstration tests.

Supporting the establishment of a new industrial processing plant

For paddy rice processing, it should be noted that an industrial plant with a theoretical capacity of 20,000 T started production in April 2001 in Ségou (the GDCM company – "Grand Distributeur Céréalier du Mali"). Investments made are sufficient and adequate to meet generally accepted quality standards. The product is already available in the market and is sold under the trademark name of "GDCM – Riz de Luxe" at a factory price of 260,000 FCFA per ton.

Lessons learned

Results achieved by CAE through implementation of "Rice Quality Improvement Testing in the Office du Niger Area" for improvement of product processing and marketing, to help achieve the objective of creating value added and gaining competitiveness include the following:

⇒ The comparative advantage that may result from better performing processing technologies at the level of small-scale rice husking plants, considering quality requirements from consumers and better valorization requirements, is well perceived. The same is true for the significant impact of this process of improvement of white rice characteristics on marketing practices;

⇒ The interest of processing entrepreneurs for further modernization of paddy rice processing practices is confirmed by various requests recorded for the acquisition of new and better performing equipments.

⇒ Requests for business plan development and for various technical and economic reference information on paddy rice processing demonstrate this interest;

⇒ The interest of actors (processing entrepreneurs and merchants) is expressed through demand for better quality products from the testing sites;

⇒ Quality improvement aroused enthusiasm among the merchants. The quality premium is estimated at 15 to 25 FCFA/kg and assessed through increased sales.

⇒ A consultation meeting was held to facilitate relationships between the merchants and processing entrepreneurs who received support under the demonstration tests. Essentially, the approach aimed at encouraging the two parties to take into account the improved quality of Office du Niger rice and the assessment of marketable quantities. An order for 10,000 tons was recorded from merchants who participated in the demonstration testing, to be sold in the local market.

2.3.2. Search for new opportunities for Maize

Maize is an important cereal in Mali. Because it has higher productivity and is suitable for various utilizations (human consumption, animal feed, industrial use), it is gaining increasing importance in the achievement of food security. It is locally consumed in the form of various traditional dishes (couscous, *tô*, porridge, cooked or roasted ear, etc.).

Despite the existence of a network of small-scale flour mills, less than 1% of maize production is locally processed. Existing small-scale plants with low productivity, using traditional processes, are confronted with serious adaptability issues for their milling chart, due to the requirements of local consumers. The quality of production and of the final products is clearly below the standards required by existing market segments.

The processed products (semolina and breaks) are easy to sell, except for flour (25% of processed products) due its present characteristics, compared with most common culinary utilization forms and suitability for storage.

Therefore, the quality improvement, especially for flour, through germ-removing, seems to be a good alternative for valorization of maize production through processing by the small-scale and medium enterprises. Moreover, the application of more appropriate technologies should help improve the quality of final products in a significant manner.

Considering the relative complexity of the processing method (equipments, training, financing – value added estimates and investment opportunities), few entrepreneurs are willing to invest in this sector. Therefore, it may be noticed that most of current maize

production is marketed only in its coarse form (sale of grain) or is processed by individual families for self-consumption.

Finally, the lack of a coherent commercial policy prevented the promotion of consumption and the development of new outlets in the case of the flour mills.

Perception of this issue motivated the introduction of demonstration tests for technology (for maize germ-removing for the CMDT area flour mills) and marketing (introduction of germless products in the urban markets).

Implementation of the technological demonstration test in the sites of Karangana and Namposséla, with technical support from IER's food technology laboratory (LTA), in collaboration with the Cereal Sector Division at the Regional Direction of CMDT in Koutiala. The marketing component is monitored by the NGO Afrique Verte, through a marketing test for germless products in a few urban centers.

Identifying/Testing germ-removing with small-scale maize flour mills

1. Operational objectives

Presently, the approach for improving the milling chart for small-scale rural flour mills consists in finding compromises for solutions. Various adaptation options are only palliative solutions proposed for improvement of product characteristics, based on market needs before sustainable solutions are identified (through an integrated technological, commercial and financial approach) for the development of industrial processing and valorization of maize.

Two sites were equipped with germ-removers. Testing for the production germless maize flour was conducted, covering the training of mill operators in cereal milling technology through a subcontract with the LTA.

2. Results achieved

The training program covered the following themes and modules:

- Operation of the maize germ-removing machine;
- Understanding the milling chart for cereals;
- Processing best practice;
- Product characterization (raw material and final products);
- Stock protection techniques;
- Production cost calculations.

Mill operators (a total of 12) improved their skills in the utilization of raw material (coarse maize) and in production best practice. They identified hygiene and protection measures for their stocks as well as appropriate solutions for their technical problems through improved production charts for breaks, semolina, flour and maize grits.

Important recommendations were made for compliance with the main quality criteria for maize grain breaks and flour, mainly regarding cleanliness, color, granulometry and suitability for storage, as demonstrated in terms of humidity and lipid contents.

It is estimated that the two sites have adequate materials to produce final products that meet market requirements. The grain break production according to the improve chart is overall compliant with the average break type for which there is demand in the urban market.

However, it is observed that they do not apply a specific chart for flour, which is always considered as a secondary product, compared with breaks. Considering the potential demand, quality flour production would be profitable. Better understanding of the germ-removing technique will significantly contribute to this.

Primary qualitative characteristics seem to be favorable in terms of germ-removing efficiency. Considering lower yields of final products due to the impact of the germ-removing process, the calculation of production costs and cost prices will be pursued so as to adopt a coherent policy for sale price determination for breaks and flour.

3. Guiding lines for Year Four

Despite improvement noticed in terms of culinary property of the flour (suitability for traditional culinary preparations, particularly well-cooked *tô*) product finishing remains a weakness because winnowing and sieving equipments are obsolete and low performing and often lack rigor in terms of quality control. Observation will continue with the LTA in order to determine improvements to be recommended to small-scale maize processing entrepreneurs.

At the same time, efforts for characterization of the products will continue at the LTA in order to determine required adaptation for product diversification for small-scale flour mills in order to encourage the consumption of processed maize.

Analyzing the demand (market segment profiles in terms of quality/price and quantitative needs for outlets)

1. Operational objectives

Afrique Verte, the NGO responsible for marketing monitoring, conducted a market survey targeting 419 actors in the sector (producers, animal raisers, mill operators, merchants and households) in five regions (Kayes, Koulikoro, Sikasso and Mopti) and in the district of Bamako.

2. Results achieved

This baseline survey helped determine the typology for:

- Production;
- Processing;
- Marketing;
- Consumption.

Identification of determining preferences and requirements resulting from the survey on the appreciation of maize grain breaks and flour may be summarized as follows:

- Maize breaks and flour represent 94.7% of milling products consumed in the households surveyed. The remaining of their maize consumption (5.3%) takes the form of roasted maize ear or fine semolina;
- Maize flour is mainly used to prepare *tô* and couscous while the breaks are mainly used to prepare liquid porridge;
- Three types of granulometric sizes are preferred by the consumers, both for flour and for breaks;

  - For flour, the most preferred type is the type that passes through the *mugutèmè* sieve (57.8%) followed by the type that passes through the ordinary and fine nylon sieve. The top preference for the type that passes through the *mugutèmè* (representing an average granulometry of 0.5 and 0.75 mm) may be explained by the fact that it is more suitable for preparing *tô* and couscous. Granulometric fineness of the nylon sieve or fine nylon is preferred for the preparation of the type of porridge called *môni*.

  - As for the breaks, the average size is the most preferred (58.8%), followed by the fine breaks (29.4%) and finally the large breaks (11.8%). Easy cooking and the texture when eating are the main reasons for the consumers to justify this choice.

- By order of priority, the criteria that determine acceptability of milled maize products for consumers include the following:

  - cleanliness was most frequently mentioned (50%);
  - color; at this level, consumers' top preference is yellow maize (57.1%), especially in breaks and then white maize (42.9%) which is mostly preferred in the form of flour;
  - suitability for storage;
  - granulometry;
  - easy cooking; and
  - price.

This means that milled maize products that are marketable in urban centers such as Bamako, must be very clean and have suitable color (yellow for breaks and white for flour). Hence the need to ensure proper selection of raw materials and almost perfect cleaning operations when processing maize. Hygiene measures must be rigorously enforced. They must also take into account the products' suitability for storage (hence the need for germ-removing) and granulometry, a criterion that influences easy cooking.

By complying with these requirements, the consumer seems to be ready to pay adequate price for quality products. As he is much concerned, for now, with other criteria than price which, however, should be contained in the limits of references for similar products made from other cereals.

Therefore, it is important for flour mills to continue production of various product sizes (breaks, semolina and flour). The main conclusions reached by the LTA about technological references must be considered when adopting improved milling charts.

The level of current demand confirms that the market for maize breaks is very promising. As for flour, which has always been a constraint, initial culinary characterization performed by the LTA are confirmed with some households for suitability of germless maize flour for several local culinary preparations (porridge, *tô*, couscous, etc.).

3. Guiding lines for Year Four

Based on technological research carried-out by the LTA and on the results of the market test for processed products, the following marketing elements must be conveniently managed in order to ensure better marketing of the products.

Product policy

The marketing process indicated that urban center consumers have a noticeable preference for grain breaks and semolina. These two products should be designed, à priori, for urban markets. Flour should be produced for suburban markets which expressed interest for this product. Therefore, in order to ensure adequate marketing, flour mills must establish a pricing policy that is attractive enough, selling it a lower price than grain breaks and semolina.

Based on demand expressed by the entrepreneurs and consumers during the test, flour mills must adopt their production strategy in the following proportions for better marketing: 65% of the production in grain breaks; 20% in semolina; 15% in flour. In addition, 80% of total production must be yellow maize and 20% white maize.

Creation of a commercial agent position within the flour mills: analysis of flour mill operations sufficiently points to a deficit in commercial aggressiveness. In fact, the current marketing policy at flour mills is quite timid and lacks a professional approach. To solve this, the flour mills must introduce a commercial agent position which will be responsible for defining and implementing an adequate marketing strategy.

Establishing a proper advertising policy

Investigations carried-out by Afrique Verte largely demonstrated that flour mill products in the CMDT area lack adequate advertising. In fact, these products are little known or unknown to the consumers and merchants because of the lack of information. It is

therefore important to establish a proper advertising campaign to promote these products. To achieve this, the following opportunities windows may be explored:

- The national radio station (ORTM) and local FM radio stations that exist in almost all distribution markets;
- The national television;
- The written press (in French and local languages);
- Organizing culinary demonstrations, disseminating culinary receipts, or even organizing culinary competitions to vulgarize numerous opportunities for utilization of maize flour.

Establishing relationships between processing entrepreneurs and cereal distributors

The marketing test helped identify an address directory of cereal operators (see list attached) interested in the marketing of germless maize products. Considering increased interest of these operators, it is recommended that periodic meetings for establishment of relationships be organized. These meetings may be extended to certain areas which were not targeted by the testing, such as Kayes, Yélimané, Sikasso and Northern regions of Mali. These meetings may serve as a framework for direct exchanges designed to define practical methods related to product marketing: conditioning patterns, delivery time, transportation, price, payment methods, for the definition of the of conditions.

Establishing adequate supply policy for depositories

Most of the identified cereal operators wish to obtain easy product supply methods. Considering the working methods of the actors, the mill operators would better establish a good supply strategy that would consist in delivering the products themselves to various sale places. This operating method would be managed through properly developed collaboration protocols.

Informing the actors about processing opportunities and the demand for final products

1. Operational objectives

The main objective was to make the test results available to the users. Organizing meetings with actors in the sector, disseminating written materials, providing counseling-support in order to orient the promoters and develop their projects

2. Results achieved and guiding lines for Year IV

This activity will essentially be postponed to Work Plan IV, considering the accumulated delays in the finalization of the tests and the summary of final results. However, discussions with certain partners and information requests from promoters on germ-removing possibilities for small-scale maize production were regularly monitored.

Lessons learned

Valorization of the maize sector requires the promotion of maize processing: in the short-term, traditional and semi-industrial processing plants, that are better adapted to for SME/SMI and GIE's and for the socio-economic context, should be privileged, as these require lower levels of investment and technical skills than industrial plants.

This germ-removing test at the Namposséla and Karangana flour mills had crucial importance in the process of local production and the improvement of traditional maize germ-removing machine. It helped direct actors (the designer, the manufacturer and users of the equipment) to identify the major defaults as well as appropriate curative and preventive measures. Therefore, the necessary adaptations need to be implemented.

During this test, continued improvement opportunities need to be explored in order to make processing more performing at the level of this small-scale rural flour mills. By default, these cases must be taken into account in order to identify appropriate solutions for valorization of maize through small-scale processing and sustained market development for breaks and flour.

Various alternatives were explored to help with the selection of technologies based on their adaptability to the conditions of the industrial environment and the financial capacity of interested promoters. We are able to provide various information about technical proposals that integrate various parameters for the selection of a technology. The information mechanism which will be developed under Work Plan IV will be based on exploitation and dissemination of all results through:

- Development of summary data sheets for investment projects for semi-industrial maize processing. This will be used as an incentive potential investors;

- Dissemination of technical and economic information that indicate the potentials of this sector and the essential steps for customized support to be offered to investors for preparation of their investment projects;

- Direct support to entrepreneurs with project ideas, to help them develop their business plans and raise funds that are adapted to their investment needs.

2.3.3. Search for new opportunities for Millet/Sorghum

1. Operational objectives

In Mali, the impurity rate of millet is about 10% and the practice of millet cleaning is not systematically adopted, except for institutional sales contracts (PAM, National Security Stock, etc.) and very few exports.

Considering this fact, CAE envisaged the introduction of systematized sales of high quality millet/sorghum, even in domestic markets.

Therefore, the millet/sorghum program under Work Plan III focused on the introduction of the stone-trap, a new technology for the cleaning of dry cereals in Ségou, Mopti, Bamako and Koutiala. This technology was designed in Senegal by the ROCAFREMI and ROCAS networks.

2. Results achieved and guiding lines for Year IV

After validation of the technical and financial offer of the LTA for installation, training and monitoring of the stone-traps, preliminary discussions will be undertaken with the sites that are likely to receive the stone-trap. The activity was not carried-out because of delays in the delivery of the equipments by the supplier, URPATA SAHEL in Senegal. The four machines were delivered after a mission carried-out by CAE in Dakar in early August 2001. They are presently being pre-tested at the LTA. Negotiations are underway between CAE, IER and SEG/USAID in order to prepare for the testing of this millet/sorghum cleaning technology during Year IV.

