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SUSTAIN

TECHNICAL ASSESSMENT

OCTOBER 1 - 15, 1993

CAMEROON

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T echnology to
A id in the
I mprovement of
N utrition

A U.S. Private Food Industry initiative
in collaboration with the U.S. Agency for International Development
through a Cooperative Agreement with the National Cooperative Business Association

Upgrading the Food Processing Industries in Developing Countries.

Why SUSTAIN?

SUSTAIN represents a successful collaborative effort between the U.S. food industry and the Agency for International Development (A.I.D.) to upgrade food processing in developing countries. It provides an excellent model for similar private-public sector joint ventures in health, agriculture and other areas of concern to developing countries.

Food processing is a major contributor to development. It serves multiple roles. Food processing can increase the available food supply by extending the life of perishable food products. It can improve the nutritional quality of the diet by making nutritious foods available the year round. It can lead to the growth of related enterprises in transportation, storage, distribution and marketing. And, it can produce much needed foreign exchange by creating value added products both for export and for internal substitution of imported processed foods.

The U.S. food industry has embraced the concept that freely sharing its expertise and knowledge is of mutual benefit to recipient and donor - to the recipient by improving current operations - to the donor by contributing to a healthier global future.

How SUSTAIN Works

A.I.D. missions and trade associations in developing countries publicize SUSTAIN's goals and activities. Executives of U.S. food companies with technical expertise and overall knowledge of the food industry serve as the SUSTAIN Steering Committee, providing guidance and overseeing activities.

Food related companies in developing countries submit their requests to SUSTAIN through the A.I.D. mission or a designated organization in their country. SUSTAIN screens all incoming requests and if necessary asks for additional information. Appropriate U.S. companies are then invited to respond.

Some problems can be readily resolved by providing information. Others require that consultants be sent. When a consultant is sent, the usual assignment is for one to three weeks. Upon completion of the assignment, the consultant prepares a report describing findings and making recommendations. Depending on need, some consultants may return for follow-up visits to ensure that recommendations have been appropriately implemented.

SUSTAIN Helps

Requests are diverse. Help may be needed to solve processing problems, to identify equipment needs and sources of new and used equipment, to train personnel in the use of new equipment and new technologies, to find new uses for indigenous commodities, to establish or improve quality assurance procedures, to control insects and rodents in food processing plants and to improve plant layouts and materials handling.

In the past, U.S. food companies, large and small, have provided technical assistance in the form of information, consultants and training to food processors in Africa, Asia