SECTION III

SUPPORT TO AGRO-ENTREPRENEURS, GROUPS AND ASSOCIATIONS

3.1. Support for increased availability of commercial and technological information and business management capacity building (training)

Since its establishment in 1998, CAE has endeavored to establish a sustainable information system, in collaboration with information provider partners. To this effect, collaboration protocols have been negotiated with national (OAM, DNSI, etc.), sub-regional (MIS's in the sub-region) and international (ITC) partners. With support from these partners, newsletters have been prepared and disseminated among the Centre's clients and partners.

In order to directly support agro-food sector development efforts, micro-programs and magazines have been developed and disseminated with assistance from the national television station and/or outreach radio stations. These audio-visual materials discuss specific and varied themes about modern production techniques and technologies. Support from CAE during Year III helped the Observatory of Agricultural Markets (OAM) start the collection and radio-broadcasting of national and sub-regional price information for potato and shallots.

In order to ensure sustainability of this support, CAE will closely collaborate with DNAMR regional offices to disseminate technical and technological information derived from the demonstration tests conducted by CAE. This collaboration has already started with the livestock sector for which the DNAMR has been involved in various discussion forums organized the Centre during Year III (launch and feedback workshops). The micro-programs and magazines developed by CAE about animal fattening, animal feed and marketing will be widely disseminated among DNAMR regional offices. Collaboration relationships have been established with local radio stations that are already involved for the broadcasting of the same information.

CAE's web site is disseminating the same information and technical documents were developed in French and Bambara about the processes, technologies and methods of utilization for some equipments such as husking machines. Our protocol agreement with the Office du Niger also takes into account the dissemination of information.

Increasing the availability of commercial and technological information may be achieved through the following:

- Reinforcement of the partner network of information providers such as the OAM, IER, DNSI, etc.
- Dissemination of commercial and technological information;
- Establishing a cyberspace for clients to facilitate electronic mailing and research on the Web research.

3.1.1. Newsletter publishing

The Centre publishes two types of newsletters:

The CAE Newsletter

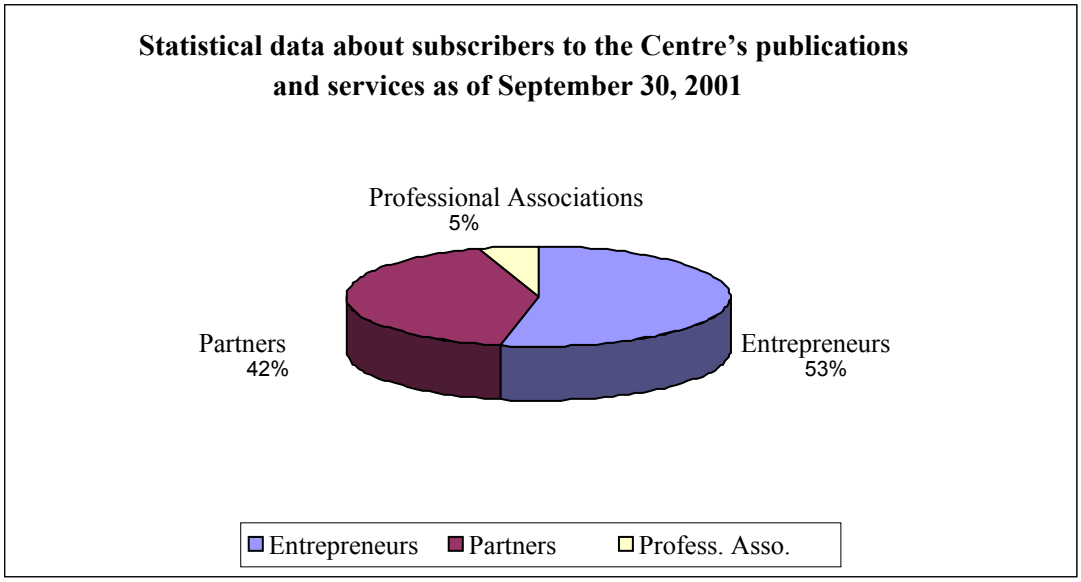
This is a quarterly publication among 98 subscribers and partners. This periodicity was determined in accordance with CAE's reporting dates. Its content is focused on activities carried-out during the quarter.

The Price Bulletin

This is a weekly publication which is disseminated among 28 agro-food entrepreneur partners. Its content is focused on price information in the European and Middle-Eastern markets for fruit and vegetable, mainly the following fresh products: mango, guava, ginger, hot pepper, green beans and yam. This publication helps agro-entrepreneurs obtain information about these markets in order to facilitate commercial decision making.

To date, CAE has recorded 98 subscribers for its publications and services, 53% of which are agro-food entrepreneurs, 42% are partners (public institutions, projects, organizations, etc.) and 5% of agribusiness professional associations. These subscribers regularly receive the Centre's publications. Some clients, in addition to the publications, receive other services such demand-driven information, the cyberspace and the documentation center.

Chart I: Composition of the list of subscribers



Source: CAE

3.1.2. Demand-driven information

Response to client requests concerns demand on an as-needed basis. Most often, the requests concern information about equipment providers, importer addresses, processing methods and standards. Such information requests are responded by the Centre's technical team or by agro-entrepreneurs themselves at the cyberspace.

The ***Cyberspace*** is mostly utilized to establish contacts with partners (suppliers and/or clients). Table 2 indicates the monthly number of visitors to the cyberspace from January 2001 to September 2001.

Table 1: Statistical data on the use the Cyberspace

	Oct 00	Nov 00	Dec. 00	Jan. 01	Feb. 01	Mar. 01	Apr. 01	May 01	June 01	July 01	Aug. 01	Sept. 01
Cereals	1	1	0	0	8	4	12	16	10	9	16	8
Fruit & vegetables	38	33	33	26	39	25	37	35	48	47	41	40
Livestock	34	22	26	17	14	23	28	26	33	36	35	13
Total # of users	73	56	59	43	61	52	77	77	91	92	92	61

Source: CAE

3.1.3. Information dissemination through the AgroMali Web site

The agromali Web site (**www.agromali.com**) helps get access to most of the Centre's information. It is continuously updated. The site records a large number of visitors, with a monthly average that exceeds 800 visitors. The majority of visitors are living in the USA. Table 3 and Graph 2 indicate the increase of the number of visitors to the site from October 2000 through September 2001.

Other information, such as the availability of 3 tons of manuals on best practices for animal and poultry feeding, sector profiles, completed studies and training sessions are also disseminated through the site.

Table 2: Statistical data about visitors to the agromali Web site

	Oct. 00	**Nov. 00**	**Dec. 00**	**Jan. 01**	**Feb. 01**	**March 01**	**April 01**	**May 01**	**June 01**	**July 01**	**Aug 01**	**Sept. 01**
# Visitors	1150	1253	1357	1369	1697	1819	1711	1588	1830	1855	3198	2933

Source : FINTRAC

The site has been revised to make it more user-friendly and to better meet users' expectations. New headings such as sector profiles or the introduction to agro-enterprises were created.

3.1.4. Preparing and publishing technical newsletters

The content of the second newsletter, which concerns the rice sector, was validated by CAE and will be disseminated among paddy rice producers, processing plants, merchants, researchers and extension agents in the form of booklets during up-coming workshops. The content is about:

- *Rice and its varieties;*
- *Rice production areas and systems;*
- *Rice in the world. The Malian rice sector;*
- *The revolution of rice cultivation in Mali;*
- *The major stakes of the intensification of rice cultivation; and*
- *Office du Niger, the masterpiece of rice cultivation in Mali.*

The *rice booklet*, which will be a basic document about rice, discusses rice production, processing and commercial data. This document will constitute the source of pedagogical data sheets and training modules targeted to some of the actors in the sector.

3.1.5. Information about financing and technological sources

A document of funding sources in Mali and in the sub-region has already been developed and CAE is considering how to widely disseminate it. The target group for this document will be composed of bank staff, agro-entrepreneurs and counseling firms specialized in business plan development.

3.2. Capacity building among agro-entrepreneurs (training)

Since Year I till Year III of the project, the role of the training component has concerned the identification of training needs for partner agro-entrepreneurs and to analyze these needs so as to translate them into training themes and modules. Then, a training network was established in order to ensure sustainability of the training activities through the transfer of skills to local organizations. At this level, another role was to ensure capacity building through the training of trainers. Another role for CAE is also to help the training network develop training modules, ensure post-training follow-up in order to ensure the quality of training contents and re-investment of skills acquired by the entrepreneurs in their activities, hence the assessment of the impact of training among beneficiaries who often lack basic training. It should be noted that the training network is composed of private and public sector trainers working in synergy among themselves and with CAE. Therefore, they are not mere consultants. Training is not delivered by consultants but rather by members of the network whose composition meets the need for the sustainability and the transfer of skills learned.

Table 3: List of Trainers of the CAE Trainer Network

N°	Names & Surnames	Contact (phone #)
01	Ibrahima Barry	77 56 76
02	Corotoumou Magassa	23 33 00
03	Abdou Berthé	23 32 24
04	Mamary Traoré	24 02 92
05	Seydou Bouaré	73 10 96
06	Cheick Hamala Coulibaly	74 04 79
07	Samboucourou Kanté	29 34 75
08	Oumou Traoré	22 32 89
09	Moriba Koné	22 32 89
10	Daouda Moussa Koné	22 15 89
11	Modibo Sidibé	77 21 33
12	Doua Demba Diallo	73 97 78
13	Sékou Sangaré	24 14 87
14	Sékou Dramé	24 17 34
15	Calixte Traoré	29 97 67
16	Ousmane Keita	29 06 63
17	Bolizé Dao	20 03 32

Source : CAE

3.2.1. Training in the use of the Internet

Introduction to the Internet aims at raising awareness among agro-entrepreneurs about the advantages and benefits of this formidable communication tool for the development of their businesses. Specifically, this training concerns:

- Learning how to use the e-mail; and
- How to search information on the Web.

The training is specifically designed for agro-entrepreneurs and presents examples of concrete solutions to problems in the agribusiness sector.

This training took place from January through March 2001. It was conducted with assistance from two trainers of the service provider named SPIDER. Twenty-four agro-entrepreneurs and partners received the training. Considering the size of the demand, priority has been granted to partners and clients in close collaboration with CAE.

By the end of this training, each participant acquired a free electronic mail address from the provider (Caramail, Yahoo, Hotmail, etc.). This training has had a tremendous impact on visits to the Cyberspace which is now visited by an average of sixty people (see Table 2) per month, compared with about fifteen prior to the training.

This introduction to the Internet, coupled with services provided by the cyberspace, has facilitated Web site information search for certain agro-entrepreneurs, and mostly sending electronic mails (e-mail). The objective of increasing access to information technologies targeted through this activity was achieved by the Centre.

Tableau 4: Statistical data about Internet utilization by the Agro-entrepreneurs

Sectors	Sector Segments	Month		
		January	February	March
Livestock	Production		1	1
	Processing			6
	Marketing			1
Fruit/Vegetable	Production			2
	Processing	3	2	1
	Marketing	1	1	2
Cereals	Production			1
	Processing			1
	Marketing			1
Total		4	4	16

Source : CAE

During Year III, 24 agro-entrepreneurs, including 7 women, received training in the use of the Internet. Their activities are part of the three sectors covered by the Centre's intervention.

3.2.2. Business management training

This concerns support provided to the enterprises, associations and groups in order to build their capacities in:

- Business management ;
- Quality approach; and
- Utilization of the Internet.

Training to agro-entrepreneurs and associations/groups

Training is not an isolated activity, but a cross-cutting one in accordance with sector and enterprise development. Therefore, it is composed of basic modules designed to update agro-entrepreneurs' skills levels, but also modules that are specific to sector development (production, processing/storage and marketing). CAE has started emphasizing this specific training.

The training component of the project was extended to Year III in order to take into account the quality approach. Thus, Year III activities focused on the following five main lines:

- Training of agro-entrepreneurs in the basic principles of business management;
- Targeted training for associations and other groups of economic actors;
- Training on specific modules about the sectors and sub-sectors;
- Quality management and the establishment of quality groups;
- Awareness-raising about certain practices and the dissemination of certain processes and technologies through the Centre's communication strategies.

Training activities

The trainer network: Establishing a network of trainers is the approach decided by the Centre. It includes both private and public institutions and is geared towards decentralization.

This approach helped us work directly with staff members of IER, LTA or CPS/MDR.

It should be noted that the role of the training component was to facilitate establishment of the trainer network first, which will take-over from CAE later. This component helps ensure the training of trainers of the network in training methodology, training material development, follow-up of the training and post-training activities and facilitates contacts with existing and potential partners for entrepreneurs who received the training. On the other hand, the training component is the direct interlocutor of service providers and beneficiaries for whom it helps assess the training needs, to be translated into training modules later. It is responsible for management all aspects of training, both in terms of planning and in terms of monitoring and evaluation. It should also be noted that the training sessions are not conducted by consultants but rather by members of the network, the composition of which responds to the issues of sustainability and transfer of skills acquired through the training.

We also provide training to the members of the consultant network and to consulting firms which collaborate with the SSE program to establish accounting systems or help develop business plans. Training sessions have been conducted in Sikasso and Ségou on cash flow, treasury and business plan. In addition to these formal training sessions, these members receive from the Centre practical training through criticism about their reports and business plans produced as part of their sub-contracts.

Through our approach, CAE is envisaging to provide support to the network, based on available resources. So, before we have enough resources to equip the network with computers and/or logistical equipments, CAE has provided computer training to those of the members who lacked such skills. CAE's cyberspace is open to the trainers and consultants for their computer needs. Regarding logistics, CAE provides them with access to our photocopiers, telephone, documentation and office supplies.

The Centre has developed 12 training modules in business management. A total of 2,094 participants were recorded for various training sessions, including 290 participants in Bamako, 100 in Sikasso and 91 in Ségou. According to a survey among trained entrepreneurs, more than 80% of them were satisfied after they attended several modules. The three most appreciated modules were the following:

- Business Plan;
- Strategic Planning; and
- The Module about Knowing your Costs.

In addition to these, other specific modules concerned:

- The juridical texts about fruit and vegetable exports;
- Training for 15 staff members of the Office du Niger in business plan development;
- Production and hygiene best practice in the production and storage of shallots in the Dogon plateau;
- Conditioning techniques for the dry shallot slices;
- Training of fruit and vegetable exporters in quality management from the farm level up to shipment;
- Training of on-farm buyers;
- Awareness-raising on processing techniques for high quality rice;
- Storage best practice for potato.

Table 5: Training data by sector and by location

STATISTIQUE DE FORMATION DE L'AN 3

SECTOR	SEGMENT	LOCATION				SEX		MONTH											
		Bamako	Sikasso	Ségou		F	M	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.
LIVESTOCK	Production	78	83	116		29	248	64	5	13	16	24	64	69	0	20	0	0	0
	Processing	52	54	35		15	126	32	1	13	3	18	43	24	0	7	0	0	0
	Marketing	82	118	69		28	241	51	3	13	9	21	64	86	0	23	0	0	0
FRUIT & VEGETABLE	Production	45	5	85		15	120	17	4	2	5	17	29	35	0	25	0	0	0
	Processing	65	5	45		36	79	12	4	0	7	12	45	17	0	13	0	0	0
	Marketing	91	32	110		84	149	15	6	0	10	21	80	41	0	42	0	0	0
CEREAL	Production	25	33	263		55	266	55	4	0	2	20	51	144	0	88	0	0	0
	Processing	38	19	115		37	135	13	5	0	8	8	23	44	0	55	0	0	0
	Marketing	46	31	354		51	380	15	3	0	6	11	69	146	0	179	0	0	0
		522	**380**	**1192**		**350**	**1744**	**274**	**35**	**41**	**66**	**152**	**468**	**606**	**0**	**452**	**0**	**0**	**0**

Source : **CAE**

The figures in this table indicate that the business management training received emphasis this year with 12 modules taught, out of a total of fifteen. The objective of these business management training sessions was to help participants undertake concrete actions: decision-making, behavioral change, improved management system.

People interviewed were able to provide examples of improvement in their enterprises: more than 60% observed improvements in the commercial network, in productivity, in their turnovers and cost-effectiveness of their enterprises.

Constraints to such favorable development are essentially related to the overall business climate, including poor judicial environment and the lack of sound contracts, leading to reluctance on the part of banks which prefer to avoid high risks with entrepreneurs who are deemed not to be reliable. This may explain the lack of adequate financing to allow entrepreneurs either to apply the newly acquired skills or to extend their enterprises.

Various people interviewed in Sikasso stated that they were largely satisfied with the training modules (Business Plan and Knowing Your Costs) taught by CAE. Their highest preference was for the module about costs (55% of preference for Cost related modules and 45% for Business Plan) which helped expose them to an analytical framework that facilitated classification of the costs in order to assess cost prices and their impact on the margins, including benefit margins. The "Business Plan" module provided them with new orientation for internal management of their enterprises. More than 60% of respondents modified or diversified their methods of working; 60% were able to increase their turnovers by about 30% as a result of better cost monitoring combined with improved commercial network.

However, the most noticeable impact concerned the decision-making process in terms of bookkeeping for better monitoring of activity efficiency. They were not able to describe the modules that would be more useful to them in the future, but indicated that the lack of revolving fund remained a major constraint to improved performance.

The constraints they cited included the following:

- The lack of quality which limits access to desired markets; and
- Inadequate credit fund for the annual activity cycle.

In general, the Village Associations (VA) stated little improvement in their approaches as a result of training. The associations expressed their wish to receive training in Market Survey and Commercial Strategy, in stock management and accounting, in treasury management and finances. These modules will help facilitate access to reliable funding sources.

3.2.3. Training for improvement of the quality approach

Implementation of the training and results achieved

Following a needs assessment study for a quality improvement program, dissemination of the results of this study and the initial promotional activities, actual implementation of the quality management program started in the form of a contract with an independent consultant. Activities were essentially focused on the assessment of quality in agro-industry, awareness-raising, training and establishment of quality groups. Participation in this program is voluntary and it facilitates the implementation of an approach which, within one year, should help draw conclusions and validate an approach which had not yet produced satisfactory results in Mali.

This approach is characterized by the following two components:

Training: During the preparatory phase, participants were selected and pedagogical materials were designed for the first module of the quality management training, which took place from July 10 to 14, 2000. Four modules were agreed-upon and twenty-nine (29) enterprises were selected including the following:

- Twenty-four (24) that were classified as micro and small size;
- Five (05) that were classified as medium and large size.

In terms of sectors and fields of activity, this group includes the three (3) main sectors (Cereals, Fruit and Vegetable/Alternative Products, and Livestock) as well as agro-processing (food industry) and agricultural product export activities.

Based on site visits aimed at identifying quality issues and various constraints faced the enterprises, as well as on various interviews conducted with participants, a training was designed with the following overall objectives:

- Understanding various meanings of the word "QUALITY";
- Understanding the main steps for establishment of a quality approach within an agro-food enterprise;
- Establishing quality groups within one's enterprise; and
- Judicious utilization of the main tools of quality control.

To achieve these objectives, the first training module entitled: "Generalities about Quality Management" was taught.

Quality management training is being pursued. To date, four quality groups have been established:

- The "Nyesigi" Group, composed of 10 members with concentration on "secondary Processing";
- The "Keneya" Group, composed of 5 members, with concentration on "Livestock";

- The “Etincelle” Group, composed of 4 members, with concentration on “primary Processing”; and
- The “Mali Qualité Export” Group composed of 7 members, with concentration on “Exports”.

Regarding problem solving, the groups have already classified these into “manageable” and “non-manageable” and are in the process of prioritizing the manageable problems, which will lead to the identification and selection of the major theme to be covered by the group as a priority.

Intermediate results achieved for this training on quality are very satisfactory. These include the following:

- Establishment of 4 groups based on the module on generalities of quality management;
- Problem solving in the enterprises by classifying them into manageable and non-manageable and prioritization of manageable problems;
- The practice of quality within agro-enterprises by judicious utilization of the main tools of quality control: the case of four mango exporters whose turnovers improved this year, compared with previous years;
- The case of other processing entrepreneurs who clearly improved visual presentation of their products: Mr. Tangara for the processing of millet into “dry *dégué*” and dried meat conditioned in packaging with a label indicating the ingredients, the manufacturing and expiration dates and the methods of utilization for *dégué*. The case of Mr. Mallé in the processing of fruit and vegetable into juices with better conditioning; and
- The case of Mrs. Tounkara in poultry farming, who increased egg productivity.

Currently, efforts are concentrated on communication issues in order to better explain the stakes of quality among the main actors and promote the CAE recommended approach to solve persisting problems. These efforts also aimed at drawing the attention of support institutions on the strategic issues of national policy of quality management in the agro-food sector.

3.3. CAE’s communication activities

The following activities were implemented :

In the field of communication, the publication of the manual on “animal and poultry feed best practice” in three volumes is completed and a communication strategy for sale of the manual has been adopted. Each volume was sold at 2,500 FCFA, with sale places located at CAE offices in Bamako, Ségou and Sikasso. Advertising messages were designed to support the sales.

The 10 volumes of the study on promising agro-food sectors in Mali, which were initially available at the CAE documentation center, were edited in the form of books upon the request of the MICT.

The two micro-programs in French and Bambara languages about "mango harvesting techniques" and about "the control of fruit diseases" are available in the form of vide-tapes and the version in Bamanankan of "Malian mango: the challenge of exports" has been broadcasted several times. The video-tape and the 4 micro-programs about the quality of Malian mango have been disseminated in Bamako and Sikasso since January 15, 2001. All of these documents will be transmitted to such partners as the DRAMR's and IER for wider dissemination.

The brochure about the summary of the demonstration test results for improvement of the quality of rice in Niono is available and is currently being published.

In order to support animal merchants, especially small ruminants, posters on the sheep stock exchange for Tabaski were prepared and posted during the stock exchange period.

Media coverage by radio and television as well as insertions in newspapers was ensured for the workshop organized by the livestock/meat federation (FEBEVIM), the workshop on validation of the study on agro-industry sectors in Mali and the launch workshop for the test about high quality animal production and marketing.

By the time of the departure of Mr. Andrew Lambert, a workshop was held at Mandé Hotel, to present mid-term results of the activities implemented by CAE. This provided an opportunity to introduce the new Director and to present the perspectives for the next two years.

The launch ceremony for the Potato activity took place in Sikasso as well as the inauguration of the two storage warehouse prototypes from July 11 to 12, 2001.

A feedback workshop for the results of the demonstration tests of balanced feed and high quality animal marketing took place in Ségou on August 1st and 2nd, 2001. During this workshop, two micro-programs and 2 magazines were prepared on the livestock sector.

AMAP published advertising on the Centre in their year 2001 calendar. The official directory of CMA-AOC also published an insertion on Mali, including 2 advertising pages about CAE.

3.4. Support to enterprise development and access to financing

The main constraints identified by CAE which impede the development of agro-food enterprises included the following:

1. inadequate management capacity among agro-entrepreneurs;
2. difficult access to credit; and

3. very small enterprise sizes.

In order to reinforce these enterprises, CAE established an arsenal of support to enterprises (training, marketing, processing, management, information). In addition to such direct support, CAE organized several supervising sessions for the support network to help the latter provide more professional services to the enterprises thus facilitating their access to financing. The production of business plans is being pursued through support from our SSE network. The dialogue with national and sub-regional financial institutions was reinforced. CAE was able to mobilize 485 million FCFA from the BICIM, BNDA, and BIM-SA for three agro-food enterprises. The overall cost (personal contributions and loans) for these projects amounted to 1.4 billion FCFA. These projects included:

1. A credit campaign for a maize processing plant in Bamako;
2. Extension of a rice processing plant in Ségou; and
3. Cattle fattening and exports.

In addition to these mobilized financial resources, several project documents supervised by CAE obtained agreement in principle from local or sub-regional banks.

In addition to these direct supports to enterprises and their support network, CAE provided considerable support in Year III for sector development, mainly through financing of rice testing projects in Niono and animal fattening in Ségou, Sikasso and Mopti, mangoes for the Bamako pool and maize in Koutiala. These pilot operations led to very interesting results, they were catalyzing operations that fostered the emergence of new enterprises. All of these activities were conducted as part of the enterprise reinforcement and facilitation of access to financing.

Reinforcement of the support network

During Year III, reinforcement activities took the form of:

1. Capacity building seminar for the support network in Bamako, Ségou and Sikasso

The SSE established in January 2000, facilitated the production of several credit application documents by local or international consultants with support from the Centre's specialists. During the review of these documents by the Centre's specialists, weaknesses were identified mainly at the level of the financial history record and financial analysis of the projects. To solve these weaknesses, CAE organized a workshop to build capacity among the network in Sikasso, Ségou and Bamako. The objective of this workshop was to improve the quality and harmonize the credit document prepared by the consulting firms of the SSE program.

The following themes were developed during these workshops: reconstitution of the financial history record of an enterprise, project financial analysis, SME analysis methods according to a bank worker, credit scoring, outline of the CAE business plan and the

outline of technical and financial offer for the SSE program as well as the methodology for presentation of project documents to be submitted to OIKOCREDIT.

Eight (8) financial institution representatives and thirty-three (33) consultants or accountants from the SSE in Bamako, Ségou, Niono, San, Sikasso, Koutiala and Yanfolila participated in these workshops (see **Annex 2**). During these seminars participating bank staff presented banks' conditions and the main elements to be mentioned in project documents designed for submission to the banks.

3. *Working session with the consulting firms*

To improve the quality of technical offers or projects developed by the SSE, CAE held several working sessions with 35 consulting firms, accounting firms or independent consultants (see **Annex 3**).

Counseling-support

Activities included the following:

1. *Support to small-scale processing plants: Support for improvement of the quality of labels and packaging:*

This integrated support program was submitted to and validated by the beneficiaries during a workshop organized by CAE. This concerned 12 small-scale processing plants (**see Annex 4**). The activities focused on the following:

- **Improving labels used by small-scale processing plants**

Selection of 12 enterprises and 17 products which will receive label improvement activities. The sub-contractor, Graphique Industrie, conducted a preliminary study (with a panel of consumers) in order to analyze and summarize the quantitative exploratory phase. The label models are already available.

- **Acquisition of packaging**

The stock of polypropylene bags used as packaging needs to be renewed. This stock will be managed by a few enterprises supervised by the Procelos project ("promotion of local cereals in the Sahel). A protocol agreement is under preparation between CAE and Procelos, which will define the methods of stock management. This will serve as an embryo of purchasing center. Despite efforts made, no promoter has expressed interest in the project entitled "conditions for establishment of a purchasing center" because of its low cost-effectiveness.

2. *In-take and orientation of project promoters*

During Year III, CAE met with several project promoters. The objective was either to reinforce, rehabilitate and re-direct the project ideas or to provide counseling to the promoters.

3. *Establishing accounting systems*

As part of the efforts to improve internal management, CAE supported establishment of an accounting system within three (3) agro-food enterprises including: the GDCM rice processing plant in partnership with APDF, COGETRAM for maize processing and the small dairy industry – "Harry Délices".

4. *Business plan development*

This is carried-out by CAE's SSE consultants or by consultants from the support organizations such as APDF. Out of the 18 business plans finalized by CAE, only one project (Dioro rice processing) was finalized in partnership with APDF. The table in Annex 5 indicates the progress status of CAE business plans as of September 30, 2001.

5. *CAE's financial intermediation role*

- **Information workshop about funding sources in Ségou and Sikasso**

CAE, in partnership with OIKOCREDIT/Abidjan and PUFS BOAD/Lomé, organized a workshop for information and identification of project promoters in Ségou and Sikasso targeted for village associations, women's groups and cooperatives in the Office du Niger and CMDT areas. The objective of this workshop was to better inform farmer organizations, which are active in the agribusiness sector, about the existence of funding sources that are adapted to their needs and to identify promising project to be finalized by CAE. These finalized projects will be submitted to these two sub-regional financial institutions. 70 representatives from various groups participated in this workshop and 65 project initiatives were identified after individual meetings with group promoters during these workshops in Ségou and Sikasso (**see Annex 6**).

- **Partnership with local banks**

During this year, dialogue was reinforced with banks or other financial institutions. This took the form of working sessions to defend the credit documents submitted by agro-entrepreneurs or to discuss the role CAE may play in the monitoring of financed enterprises, through its SSE program. The following institutions were approached: BDM-S.A., EcoBank, Crédit Initiative, EquipBail, SOMAFI, BMCD, BIM, BNDA and BICIM.

- **Partnership with sub-regional banks or financial support institutions**

Collaboration between CAE and sub-regional banks was reinforced. This was illustrated by several working sessions or joint field missions to assess projects submitted to CAE or through information workshops. The following sub-regional financial institutions worked with CAE:

- **The International Financial Corporation – Dakar office**

The International Financial Corporation, member of the World Bank Group, was established in order to promote economic development in developing countries by fostering private sector growth and helping mobilize capital to this end, either within the countries or abroad. The size of loans ranges between US$1 million and US$100 millions.

Activities with CAE:

- Working session with the Senior Investment Officer and with an industrial economist from the Abidjan office to conduct technical and financial assessment of the rice processing project submitted by Mr. Modibo Keita.
- Participation of CAE in a training session about SME analysis methods organized by IFC/Dakar. The objective of this workshop was to identify the risk elements about which the banks are very cautious and to reformulate the same presentation on behalf of the SSE network service providers, particularly the business plans, the logical approach for banks, and risk analysis.

- **African Project Development Facility/Abidjan**

APDF was established in 1986 by the African Development Bank, the International Financial Corporation, the United Nations Development Program and 15 donor countries with the goal of helping African entrepreneurs develop viable projects and to promote small and medium enterprises. The objective of APDF is to accelerate the development of private productive enterprises whose promoters and owners are African entrepreneurs, so as to foster sustainable economic growth and the creation of productive employment in Sub-Saharan Africa.

Activities with CAE:

- Several working sessions with the investment officer for Mali about project development and counseling-support to projects developed in partnership with APDF;
- Working session with the APDF Regional Director to reinforce partnership between CAE and APDF;
- Participation in the implementation of the feasibility study for: Extension of the Dioro Rice Processing Plant and for the Mango drying plant.

- **PUFS/BOAD / Lomé Office**

The Swiss fund utilization project ("Projet d'Utilisation du Fonds Suisse - PUFS") is a coordination unit established with the BOAD (West African Development Bank) in the framework of the agreements between BOAD and the Swiss Confederation signed on December 20, 1993, to serve as an application point for the implementation of Swiss financial assistance to WAEMU countries. The PUFS became operational in January 1994.

Its main objective is to support the experimental process of BOAD intervention on behalf of Grassroots Organizations or farmer organizations through credit activities. The Swiss fund utilization project supports income and employment generating activities (AGR/E) or cost-effective activities and provides accompanying measures to reinforce grassroots organizations. Loan sizes range between 30 and 200 million FCFA.

Activities with CAE

- Working session with PUFS program manager and CIP/PUFS on finalized credit documents that might be of interest to the PUFS.
- Participation of two PUFS representatives in the information and project identification workshop held in Ségou and Sikasso.
- Participation in the technical and financial assessment of COPAK projects (storage warehouse and cereal marketing) and COPRAAV (animal feed).

- **OIKOCREDIT/Abidjan**

Established in November 1995 in Geneva upon the initiative of church ecumenical council, its mission is to help churches, church organizations and individuals throughout the world, to invest their capital (savings) in the developing countries. OIKOCREDIT's objective is to promote sustainable human development through mobilization of credit and financial resources for the development of disadvantaged regions in the world.

OIKOCREDIT provides credits ranging between 100 and 600 million FCFA in size.

Activities with CAE:

- Participation of CAE in the OIKOCRED project appraisal mission composed of the Deputy Director General and financial consultant to conduct technical and financial assessment of three projects submitted by CAE and which were deemed acceptable for the karité butter processing unit, the sweet peas conditioning unit and the small-scale dairy industry;
- Participation of the OIKOCREDIT Deputy Director General in the information and project identification workshop held in Ségou and Sikasso;

- Participation of CAE and two SSE consultants, upon invitation by OIKOCREDIT, in the workshop held in Grand Bassam about project appraisal and development based on OIKOCREDIT criteria. The objective of this workshop was to assist project directors with the development of feasibility studies and to help consultants better understand the OIKOCREDIT requirements and to facilitate the presentation of project documents and thus shorten the time frame for project document examination.

- **Partnership with International Financial Institutions based in Bamako**

***French Development Agency (AFD)*:** Working session with the AFD financial specialist to discuss AFD intervention conditions in financing for the mango drying plant established by TAM Fruits and collaboration methods between CAE and AFD.

African Development Foundation (ADF): Discussions about conditions for financing of processing projects developed by Medine Women Merchant Group (GFCD) and collaboration methods with CAE.

6. Fund raising

CAE was able to raise funds for three projects (extension of a rice processing plant in Ségou, extension of livestock export project in Bamako, and campaign credit for a maize processing plant).

The amount of funds raised with CAE support is estimated at 485 million FCFA from the following local banks: BICIM, BNDA, BIM-S.A.

Establishing a financial component at CAE and the SSE guarantee program

1. *Internal financial component*

To help CAE improve sustainability of its activities, the Centre prepared a proposal entitled "Association Support Fund". The main objective of this fund was to build capacity among associations working for development of this sector. This proposal was not approved by USAID.

2. *Establishment of the CAE/USAID program*

- Preparation of the bank appraisal mission: CAE held several working sessions with Chief Executive Officers or Director Generals of the following banks: EcoBank, BOA, BDM, BNDA, and BICIM to discuss the guarantee mechanism to be established by USAID with support from CAE on behalf of agro-food enterprises;
- Participation in the bank appraisal mission: CAE participated, with USAID, in the appraisal conducted by the banks (BNDA, BICIM, BOA)

for the establishment of USAID's guarantee fund. Working sessions were held with CEOs and other technical staff of identified banks (BNDA, BICIM, BOA) as part of this mission;

- Monitoring establishment of the guarantee fund: CAE closely monitored the implementation of establishment agreement for this program with identified local banks (BICIM and BOA).

SECTION IV

IMPROVING THE AGRIBUSINESS CLIMATE

During the first two years of its establishment, CAE emphasized institutional capacity building activities for the Institut d'Economie Rurale (IER) and the Central Veterinary Laboratory (LCV). The objective of the institutional support to these two government institutions was to build their capacities to better serve private sector actors in agribusiness. The goal was to help these two institutions to operate on more sustainable bases by generating more internal resources.

During Year III of the project, agribusiness climate improvement activities were focused on the reinforcement of the private sector and the implementation of sectoral studies. However, activities undertaken at IER and LCV were pursued.

4.1. Institutional support to IER and LCV

4.1.1. CAE support to electronic archiving of IER research results

In order to help IER improve its image by valorizing its research results, CAE provided funds to support electronic archiving of the results of research conducted by this institution by designing its Web site. The consultant engaged for this activity was Afribone and other existing Internet service providers.

Targeted activities included the following:

- To reinforce research results for certain research programs and central laboratories in the regions of Bamako, Koulikoro, Kayes, Ségou, Sikasso and Mopti;
- To enter these research results into an electronic record (Web pages, CDROM);
- To provide training to BEDIP/IER staff in Web page designing;
- To make the electronic records accessible to the public;
- To valorize information resulting from research.

This institutional support to IER helped achieve the following results:

- IER research results were identified for dissemination among the public;
- The IER Web site was enriched with new information;
- The CDROMs will be available in the short-term to users of IER research results;
- The BEDIP/IER staff received training in Web page designing and will be responsible for updating of the IER site.

4.1.2. Institutional support to IER

Development of the **cost recovery plan** (Business Plan) of IER was the main activity conducted during Year III in terms of institutional support for this institution.

Through this support, CAE aimed at helping IER regularly obtain orders for research activities from clients and users of research results. Through this new approach, the research units must integrate in their activities research on clients, production, delivery and research activity monitoring in the contractual conditions. This will help them generate new income for the development of research.

To implement this new orientation which constitutes an important change in IER's approach, a first step proved to be necessary: an institutional assessment which helped achieve the following:

1. the designing of an intervention framework to introduce this new approach to income generation within the units;
2. establishment of a Business Unit at the management level;
3. identification, within the units, of staff to take responsibility for the implementation of income generating activities;
4. assessment of training needs for establishment and monitoring of the new approach within the units.

This step was achieved with financial support from CAE which granted a service delivery sub-contract to the African Institute of Enterprise. The services for which the Institute was contracted included the following:

- assessing the perception of the problem with IER management;
- to assess the current status of contract-based research;
- to formulate in a participatory manner: the objectives and steps to be undertaken to implement the new orientation, i.e., establishment of the Business Unit as well as the necessary procedures and teams within the units;
- to determine training necessary to ensure reinforcement of income generating activities.

We organized this step through a workshop called "Workshop to re-formulate the project for change", as it was necessary to involve IER management staff in the process of income generating activity development.

Participants included the following:

- Representatives of various IER management offices;
- Research Centre Directors;
- Research Laboratory Directors;
- The Director of the Sotuba Station;
- The Ecofil Program Officer.

During the workshop, participants addressed several issues related to income generating activities, including the following:

1. the rationale for developing income generating activities;
2. alert systems;
3. opportunities;
4. autonomous management.

The Business Unit established as a result of these activities is presently in contact with the ***Policy*** and ***Enterprise Development*** Departments of CAE to continue the program through development of business plans that are specific to certain research centers and particularly the Food Technology Laboratoy (LTA) and the Animal Nutrition Laboratory (LNA). These two laboratories, if adequately organized, are able to provide quality services to agro-entrepreneurs for product processing (development of processes and recipes) and animal nutrition (preparation of animal feed and feed analysis).

4.1.3. Institutional support to the LCV

The management staff of the Central Veterinary Laboratory requested CAE's support for establishment of a Business Unit. Like the on-going activity at IER, a consulting firm was identified to conduct this activity. The technical and financial offer is under preparation.

In addition, in collaboration with LCV management, permanent monitoring of the document on improvement of the Toxicology Unit is carried-out with USAID.

It should be noted that continuation of the activities with LCV in Year IV will depend on strong willingness of the Laboratory managers and of the decision-makers at the supervisory department to implement a restructuring program for the Laboratory, as was the case for IER. This program should grant privilege to the privatization of certain functions, such as vaccine production. CAE is envisaging to solicit USAID's assistance to obtain clarifications from the MDR, in order to resume our support activities in a more clarified context.

4.2. Capacity building for institutions and professional associations

4.2.1. Support to the private sector (Enterprises and Professional Associations)

Various meetings were held with Professional Associations or Groups in order to prepare the activities. One of the most important meetings was the organization of a workshop on Commercial Missions and Events (fairs, exhibits) from April 17 to 18, 2001, in collaboration with APEP. The theme of the workshop was:

"Fostering Efficient Participation in Commercial Missions and Events"

The objective of this workshop was to identify solutions for the difficulties that currently confront development partners, to make an objective assessment of the impact of their assistance to beneficiary enterprises which received support to participate in commercial fairs.

To solve this weakness, CAE and APEP invited the main actors into an appropriate consultation framework: donors, support beneficiaries and supervising organizations.

Recommendations from the workshop included the following:

- Capacity building among the steering committee;
- Budget for participation in commercial missions and events;
- Involvement of private institutions in the organization of commercial missions and events;
- Development of procedure manuals.

4.2.2. Activities implemented with Rural Development Programs (Office Riz in Ségou, Office du Niger, Office Riz Mopti)

Activities conducted by CAE with RDPs such as ON, ORS, ORM are managed by the CAE branch office in Ségou, with support from the Policy Department of the Centre and are essentially focused on animation of the ***Consultation Framework*** for promotion of agro-food products produced by these RDPs. These products mainly include rice and shallots.

At Office du Niger, this animation facilitated the following:

a) The development of activity programs under Work Plan III. Particularly, training sessions that were conducted from March to June 2001 targeting Office du Niger staff (training in business plan development) and producers (business management training);
b) The development of terms of reference for preparation of the forum for potential investors (both Malian and foreigners), with support from CAE as part of the feedback of the study on business opportunities at Office du Niger.
c) Preparation of the proposed CAE/ON program that was examined and approved under Work Plan IV. This program placed on emphasis on the following: business plan development by rice producers/processing plants, "targeted training" for private irrigation promoters in the Office du Niger area (USAID project) and potato sector development (upon request from ON).

In addition, it should be noted that the study of technical improvement and Business Plan development on a surface area of 150 hectares, started with support from CAE on behalf of Rajaa-S.A., an agro-pastoral company established in the Office du Niger area.

TORs were developed by CAE and ON for the organization of a forum for potential national, regional and international investors in the Office du Niger area. The next step is for Office du Niger management to take necessary measures to start preparations.

Contact established and sustained with the staff of Office Riz Ségou soon after effective start-up of activities by Ségou branch, facilitated the signature of a joint collaboration convention between CAE and ORS on February 13, 2001, covering the period 2000/2002.

Animation of this consultation framework facilitated the development of draft support program which was examined and approved for Work Plan IV, emphasizing training (business management), agro-food product conditioning (providing packaging and printing labels for *attiéké*, starch, dry shallot, etc.) and marketing support (research for commercial partners).

4.2.3. Sectoral Study

For the promotion of promising sectors, the Government of Mali requested the Ministry in charge of private sector development to conduct a study on these sectors. The steering committee established by the Ministry and comprising all stakeholders and the activities of specific commissions led to a preliminary Action Plan. To further refine the reflection about agro-industrial sectors, CAE, upon request from the MICT and USAID, finalized this process. This led to results which were discussed by all actors during a workshop held on February 5 to 6. This study resulted in the following:

1. completion of an in-depth appraisal of each agricultural sector (overall status);
2. development of an action plan which determines the objectives, roles and responsibilities for each actor (private or public) by sector;
3. development of promotional data sheets for promising projects.

This large-scale study helped achieve a comprehensive study on twenty-two agro-industrial sectors from the production stage to valorization. In order to overcome the constraints, an action plan was prepared, which also included strategic orientation for promising sectors and indicated the priorities for each sector. Investment opportunities are proposed for the private sector as well as priority actions to be conducted by the Government and support organizations.

After validation of the results through a workshop, the next step consisted in multiplying and distributing the study reports. As of now, investment data sheets have been posted on the Agromali Web site. Complementary competitiveness studies are envisaged for certain products.

4.3. Developing the marketing of agro-food products at the national, sub-regional and international levels

The objective of increased exports urges CAE to take into account certain sub-regional organizations such as CILSS and WAEMU. Therefore, activities were envisaged under Work Plan III with these economic institutions in order to harmonize the norms and standards within our various economic organizations.

4.3.1. Collaboration with sub-regional institutions (CILSS and AEMU)

CILSS and CAE undertook a study to launch an Observatory of Illicit Practices of Border Crossing within the West African region. After preparation of the study, delays occurred as a result of diverging positions among certain partners. The following was proposed:

1. To organize a regional meeting to launch the process which would bring together the chambers of commerce, transporter unions, interface networks and other operators holding freight, etc.;
2. To redefine the process, mainly in relation with Côte d'Ivoire.

Establishment of this Observatory of Illicit Practices is considered as being a pre-requisite for an operational transport and transit management system. It will be an efficient tool that helps, on the one hand, to feed the awareness-raising dynamic about relevant information and, on the other hand, to propose concrete actions that contribute to effective reduction of the constraints.

As for WAEMU, a study on the definition of major orientations of the common agricultural policy was conducted by this regional institution. A report by country and a summary report were presented at the institution's Headquarters in Ouagadougou. During Year IV, this study will constitute one of the phases of the reflection process, with the objective of designing and implementing a policy within WAEMU.

4.3.2. Institutional support to groups involved in sub-regional trade

These activities are limited to support provided to COBAS and its partners for establishment of a Border Market. This includes support for start-up and operation of the Border Market for Livestock in Sikasso in collaboration with CLUSA.

4.3.3. Collaboration with other organizations working in agribusiness (APROFA, CLUSA, APCAM, CCIM)

Year III provided an opportunity for CAE to reinforce or establish new potential partnerships. The following activities were conducted for this purpose:

- Contacts established by the new COP with various partners in both public and private sectors as well as associations;
- A working session with the CEO of the Régie du Chemin de Fer du Mali (the state-owned railway company) for preparation of railway transportation of agricultural products;
- Consultation meetings with CLUSA and APROFA;
- Preparation of a joint work program with APCAM; and
- A working session with the French Development Agency.

SECTION V

THE PARTNERSHIP FUND

The partnership fund was designed as a stimulating tool to foster and consolidate the supply of high quality services to Malian enterprises.

The involvement of CAE partner organizations, consulting firms and service providing NGOs in the implementation of activities designed by the technical team and the resulting capacity building, helped ensure further sustainability to CAE interventions.

This mechanism also helped CAE to contribute, through sub-contracting, in the creation and maintenance of a certain approach and achieve a certain number of its objectives in terms of sector development.

Total commitment of the Partnership Fund for Year III amounted to ***US$644,545.***

These resources committed through sub-contracting concerned the development of sectors or sub-sectors and the reinforcement of small-scale processing plants and GRM institutions.

Sector or Sub-sector	Committed Resources	%
Livestock	181,868	28.22
Mango	83,062	12.89
Potato Sector	113,210	17.56
Shallot	86,673.5	13.45
Rice	97,056	15.06
Maize	42,221	6.55
Other	40,454.5	6.28
Total	**644 545**	**100**

In US$

Distribution by field of intervention is as follows:

	Amounts	%
Study	88,119	13.67
Training	140,610.5	21.82
Demonstrations/Tests	415,815.5	64.51
Total	**644,545**	**100**

In US$

Over the same period and under the same SSE program, total obligations amounted to ***25,802,820 FCFA***, covering 28 Business Plans.

SECTION VI

MONITORING-EVALUATION OF THE WORK PLAN ACTIVITIES

In order to meet a contractual requirement of the SEG/USAID, CAE developed a ***Result Framework*** during Year III, which defines the monitoring strategy of activities and the evaluation of their impact on the agribusiness sector. In addition, the document determines the ***Performance Monitoring Plan*** for the implementation of the Monitoring & Evaluation system.

This document was designed to better guide implementation of the Centre's activities and to monitor progress achieved towards SEG/USAID Intermediate Results.

The M&E system thus designed jointly with the Result Framework, serves as a basis for measuring the impact of activities and progress achieved by the project. This new system uses a threefold approach to monitoring and evaluation:

1. Internal data collection by the technical team;
2. The involvement of partners and beneficiaries in data collection;
3. Baseline surveys at the end of fiscal year.

In order to achieve full coverage necessary for the review of project progress and problem solving, we developed a comprehensive M&E system while determining two main types of indicators: performance and impact indicators.

The ***impact indicators*** are used to measure project outputs. They contribute directly to the USAID/Mali Strategic Objective through the two Intermediate Results: promoting the processing and marketing of agro-food products.

For data collection on impact indicators, we will take into account the *direct* and *indirect (induced) effects* of the Centre on the agribusiness climate. Strategies were developed in collaboration with partners for each agro-food product in order to collect information about these induced effects.

As for the ***performance indicators***, they determine project intermediate results and the deliverables. These are products which are directly attributable to the project, for example, the number of agro-entrepreneurs trained or informed, studies conducted, the amount of credit allocated, etc. Performance indicators provide the means for the monitoring of direct project results.

After development of this Result Framework, discussions were held with the SEG/USAID team, which mainly helped correct the definition of certain indicators and proposed targets. The final version of the document was submitted in June 2001.

Since this date, a table summarizing progress of the indicators, is attached to each activity report and describes the results achieved during each reporting period. The table in **Annex 8** indicates the progress of all indicators (impact and performance) for Year III.

ANNEXES

ANNEX I

SUPPORT FROM SÉGOU AND SIKASSO BRANCHES FOR ACTIVITY MONITORING

Since their establishment, the two branches (in Ségou and Sikasso) have provided support to the technical team at CAE Headquarters for the monitoring of demonstration tests and organization of workshops/seminars and training sessions for agro-entrepreneurs. The following summarizes activities carried-out at the two branches during Year III.

1. Activity monitoring by the Ségou branch

1.1. Support from the branch for the monitoring of sector development activities

The target sectors for the Centre and its branches in Ségou and Sikasso include the following:

1. rice;
2. livestock (animal feed and marketing); and
3. shallot at Office du Niger and in Bandiagara

The main tasks implemented for the monitoring of activities will be summarized for each sector as follows:

- Support for implementation of the activity;
- Summary of field visits; and
- Appreciation of the results by the Centre's partners/clients.

Rice sector:

The tests for improvement of the quality of rice in the Office du Niger area under Work Plan II (1999-2000) were underway when the branch effectively started in August 2000. Support to the implementation of the test under Work Plan II consisted in:

a) contribution in the definition of the work program by participating, on the one hand, in the evaluation of results obtained under Work Plan II and, on the other hand, participating in the workshop on the result assessment/ programming about the valorization of rice in the Office du Niger area held in Ségou on November 8 and 9, 2000;
b) serving as interface between sub-contractor Nyeta Conseil/Afrique Verte and Headquarters (through a processing specialist) by reporting almost in real time the bottlenecks and constraints (difficulties related to tardy purchase of paddy rice, shortage of spare parts for the husking machines).

The major remark is that the "opportunity" for improvement of the quality of rice in the Office du Niger area is very promising, as the "testing sites" managers unanimously

agree that increased value added resulted in significant increase in their incomes. They complain about their incapacity to meet the high demand currently recorded for high quality rice "Etoile du Delta". Therefore CAE has placed emphasis on the development of business plans by the producers/processing plants under Work Plan IV through production of the high quality rice "Etoile du Delta".

Shallot sector:

For the construction of the 100 T warehouse prototype in Foabougou (Office du Niger area), a first field visit was conducted with the shallot sector activity manager to prepare the consultant mission designed to confirm the feasibility of the model proposed by a team of Malian researchers.

Following the decision to build the warehouse prototype, various field visits were conducted with the shallot sector activity manager to Foabougou women's group in order to define, through a participatory approach, the organizational system that would be appropriate and the main lines of a mechanism for utilization of the warehouse (notably, the supply and marketing methods).

After the warehouse was provisionally received on November 15, 2001, working sessions between ON/CAE and the beneficiaries helped develop a timeline for training in the technical itineraries of the harvests and the quality of shallots for better storage. This training will be sponsored by Office du Niger as part of its normal extension program in order to achieve synergy with activities planned by CAE under its Work Plan IV. These include the following:

- Capacity building among the Foabougou women's group;
- Preparation of a schedule of conditions;
- Facilitating access to the revolving fund;
- Recruiting a woman animator/trainer for monitoring of the warehouse operations for one year.

Needs assessment missions conducted with the shallot sector activity manager for 35 shallot producing groups in the Dogon plateau facilitated preparation and proper implementation of the following two consultant missions:

1. appraisal of the shallot sector in the Dogon plateau; and
2. assistance to 35 groups in the Dogon plateau for dry shallot slice (EST) production, conditioning and marketing.

During the feedback meeting held in Bandiagara on December 6, 2001, on the provisional results of EST marketing in the markets of Bamako, Bouaké and Conakry, representatives of the monitoring committee for the 35 groups unanimously made positive comments on efforts made by CAE to promote EST while re-asserting the need to increase their contribution for the implementation of activities planned under CAE's Work Plan IV (training, continuation of the market tests) in order to ensure sustainability

of EST production/marketing in the Dogon plateau (taking-over project activities after phase-out).

Livestock sector:

As part of the preparation of Work Plan III, meetings and information missions were carried-out to Ségou and Mopti to plan for livestock activities (sheep stock exchange and demonstration tests on balanced feed and marketing of high quality animals).

Support activities for the implementation of the livestock work program under Work Plan IV may be summarized as follows:

- **Organizing the sheep stock exchange in Ségou and Mopti**

Close collaboration with the respective organizing committees in Ségou and Mopti helped ensure transparent and efficient utilization of CAE's financial support for the preparation of sites and media coverage of the official opening ceremony for each stock exchange.

The results recorded (number of animals presented, percentage sold, turnover) are deemed to be overall satisfactory in all sites (mainly in Ségou where the sheep stock exchange was being organized for the first time).

- **Implementation of the demonstration tests for balanced feed and marketing of high quality animals in Ségou and Mopti**

In Ségou, following an information meeting held on September 19, 2000, chaired by the President of the Regional Chamber of Agriculture, the livestock/meat professionals selected the livestock merchant cooperative in accordance with the conditions of the test implementation protocol.

In Mopti, the main activities conducted included the following:

- An information/programming meeting was held at the Regional Chamber of Agriculture on September 15, with representatives of all cooperatives and professional associations in the livestock/meat sector, in order to explain the criteria defined in the test implementation protocols.

- Selection of the animal raising association in Konna after visiting all sites of pre-selected candidates (by a commission of livestock/meat sector professionals) accompanied by the technical counselor of the Mopti Regional Chamber of Agriculture (mission conducted to Mopti on November 28 through December 2, 2000).

The monitoring of tests (most often in conjunction with the technical coordinating contractor) revealed the following:

- The tests were successfully conducted without any mortality in Konna and Ségou;
- Animal fattening organizations which participated in the tests in collaboration with CAE were unanimously satisfied with the positive results recorded, as they were able to sell their animals at better prices, mainly because the animals were well-fed as a result of the improved feeding practice (utilization of high quality feed imported from the United States).

Considering the above, the livestock work program under Work Plan IV is emphasizing support for the development of business plans by the animal fatteners, on the one hand, and on local production of high quality feed, on the other hand.

- **Support to enterprises and associations**

The main tasks for the monitoring of support activities to enterprises and associations will be reviewed based on the outline mentioned above (cf. paragraph 41).

- 1.2. Support from the Branch for the monitoring of Information, Communication and Training activities

The joint mission by CAE and the Regional Chamber of Agriculture (CRA) in Ségou, conducted by the head of the CAE branch in Ségou and the CRA technical counselor in Tomininan on September 25, 2000, provided an opportunity to assess support needs (mainly in terms of training) converted into training programs in business management after the refining mission (carried-out on February 14 in Tominian) with the training manager at CAE Headquarters and the training manager of the CRA in Ségou.

During the monitoring missions, participants to the training sessions unanimously underscored the relevance of the training content and the competency of trainers. In this respect, one should mention the interventions of a butcher (M. Salif Kimbéré) and a baker (M. Amadou Traoré), who insisted on their wish to make public testimony of the profit they were already making as a result of the training they received, as changed their working methods. The first tripled his daily sales of meat and the latter better controlled his daily revenues. In addition, the participants expressed their desire to continue the training sessions, recommending that certificates be issued to the most regular trainees at the end of the training. This recommendation is taken into account under Work Plan IV.

The multiplication of formal and informal contacts with the managers of the enterprise development and training departments helped organize, for the first time under Work Plan III, training sessions at Office du Niger for supervisors (training in business plan development) and for producers in various areas (business management training).

During the joint mission USAID/CAE conducted in Niono on August 30 by the monitoring/evaluation officer of SEG and the head of the CAE branch in Ségou, all beneficiaries of the CAE's training program who participated in the interviews stated that they were satisfied with the quality of training received (relevance of the content and

competency of trainers). Weaknesses identified during the monitoring were corrected under Work Plan IV (mainly, the organization of better targeted training sessions).

Support to the implementation of the information/communication program consisted in:

a) distributing leaflets, periodic newsletters and other publications of the Centre during visits in the Ségou and Mopti regions;
b) facilitating the organization of seminars/workshops and training sessions for agro-entrepreneurs, including the following:

- Logistical support for two training sessions in business management from October 17 to 20, 2000 in Ségou and in Cinzana (40 km away from Ségou);
- Logistical support and facilitation of two workshops for presentation and discussion of initial results of the "rice testing", held in Ségou on November 8 to 9, 2000.
- Support for organization and facilitation workshops on fund raising strategies within the sub-region on behalf of agro-entrepreneur associations and cooperatives (February 19 to 21, 2001 in Ségou);
- Support for organization and reporting on the feedback workshop for demonstration tests on balanced animal feed and marketing of high quality animals (August 1 to 2, 2001 in Ségou).

1.2. Support from the branch for the monitoring of enterprise development activities

Support activities to provide assistance to enterprises consisted in:

a) ensuring liaison between registered consulting firms and the financial specialist at Headquarters in order to shorten the timeframe for business plan development (in-take, preliminary review of support requests, and monitoring of their implementation at Headquarters);
b) multiplying contacts with the consulting firms based in Ségou and Niono. This helped increase the number of enterprise support service providers (SSE) in these two areas and to start the constitution of a dynamic network of registered consulting firms, in synergetic interrelation in order to facilitate and accelerate access to bank credit for agro-food enterprises serviced by the Ségou branch;
c) identifying new investment opportunities for CAE in enterprise development. In this framework, a study for the rehabilitation of "Ségou-Lait" (a dairy industry) is underway with support from CAE.

Considering the above, SSE is emphasizing, under Work Plan IV, support for business plan development by the agro-entrepreneurs (mainly leading enterprise promoters who were previously identified) in Ségou and Mopti.

1.4. Support from the branch for the monitoring of policy activities

Activities conducted by CAE in this field within the territorial area of the branch mainly concerned support to two government programs for the implementation of their agribusiness programs in the framework of the collaboration convention with the Centre. These are Office du Niger (ON) and Office Riz Ségou (ORS).

The main tasks implemented for animation of these two collaboration frameworks included the following:

- Multiplying formal and informal contacts with the respective staff of the two programs; and
- Joint field visits.

Animation of the consultation framework with Office du Niger

This animation facilitated the following:

a) Development of activity programs under Work Plan III. Mainly the implementation of training sessions from March to June 2001 for the ON staff (training in business plan development) and for producers (business management training);
b) Development of the terms of reference for preparation of the forum of potential investors (Malian and foreigners) with support from CAE as part of the feedback of the results of the study on business opportunities in the Office du Niger;
c) Preparation of the draft CAE/ON program examined and approved for Work Plan IV, emphasizing business plan development by rice producers/processing plants, "targeted training" for private irrigation promoters in the ON area (USAID project) and potato sector development (upon request from the ON).

ON staff who participated in the agro-business program (management staff and field staff from the Niono area) unanimously stated that the collaboration convention CAE/ON (1999-2002) was satisfactorily implemented, especially in terms of rice quality improvement (high internal and external demand for improved quality rice "Etoile du Delta").

Animation of the consultation framework with ORS

Contacts established and sustained with the staff of this government program soon as the effective start-up of activities at the branch, facilitated the joint signature (CAE director and the Director General of ORS) of a collaboration convention CAE/ORS in Ségou on February 13, 2001, covering the period 2000-2002.

Animation of this consultation framework facilitated the development of draft support program which was examined and approved for Work Plan IV, emphasizing training (business management), agro-food product conditioning (providing packaging and printing labels for *attiéké*, starch, dry shallot, etc.) and marketing support (research for commercial partners).

1.5. Identification of opportunities for CAE intervention in Ségou and Mopti

Missions for information of CAE current and potential partners/clients in the regions of Ségou and Mopti aimed at establishing contact with them (following effective start-up of activities at the Ségou branch on August 24, 2000) in order to introduce the Centre (its missions, services and resources) and to identify support needs for the programming of activities under Work Plan III (October 2000 – September 2001) and beyond.

After the introduction to CAE (supported with the distribution of leaflets) during the information meetings, numerous and various constraints were mentioned and support needs for the Centre's target sectors and others opportunities windows were expressed and then formulated into requests submitted to the CAE director.

1.5. Recording and monitoring requests for support

As of November 30, 2001, seventy-one (71) requests for support were recorded at the branch, coming from Mopti and all other places visited in the Ségou region (except for Bla) during the contact missions and needs assessment conducted in September 2000 (see above). These request concern all types of support provided by CAE.

A directory of support requests by administrative constituency in the region of Ségou is also available at the branch office. It should be noted that regular contacts with various work teams at Headquarters helped translate certain needs (mainly for training) into a multi-annual work program.

1.7. Representation of CAE at meetings and events in the regions of Ségou and Mopti

Since the start-up of activities at the branch, CAE has been regularly invited to attend meetings and professional events, most of which were attended to, depending on availability of the Branch Chief (considering numerous monitoring site visits). These meetings included the following:

1. Various meetings of the Regional Organizing Committee for the SECO (commercial week) 2001 event in January 2001;
2. The official opening ceremony for the sheep stock exchange in Ségou (February 19, 2001);
3. The official opening ceremony of the 2001 SECO (February 22, 2001);
4. The official opening ceremony for the sheep stock exchange in Mopti (February 24, 2001);

5. The workshop on "Best practice for irrigated perimeters" (July 11, 2001);
6. The thematic committee of PACCEM (November 21, 2001).

2. Monitoring of activities by the Sikasso Branch

2.1. Support provided by the Branch for sector development activity monitoring

The Centre's target sectors in the Sikasso region include the following:

1. Mango;
2. Livestock (animal feeding and marketing);
3. Potato;
4. Maize

Close monitoring by the Sikasso Branch under Work Plan III focused on the following activities:

Fruit (mango) fly control

Year III activities under the fruit fly control program was essentially aimed at confirming the results achieved by the testing conducted during Year II. The branch played a determining role in the implementation of these activities mainly through:

- The selection of test sites in Sikasso and Bougouni;
- Improvement of the observation and incubation laboratory;
- The selection and recruitment of the assistant-entomologist in collaboration with the consultant;
- The organization of training sessions for farmers; and
- Management of the entomology materials.

This second phase conducted by an expatriate consultant lasted six months and helped confirm that the *ceratitis cosyra* is the most dominant species in the three sites examined and causes greater damage to mango (see detailed consultant report).

The potato program

This program comprises the following three components:

- Understanding of production and storage itineraries in ten villages to be supported;
- Organizing producers in the ten villages for regular input supply and collective marketing;
- Dissemination of information on price evolutions in various markets.

The roles of the branch included the following:

- Selection and awareness-raising in the ten villages, through joint missions organized with NGO AMATEVI;
- Establishing commercial relationships between the ten villages and commercial partners, such as UCOBAM and MALI YIRIDEN;
- Establishment and monitoring of the groups;
- Monitoring of the construction works for two warehouses;
- Organizing the program launch workshop.

This workshop was held in Sikasso on July 11 and 12 and helped define three main lines for reflection:

1. The roles and responsibilities of government supervision organizations, projects and NGOs in the organization of producers into professional groups for potato activities;
2. The roles and responsibilities of banks and savings/credit clubs, input suppliers, government institutions, projects and NGOs in facilitating access of producers to financing and timely acquisition of high quality inputs and equipments.
3. The roles and responsibilities of government supervision organizations, projects, NGOs, banks and savings/credit clubs in the marketing of high quality products.

<u>The livestock/meat program</u>

The livestock/meat program comprised four components:

1. Demonstration test for high quality feed

This test was conducted in two sites: the Kadiolo livestock merchants' cooperative (CMBK) and the livestock marketing cooperative in Sikasso (COBAS) for two and a half months.

CAE provided each site for free with 15 tons of high quality animal feed imported from the USA and partially improved the animal fattening park in Kadiolo. The testing in Kadiolo concerned three lots of 15 cattle units each, including a test lot and two control lots; while in Sikasso there were two lots with 25 units each composed of one test lot and one control lot.

By the end of the testing a total increase of 985 kg was recorded in Kadiolo for the test lot compared with a 544 kg increase for the control lot, while in Sikasso the records indicated 1,126 kg gained versus 1,052 kg.

Results achieved proved to the beneficiaries that high quality feed administered in adequate feeding conditions provides increased gains than a poorly balanced feed administered in the similar conditions.

2. Animal fattening test for the marketing of high quality animals

Five professional organizations participated in this test and received an interest-free loan of five million (5,000,000 FCFA) each. These included: the COBAS, the Sikasso cattle fattening cooperative, the cattle marketing cooperative in Niéna, the animal raising cooperative in Koro-Barrage, the Farakala agro-pastoral association.

The objective of this test was to provide the beneficiaries with an opportunity to produce high quality animals for adequate supply of the border market on the one hand, and on the other hand, to attract banks for investment in cattle fattening activities.

3. Testing for support to livestock marketing

COBAS was the only beneficiary of this component. They received ten million FCFA for high quality cattle marketing with the objective of supplying the border market and selling the cattle in Côte d'Ivoire or in Bamako. Unfortunately, the cooperative was unable to meet its commitments and still owes 4,020,000 FCFA, since the end of the contractual time frame.

This fair result achieved by the two components may be explained, on the one hand, by the delay in fund securing which resulted in increased purchase prices and, on the other hand, the lack of experience on the part of beneficiaries for collective management of cattle fattening and marketing activities.

4. The sheep stock exchange

The objective of this activity was to support the marketing of high quality sheep by:

- building capacity among of the sheep merchants' cooperative to establish a sustainable marketing approach with national and sub-regional buyers in order to better sell high quality sheep for Tabaski;
- increasing the beneficiary margin; and
- increasing high quality animal sales.

CAE's support helped prepare three sites for a total cost of 5,313,300 FCFA. In addition, media coverage support through outreach radio stations and posters helped the cooperative achieve a turnover of 48,083,000 FCFA from the sale of 1,443 sheep during the stock exchange period (February 25 to March 7, 2001).

<u>The Cereal program</u>

Activities in the cereal program mainly concern the processing of maize in the flour mills in Karangana and Namposséla, district of Koutiala. Introduction of the germ-removing machine for promotional testing and monitoring of the final products through sub-contracts with Afrique Verte and LTA, constitute the two components of activities in the maize sub-sector. To successfully conduct the test, each flour mill received 20 tons of

maize. Activities of the branch mainly consisted in conducting site visits to monitor and evaluate the performance of the new germ-removing machines.

2.2. Support from the branch for Training and Information activity monitoring

The training sessions conducted covered twelve modules in business management, taught to two groups of 15 trainees each; the training of butchers in meat cutting techniques and the training of livestock market information providers. The branch office was responsible for organizing the workshops through consultation with the trainees for the selection of training dates and locations, as well material organization of the workshop. Establishment of the information device for OAM helped ensure regular dissemination of potato price information.

2.3. Support from the branch for enterprise development activity monitoring

Under the SSE program with support from the branch office, business plans were developed for the following organizations:

- COPAK (Koutiala cereal dealers' cooperation);
- Karangana village association (flour mill) ;
- The GIE "Kéné Yiriden";
- The Farakala agro-pastoral association;
- CIC-S.A. (sweet peas);
- The association of local product buyers in Sikasso (APLS); and
- A project document for Mr. Adama Togola (animal fattening).

2.4. Support from the branch for Policy activity monitoring

As part of the efforts to establish relationships with partners, the branch office, under the aegis of the SSE, organized two workshops in Sikasso.

- From 2/22/01 to 2/24/01 a workshop on mobilization of financial resources which was attended by two major sub-regional financial institutions, namely OIKOCREDIT and PUFS. Participants also included representatives of socio-professional organizations, consulting firms and NGOs. This workshop provided an opportunity to inform participant about the conditions and methods of each institution and to pre-select projects that were receivable for financing;
- From 5/15/01 to 5/17/01 a workshop on capacity building among the enterprise support network which was attended by the consulting firms approved by the CAE as well as banks and financial institutions.

The objective of this workshop was to harmonize the points of view about financial analysis of project documents between the consulting firms and donors and to review the procedures of each financial institution.

2.5. Recording and monitoring requests for support

The branch received various requests from various beneficiaries, analyzed them and made comments before transmitting them to Headquarters. These requests included the following:

- financing for animal fattening activities;
- organization of the constitutive general assembly meeting of the regional union of mango producers;
- organization of the constitutive general assembly meeting of the border market management company;
- training of butchers in meat cutting techniques; and
- support requests for the SSE program.

2.6. Representing CAE at meetings and events in the regions of Sikasso

Activities implemented by the branch office helped conduct outreach missions in all districts of the region to explain CAE's mission and intervention strategy to all partners and beneficiaries.

These field visits helped develop and update the directory of socio-professional organizations and agro-enterprises working in the three sectors targeted by CAE. They also helped identify partner firms to participate in M&E and training sessions.

ANNEX II

List of participants to the workshop on project financial analysis

Bamako

1- Consulting firms or Consultants or NGOs

BARREP
BIFAC
CAB DEMESO
AFRITEC
BB CONSULTING
EXXEL H REMINGTON (2 consultants)
BAC+ (2 consultants)
CENAFOD
IAE
FINWATT
ACA
AMCE
GUAMINA

2- Banks

Bank of Africa

Sikasso

1- Consulting firms or consultants or ONG

CGA Koutiala
AGA Koutiala
BFC Sikasso (2)
Cabinet comptable Haidara Sikasso
AGRI MULTI SERVICES Yanfolila
ACOD Sikasso (2)
Nyesigiso Sikasso
BEEA Koutiala

2- Banks or Financial Institutions

BOA
Credit Initiative S.A
Kafo-jiginew

Ségou

1- Consulting firms or consultants or ONG

Someca - Ségou (2 consultants)
Nyeta–conseils Niono
BSIC (2 consultants) Ségou
AFD San
CEDI Ségou
Oumar DIALLO - Ségou

2- Banks and Financial Institutions

Crédit initiative
Merchants' and entrepreneurs' savings and credit club
Nyesigi-so
BNDA Ségou
BNDA SAN

ANNEX III

List of consulting firms which had working sessions with CAE to build their capacities

Bamako

Boubadia
IBC
AMCE
NATA CONSULT
YIRIWA-COSEIL
AGRI-CONSULT
EXXEL REMINGTON
BB CONSULTING
EMOB
BESI
GROUPE PIVOT PME-PMI
BGP/AIB
CAB DEMESO
SAMBA KANTE
FINWATT
HCD
CABINET D'EXPERTISE KOUMA
BAC+
ACE CONSEIL
MORIFING KONE
FORANIM
AFRITEC
BOLIZIE DAO
HAMADOUBN DIALLO
IAE
BARREP
MCI
GMI-AUDIT

Ségou

BSIC – Ségou
SOMECA Ségou
Delta-conseils

Sikasso

AGA Koutiala
BFC Consulting
CGA Koutiala
Cabinet conseil Diaoumoutené
GODEA Bougouni
ACOD Sikasso
BEAA Koutiala

ANNEX IV

List of small-scale processing plants which received support from CAE

FOGHASS	Fruit processing
LE VERGER	Fruit processing
MARAICHERE	Fruit processing
Tata GINGEMBRE	Fruit processing
OUMOU DRINK	Fruit processing
UCODAL	Cereal processing
UTEPA	Cereal processing
USISS	Meat processing
ANA CHIPS	Potato processing
MILAIBA :	Milk processing
COGETRAM	Cereal processing
PROVEL	Milk processing

ANNEX V

Status of Business Plans Supervised by CAE

Project Title	Estimated Project Cost	Credit Amount	Project status as of September 30, 2000	Project status as of September 30, 2001	Bank solicited for financing
COGETRAM/ Maize processing	66,363	25,562	Finalized and submitted to banks	Financed by BNDA Up to 20 millions	Bank of Africa, Crédit Initiative S.A, BNDA
Rizerie GDCM	1,225	675,000	Finalized in partnership with APDF / Abidjan	Financed by a bank pool BNDA – BICIM up to 420 million	BCS, BOA, Crédit Initiative S.A, SFI-Dakar
Bandenya Group in Siengo village / Extension of a husking plant	14,214	7,545	-	BNDA interested in financing the project but promoter does not meet criteria.	BNDA, Crédit Initiative S.A
GASA / Small-scale rice processing plant, Niono	60,957	42670	-	Under advanced review by Crédit Initiative S.A	Crédit Initiative S.A, BOA

SENAGRI / Campaign credit for rice husking plant	1,129,000	1,058,000	-	Project document finalized and submitted to BDM. Promoter is not following-up.	BDM S.A, BDM, Crédit Initiative S.A
Extension of the Dioro rice processing plant	2,000,000	2,000,000	Feasibility study to be initiated in September in partnership with APDF	Project document finalized and submitted to banks. Agreement in principle from certain banks to finance the project	BIM, BDM S.A, BOA, BNDA
Small-scale rice processing plant in Ségou/ SUMA S.A	200,000	150,000	-	Draft report delivered. To be finalized by late December 2001	-
Mamadou DEMBELE / Rice conditioning plant	162,000	104,000		Draft report delivered. To be finalized by late December 2001	-
ACCS Ségou/ Establishment of cereal cleaning and marketing plant.	200,000	170,000		Project document in finalization process	-
COGETRAM/ Extension of a maize processing plant	600,000	475,000		Project document in finalization process	
MILAIBA/ Small-scale dairy industry	150,000	100,000	Under review with OIKOCREDIT	Project receivable Under advanced review with OIKOCREDIT and PUFS	OIKOCREDIT / Abidjan, PUFS / Lomé
Harry Délices /	200,000	100,000		Draft report delivered. To	-

Extension of small-scale dairy industry				be finalized by late November	
PROVEL / Extension of a small-scale dairy industry	130,000	100,000		Project document finalized Document receivable Under advanced review with sub-regional banks	PUFS / Lomé and OIKOCREDIT / Abidjan
Adama TOGOLA / Sheep fattening	74,474	59,474		Preparation underway. To be finalized by late December 2001	
Yaya Dolo/ Chick and Poultry feed production plant	625,000	500,000		Preparation underway. To be finalized by late November 2001	
Extension of the Modern Honey processing plant	500,000	470,000	Under review with OIKOCREDIT	Under review with OIKOCREDIT which thinks that honey is a new sector.	OIKOCREDIT / Abidjan
Sweet peas conditioning grading	350,000	300,000	Under review with OIKOCREDIT	Project receivable Agreement from the credit committee of OIKOCREDIT / Abidjan to finance the project.	OIKOCREDIT / Abidjan, Cauris Investissement Lomé
Karité butter processing	300,000	150,000	Under review with OIKOCREDIT	Project receivable Under advanced review with OIKOCREDIT	OIKOCREDIT / Abidjan
Modibo Bathily/ Tomato processing plant	120,000	80,000		Draft report delivered. Project document to be finalized by late December 2001	-

Cod Room Fruileg	40,000	30,000	Study underway To be finalized in October	The promoter has given-up	-
Self-managed Warehouses / COPAK	250,000	200,000	Study underway To be finalized in November	Document finalized ; under advanced review with sub-regional banks	OIKOCREDIT PUFS
Poultry Feed Production	200,000	170,000	Study underway To be finalized in December 2000	Document finalized ; under advanced review with sub-regional banks	OIKOCREDIT / Abidjan PUFS /Lomé
Jabirou HAIDARA/ Animal Feed Manufacturing	246,823	173,000		Draft report delivered. To be finalized by late December 2001.	-
Moussa DOLO/ Animal Feed Manufacturing	57,150	40,006		Draft report delivered. To be finalized by late December 2001.	-
ADEBORIA S.A/ Tannery	653,000	0		Final report delivered to the promoter. Project to be self-financed.	-
Livestock and meat marketing	150,000	100,000	Animal Feed Manufacturing November	The promoter has given-up	
Livestock merchants' Cooperative in Ségou / Cattle Fattening	16,383	14,613		Document finalized	BNDA

Livestock merchants' Cooperative in Niéna / Cattle Fattening	5,710	5,000		Document finalized and financed by CAE	BNDA
Koro-barrage village Cooperative / Cattle Fattening	5,440	5,000		Document finalized and financed by CAE	BNDA
Farakala village Agro-pastoral Association / Cattle Fattening	5,404	5,000		Document finalized and financed by CAE	BNDA
Cattle Fatteners' Cooperative in Sikasso/ Cattle fattening	5,640	5,000		Document finalized and financed by CAE	BNDA
COBAS / Cattle fattening	5,022	5,000		Document finalized and financed by CAE	BNDA
COBAS / Cattle marketing	11,613,500	10,000		Document finalized and financed by CAE	BNDA
Modibo TRAORE/ Fruit and vegetable processing	70,000	5,000	Study underway To be finalized in December	The promoter has given-up.	
Tam Fruits / Mango drying plant	484,000	230,000		Draft report delivered. To be finalized by late November	
Mali – Cosmétique / Cosmetic product manufacturing out of karité butter	-	-	-		
Ombotimbé Dist Extension of an agricultural product	40,000	30,000		Draft report delivered. To be finalized by late November 2001	

marketing enterprise					
TOURE/ Establishment of a karité-based cosmetic product manufacturing plant	50,000	40,000		Draft report delivered. To be finalized by late November 2001	
Potato chips production	40,000	37,000	Study underway. To be finalized in December	Document finalized. The promoter turned down bank financing as the project was financed by her family	
Cattle leg and red meat exportation	100,000	65,000	Study underway. To be finalized in December 2000	Document finalized and financed by BIM	-
Farakala village Agro-pastoral Association / Extension of an animal fattening enterprise	-	-		Document under review	
ACCS/ Cereal storage and marketing	100,000	65,000		Draft report delivered. To be finalized by late November 2001	
Sesame conditioning plant / Goumane	125 000	100 000	Study underway. To be finalized in December 2000	Document under review. Technological information research underway	
Total					

Amount are expressed in K FCFA

ANNEX VI.

Project identification after the workshop organized by CAE in partnership with OIKOCREDIT and PUFS – February 2001

Summary table

Elements	Ségou	Sikasso	Total
Number of projects identified	37	28	**65**
Number of projects pre-selected by CAE	22	20	**42**

Pre-selected projects will be further studied and refined by CAE before they are submitted to local or sub-regional financial institutions.

List of projects identified in Ségou during the workshop organized by CAE in partnership with OIKOCREDIT and PUFS in February 2001

Promoter	address	Current Activity	Title of the new Project	observations
Djekadi Women's Group	S/C URDOC Niono Bp 37	• Shallot production and storage • Rice production and marketing	Construction of a large capacity warehouse for shallot storage	Project pre-selected
Women's Group	Foabougou / Niono	• Shallot production and storage • Production and marketing	No new project yet	The group received financial support from CAE for storage of 100 T

Benkady Women's Group	Yangassadiou-Koura N'Dogofri /Niono	• Production and marketing of rice and shallots	Shallot storage	Project pre-selected
Village Association	Seriwala/ Km 30	Rice husking and marketing as well as other market-gardening products	Small-scale rice processing plant	Interesting project The promoter should be a cooperative which will be the Village Association 's (VA) Business Unit
Kotognonan village Women's Group, Niono district	Niono	• Production and marketing of rice and shallot	Rice husking and marketing	Interesting project
Molodo I KANKELE Group	Molodo/ Niono	• Rice production and marketing	• Rice threshing, husking and marketing	Interesting project
Tara BOUARE Women's Center	Niono	• Agro-food product processing • Soap making	Construction of a center	Project rejected
Milk and Meat Association	Niono	• Cattle or sheep fattening	Animal feed manufacturing	Interesting project
JEKAFERE GIE (collective sale)	Niono	• Rice production, husking and marketing	• Rice husking and marketing	Interesting project
Niono district fishers' cooperative	Niono	• Fishing	Providing the fishers with equipment and water hyacinth control, fish-breeding	Fish is not a product targeted by CAE
Niongodemè Group Oumar Diallo President 34-21-	Siribala / Niono	Shallot processing	• Replacement dryer • Fish-breeding	Interesting project. The Centre is not interested in fish-

51/ 34-31-51				breeding activity
Yiriwa-so Group « the hut of progress » S/c Amada DOUMBIA	Niono	Veterinary service delivery	Extension	Document rejected
Market-gardeners' Cooperative in Louta – Koura Kolongo s/c Alassane OUEDRAOGO President	Kolongo / Macina	Fruit and vegetable production	-	-
Agro-pastoral Cooperative M'Baye Mody DIALLO Contact : Mamadou DIARRE	Baroueli	Animal fattening	Extension of the animal fattening project	Project rejected
Kalifa DIARRA Farmer	Macina	Rice cultivation and marketing	Purchase of husking machines	Project pre-selected
Djiguiya Women's Association Contact : Mme TOURE Mariam DJIGAs/c Projet Moyen Bani	Bla	• Cattle fattening • Manufacturing of Tamarin syrup	Animal fattening	Document rejected

Yeré yiriwa Women's Association Mme Hatouma SYLLA Secretary General	San	Mango, papaya and pumpkin processing	Extension of a small-scale mango and papaya processing plant	Project pre-selected. PUFS expressed interest in financing this project. It may be financed by PUFS as part of their activity for financing of experimental projects.
Madame CISSE Maïmouna KONE	San	Fresh milk and curds production	Extension of a small-scale dairy industry	Very interesting project. OIKO and PUFS expressed interest in financing the projects
Parisi Association Rachelle KONE Deputy-Secretary General	Tominian	Cereal storage	Cereal Bank	Document rejected
Tominian district Farmers' Union Contact : Pierre THERA UACT trainer	Tominian	Production and marketing of millet and sesame	Storage warehouse	Project pre-selected

SUMA SARL	Ségou	• Distribution of hydrocarbon projects and various commodities	Rice processing plant	Project pre-selected.
Benkady Women's Group, c/o Amadou GUINDO Zone Tamani Office Riz 320-326 / 320-457	Ségou	• Attiéké production	Extension of kassava processing project	Project pre-selected
Market-gardening Diado	Ségou / Office Riz	Fruit and vegetable production	Research for construction of a wide-diameter well	Document rejected
Konodimini village Women's Group	Konodimini	Cereal storage and marketing	Cereal bank and operation of a Votex cereal thresher	Project pre-selected
Beesago GIE	Ségou	• Traditional processing of tomato	Tomato processing plant	Project pre-selected
« Jama Jigui » Women's Group Mme KONADJI	Ségou	Products made out of honey Bogolan	-	-
Jekulu numa Group President : Mrs. Balel AGNE 321-128	Ségou	• Hibiscus syrup, sweet potato jam, syrup, pepper sauce	Extension of the activity	Project pre-selected
Déli Association Madame Leluc OUEDRAOGO 320-333	Ségou	Support for establishment of an organized network for inter-village marketing	Institutional support	See Partnership Fund

Kelegna Association Ségou Mrs. Korotoumou SANOGO Organizing Secretary	Ségou	Animal fattening and marketing	Poultry raising	Document rejected
Mothers' Club	Ségou	Vegetable and cereal processing, *soumbala*, Nescafé	Extension	Project pre-selected
SOUTOURA Women's Group in Dioro	Dioro/ Ségou	Rice production and marketing	Operation of thresher	Project pre-selected
Dioro Market-gardening Group	Dioro	Fruit and vegetable production	Extension of Market-gardening project	Document rejected
Founougouni village Agro-food Group	Founougouni	Kassava processing	Extension of a kassava processing plant	Project pre-selected
Agro-food Group	Koila	Hibiscus processing into syrup and jam, and product marketing.	Extension	Project pre-selected
Dembaw Jigi Women's Group	Sossé /Sansanding	Shallot processing	Extension of processing project	Project pre-selected
COPRAAV	Ségou	Animal and poultry feed production	Extension	Project pre-selected
Mama DIARRA Sahel Nango	Niono	Rice production and husking	Small-scale rice processing plant	Project pre-selected

List of projects identified in Sikasso during the workshop organized by CAE in partnership with OIKOCREDIT and PUFS in February 2001

Promoter	Address	Current Activity	Title of the new Project	Observations
Association of local product buyers - APLS	Sikasso Tel : 620-508	Purchase and marketing of local products	Extension of local product marketing project	Project pre-selected
Fruitière du Lotio SARL	Sikasso Tel : 620-917 BP : 364	Mango exportation	Mango conditioning plant	Project pre-selected
COBAS	Sikasso Tel : 620-809 BP : 265	Livestock marketing	Extension of livestock marketing enterprise	Project pre-selected
Sikasso animal fatteners' Cooperative	Sikasso Bp : 135 Tel : 620-790	Cattle fattening	Cattle fattening	Project pre-selected
Motorized farmers' cooperative in the Sikasso region	Sikasso Tel : 620-302	Tractor operation	Extension of operation project	Project doesn't fit into CAE's objectives. The promoters are already working with OIKOCREDIT
Sikasso and Kadiolo district sweet peas producers' association - APPSK	Farakala	Sweet peas production and marketing	Sweet peas juice processing plant	Document rejected
Association for the collection of karité nuts and other harvesting products - (ACAK-APC)	Sikasso Tel : 620-164	Karité butter marketing	Karité butter processing plant	Project pre-selected
Farakala Agro-pastoral Association	Farakala	Sheep fattening	Extension of cattle fattening enterprise	Project pre-selected
Fruit and vegetable marketing Cooperative	Sikasso	Fruit and vegetable marketing	Extension of fruit and vegetable marketing project	Project pre-selected

Mali Yiriden				
Association of animal raisers and innovators for sheep fattening	Loulouni	Cattle fattening	Cattle fattening	Document rejected
Sikasso district poultry farmers' Cooperative	Kaboïla II	Egg production and sale	Alveolus production plant	Project pre-selected
Wayerma Consumption Cooperative	Sikasso	Cereal sales	Extension of cereal sales	Project rejected
Women's Cooperative for fruit and vegetable valorization	Sikasso	Fruit and vegetable processing	Fruit and vegetable processing plant	Project pre-selected
Young Cookers' Association	Sikasso	Catering	Extension of catering project	Document rejected
Mamassoni Animal Fatteners' Association	Mamassoni/ Sikasso	Cattle and sheep fattening	Extension of cattle fattening project	Project pre-selected
Bogotiéré Village Association for Potato Production	Bogotiéré	Production and marketing of fruit and potato	Storage warehouse	Project pre-selected
Cereal Marketing Group	Sanoubougou II Rue 125 Porte 305 Sikasso	Purchase and marketing of potato	Cereal marketing	Project pre-selected
COCOMAFAB	Sanoubougou I Tel : 620-516	Cereal marketing	Cereal processing	Project pre-selected
Farmers' and Market-gardeners' Cooperative	Katon / Kadiolo	Fruit and vegetable marketing	Extension of fruit and vegetable marketing project	Document rejected
Zantiébougou Women's Group Union	Zantiébougou	Processing and Purification karité butter into refined butter	Extension of the activity	Project pre-selected
Sabénébougou Village Association (AVS)	Sabénébougou	Potato production and marketing	Potato storage warehouse	Project pre-selected

Kadiolo Animal Raisers' and Merchants' Cooperative	Kadiolo	Cattle fattening	Extension of cattle fattening	Document pre-selected
Loulouni mango farmers' Associatoin	Loulouni	Mango marketing	Storage warehouse	Document rejected
Kene yiriden	Sikasso	Fruit and vegetable marketing	Extension of fruit and vegetable marketing project	Project pre-selected
Association on-farm buyers for Malian citrus fruit and oleaginous	Sikasso	Mango marketing	Extension of mango, fruit and vegetable marketing project	Document rejected
Karagana village cereal producers' Group	Karagana	Operation of maize flour mill	Small-scale maize processing plant	Interesting project
Koro-Barrage animal raisers' Cooperative (CEKOBA)	Koro-barrage	Cattle fattening	Cattle fattening	Interesting project

ANNEX VII - SERVICE DELIVERY CONSULTANTS / SSE PROGRAM

BAMAKO

Code	Consultant	Tel.	Fax	e-mail	Contact person	Intervention field
1/05	Boubadia	22 82 63		esgaf@datatech.toolnet.org	Seydou Bouaré	Cost-effectiveness/feasibility studies; Counseling-support; Accounting; Accounting support; Training
1/10	IBC	29 39 77		ibc@malinet.ml	Wandé Diakité	Cost-effectiveness/feasibility studies; Counseling-support; Accounting; Accounting support; Management Training
1/15	AMCE	22 14 72			Demba Diallo	Cost-effectiveness/feasibility studies; Taxation Counseling; Counseling-support Assistance; Accounting; Training
1/20	NATA Consult	21 47 00			Ibrahim Maré	
1/25	FINAGRO	29 04 29	29 07 54		Cheick coulibaly	Cost-effectiveness/feasibility studies; Counseling-support; Accounting;
1/30	YIRIWA Conseil	22 32 89		yc@datatech.toolnet.org	Oumou Traoré	Cost-effectiveness/feasibility studies; Counseling-support; Accounting
1/35	AGRI-CONSULT	23 10 85	22 70 83	aconsult@malinet.ml	Mamadou Diakité	Cost-effectiveness/feasibility studies; Counseling-support; Monitoring-Evaluation
1/40	EXXEL Remington	24 25 38	24 25 39	exxel-h@spider.tooolnet.org	Adama Sidibé	Cost-effectiveness/feasibility studies; Counseling-support; Quality management training
1/45	B & B Consulting	22 48 31			Ibrahim Barry	Cost-effectiveness/feasibility studies; Taxation Counseling; Counseling-support; Accounting; Socio-economic studies; Training
1/50	SERNES	21 01 41	21 01 42		Koussé G Koné	
1/55	EMOB	29 90 20			Modibo Sidibé	Cost-effectiveness/feasibility studies; Counseling-support; Administrative organization
1/60	BESI	24 64 85	24 64 85		Mamary Traoré	Cost-effectiveness/feasibility studies; Counseling Assistance; Training

1/65	BEGIP	23 32 24		begip@datatech.toolnet.org	A Berthé; A Keita	Cost-effectiveness/feasibility studies; Counseling-support; Training
1/70	MALI MGT .Con	28 11 01	21 75 41		Hadiara Coulibaly	Cost-effectiveness/feasibility studies; Counseling-support; Training
1/75	Boubacar Diallo/Independent	24 75 76			Boubacar Diallo	Cost-effectiveness/feasibility studies; Taxation Counseling; Accounting; Auditing; Manual of procedures; Training
1/80	Groupe Pivot-PME	21 95 17			Tiémoko S. Sangaré	Cost-effectiveness/feasibility studies; Taxation Counseling; Counseling-support; Accounting; Training
1/85	Consult AA	23 36 61			Amadou Diallo	Cost-effectiveness/feasibility studies; Taxation Counseling; Counseling-support; Organizational counseling; Farmer organization
1/90	ECOM	23 61 44	23 61 44		Souleymane Guissé	Cost-effectiveness/feasibility studies; Taxation Counseling; Counseling-support; Accountancy training; Auditing; Juridical consultation
1/95	BGP/AIB	22 45 89			D. Moussa Koné	
1/100	CAB DEMESO	29-27-91			M'Dou Coulibaly	
1/105	Sambacourou Kanté/Independent	29 34 75	29 34 75		Sambacourou Kanté	Cost-effectiveness/feasibility studies; Taxation Counseling; Counseling-support; Accounting; Auditing
1/110	BAC +	21 16 01			Aly Mana	
1/115	ACE Conseil	21 50 52	23 50 86	mtraore@cefib.com	Mohamed Traoré	Cost-effectiveness/feasibility studies; Counseling-support; Auditing
1/120	Morifing Koné/Independent	22-65-86	20 63 27		Morifing Koné	Cost-effectiveness/feasibility studies; Accounting; Manual of procedures; Business plan
1/125	FORANIM	24 17 34			Oumar Coulibaly	
1/130	AFRITEC	21 00 53	21 00 53	afritec@spider.toolnet.org	Mamadou Diallo	Cost-effectiveness/feasibility studies; Counseling-support; Training

1/135	Bolizé Dao/Independent	20 02 32			Bolizé Dao	Accounting system establishment; Auditing; Accounting procedures manual
1/140	GEDUR SARL	23 38 49	22 40 15		Mamadou Diakité	Cost-effectiveness/feasibility studies; Counseling-support; Project study/Training Animation
1/145	Hamadoun Diallo	29 18 05	211963		Hamadou Diallo	Taxation counseling; Counseling assistance; Enterprise organization
1/150	Institut Africain	29 32 83	29 32 83	iae@afribone.net;ml	Tidiane Bah	Cost-effectiveness/feasibility studies; Counseling-support; In-service training; Marketing and commercial studies
1/155	BARREP	20 35 29			Coumaré	Cost-effectiveness/feasibility studies; Counseling-support; Training
1/160	Management Conseil Information	23 38 21	23 39 14		Ibrahim Baby	Cost-effectiveness/feasibility studies; Counseling-support; Accounting
1/165	GMI AUDIT	24 60 73	24 95 15		Soumana Makadji	Cost-effectiveness/feasibility studies; Counseling-support; Accounting; Financial auditing
1/170	Finwatt	23 97 14	23 97 14	finwatt@afribone.net.ml	Moussa Ouattara	Counseling-support; Brokering in international finance and commerce
1/175	CE.CO SA	22 44 11		ceco.sarl@ifrance.com	Abdoulaye Traoré	Cost-effectiveness/feasibility studies; Taxation counseling; Counseling assistance; Accounting; Auditing and commissary to the accounts; diagnostic assessment
1/180	Cabinet d'expertise comptable Oumar Kouma	22 34 08	22 34 08		Oumar Kouma	Cost-effectiveness/feasibility studies; Counseling-support
1/185	Horizon Consult Developpement	21 76 67			Seydou Doumbia	Cost-effectiveness/feasibility studies; Counseling assistance
1/190	CENAFOD	23 22 60	23 22 60	iadd@malinet.ml	Soumana Doumbia	Cost-effectiveness/feasibility studies; Counseling-support; Training; Workshop organization; Evaluation

SERVICE DELIVERY CONSULTANTS / SSE PROGRAM
SIKASSO

Code	Consultant	Tel.	Fax	e-mail	Contact person	Intervention field
3/05	AGA Koutiala	64 00 34			Daouda Dembélé	Cost effectiveness/Feasibility studies; Counseling-support; Accounting; Support to local initiatives
3/10	BFC Consulting	62 09 27	62 07 56		Fanta B Cissé	Cost effectiveness/Feasibility studies; Counseling-support; Training; Staffing positioning
3/15	CEPID	65 12 24			Abdoulaye Cissé	Cost effectiveness/Feasibility studies; Counseling-support; Accounting
3/20	CGA Koutiala	64 02 62	64 00 11		Moustaphe Diakité	Cost effectiveness/Feasibility studies; Taxation accounting; Counseling-support; Accounting; Training
3/25	Kaffa Traoré	62 05 93			Kaffa Traoré	Cost effectiveness/Feasibility studies; Counseling-support; Accounting; Training
3/30	Cabinet Conseil Diamoutènè	62 00 99	62 00 99		Diakalia Diamoutène	Cost effectiveness/Feasibility studies; Counseling-support
3/35	GODEA	65 10 29	65 10 29		Boubacar Djiré	Cost effectiveness/Feasibility studies; Taxation accounting; Counseling-support; Accounting; Training
3/40	Boukary Barry	65 12 59			Boucary Barry	Cost effectiveness/Feasibility studies; Counseling-support; Accounting
3/45	ACOD	62 10 91			Mohamed Ag Akeratane	
3/50	GIE BNAIPD	62 07 94				
3/55	BEAA	64 00 57	64 00 49	cmz-mali@maf.org	Pascal Admas Thera	Cost effectiveness/Feasibility studies; Counseling-support; Fund raising

SERVICE DELIVERY CONSULTANTS / SSE PROGRAM

SEGOU

Code	Consultant	Contact	Fax	e-mail	Contact person	Intervention field
5/5	BSIC	32 09 25			Ibrahim Diarra	Cost effectiveness/feasibility studies; Counseling-support; Training; Monitoring & Evaluation
5/10	SOMECA	32 05 87	32 05 93	ferdjani@malinet.ml	Moussa Kassambara	Cost effectiveness/feasibility studies; Counseling-support; Fixed asset assessment
5/15	Daffé Consult	32 06 78		-		
5/20	Oumar Diallo/Independent	32 07 92			Oumar Diallo	Cost effectiveness/feasibility studies; Counseling-support; Training; Monitoring & Evaluation
5/25	Delta Conseils	35 20 14	35 20 14		Lassiné Sidibé	Cost effectiveness/feasibility studies; Taxation counseling; Counseling-support; Accounting; Monographic studies

ANNEX VIII : PROGRESS OF RESULT AND PERFORMANCE INDICATORS AS OF SEPTEMBER 2001

INTERMEDIATE RESULT - SEG & CAE PPM	CAE RESULT AND PERFORMANCE INDICATORS	MEASUREMENT UNIT	YEAR I ACHIEVEMENTS	YEAR II ACHIEEMENTS	YEAR III ANNUAL TARGET	REALISATION AN III	% OF ACHIEVEMENT - YEAR III
SEG INTERMEDIATE RESULT 2 : INCREASED PROCESSING OF CEREALS, LIVESTOCK AND ALTERNATIVE PRODUCTS IN THE TARGET AREAS	Volume of paddy rice processed	Ton	0	160	2000	5000	250
	Volume of maize processed	Ton	0	0	50	30	60
	Volume millet/sorghum processed	Ton	0	0	20	0	0
	Volume of hides and skins processed for export	Ton	0	0	0	0	
	Volume of mango processed	Ton	0	0	0	0	
	Volume of shallot processed	Ton	0	0	28	21.6	77
SEG INTERMEDIATE RESULT 3: INCREASED MARKETING OF CEREALS, LIVESTOCK AND ALTERNATIVE PRODUCTS IN TH E TARGET AREAS	Volume of rice sold	Ton	0	100	1300	3000	231
	Volume of maize sold	Ton	0	0	0	0	
	Volume of processed maize sold	Ton	0	0	50	20	40
	Volume of millet/sorghum sold	Ton	0	0	80	0	0
	Volume of processed millet/sorghum sold	Ton	0	0	1	0	0
	Volume of processed hides and skins sold	Number	0	0	0	0	
	Number of cattle units sold	Number	0	0	380	926	244
	Number of small ruminant sold	Number	0	1400	4000	6650	166

SEG INTERMEDIATE RESULT 3: INCREASED MARKETING OF CEREALS, LIVESTOCK AND ALTERNATIVE PRODUCTS IN THE TARGET AREAS	Volume of mangoes sold	Ton	39	288	600	622	104
	Volume of processed mangoes sold	Ton	0	0	0	0	
	Volume shallot sold	Ton	0	0	25	0	0
	Volume of processed shallots sold	Ton	0	0	3.5	2.7	77
	Volume of potato sold	Ton	0	120	300	2781	927
PPM 1: To improve the availability of commercial (prices, quantities, etc.) and technological information from domestic, West African and international markets for grains, livestock, and alternative products, provided to agro-entrepreneurs	Weekly price newsletter published	Number	60	100	100	48	48
	Exporters using weekly price information	Number	22	4	4	6	150
	Operating mechanisms for radio broadcasting of price information	Number	0	0	2	2	100
	Techniques and technology newsletters published	Number	0	2	3	2	67
	Newsletters published on regulatory texts, norms and standards	Number	0	1	2	1	50
	Visitors to the Web site	Number	868	11256	13000	21760	167
	Agro-entrepreneurs trained in the use of the Internet	Number	0	46	70	24	34
	Visitors to the cyberspace	Number	0	418	500	773	155

PPM 2: To support Malian agro-entrepreneurs in identifying and testing new commercial opportunities for raw and processed products, in collaboration with national, West African and international commercial partners	Market surveys conducted (supply and demand)	Number	2	3	3	0	0
	Market prospectus developed	Number	1	4	3	8	267
	Market tests carried-out	Number	1	3	5	8	160
PPM 3: To promote the utilization of competitive production and processing opportunities and technologies by Malian entrepreneurs	Technologies tested	Number	0	4	8	6	75
	Agro-entrepreneurs trained in new technologies	Number	0	148	840	1269	151
	Agro-entrepreneurs trained in quality improvement	Number	0	25	20	24	120
	Private operators using techniques and technologies introduced by CAE	Number	0	54	173	1269	734

PPM 4: To build capacity among Malian agro-entrepreneurs to better manage and develop their enterprises	Agro-entrepreneurs trained in business management	Number	80	742	400	2094	524
	Agro-entrepreneurs using their new skills for business management	Number	nd	nd	340	204	60
	Business Plans developed and submitted to banks	Number	0	5	21	18	86
	Agro-entrepreneurs having established a reliable accounting system with CAE support	Number	0	0	3	3	100
PPM 5: To facilitate access to financing for Malian agro-entrepreneurs	New funding sources identified	Number	0	9	1	1	100
	Information seminars on funding sources	Number	0	2	2	2	100
	Banks contacted as part of sensitization towards agribusiness financing	Number	6	7	9	9	100
	Business Plans financed by banks	Number	0	0	5	3	60

PPM 6: To support IER and LCV so that they may provide improved services to Malian agro-entrepreneurs on a sustainable basis	Accounting audits achieved	Number	0	1	0	0	
	Improvement studies completed	Number	0	0	0	0	
	Agents trained in Business Plan development	Number	0	18	9	9	100
	Accounting procedure manuals developed	Number	0	1	1	1	100
	Sub-structures supported IER Business Plan development Unit	Number	0	0	4	0	0
	Agro-enterprises which have access to IER and LCV services	Number	0	4	4	18	450
PPM 7: To Reinforce the role of the private sector in the designing and implementation of agricultural development policy	Sectoral policy studies completed	Number	0	1	1	1	100
	Forums organized	Number	0	6	12	4	33
	Consultation frameworks animated	Number	0	1	4	1	25
	Professional groups assisted	Number	0	0	37	32	86
	Constraints analyzed resolved	Number	0	1	6	0	0

PPM 8: To support harmonization of quality standards and regulations and the marketing of products in West Africa and with other partners	Studies conducted on the constraints	Number	0	0	1	0	0
	Forums held	Number	0	1	8	0	0
	Constraints analyzed and resolved	Number	0	0	7	0	0
PPM 9: To provide USAID and other partners with periodical reports that help evaluate the performance of CAE and its impact on the agribusiness sector in Mali	Result framework developed	Number	0	0	1	1	100
	Monitoring and evaluation reports written and disseminated	Number	4	4	4	4	100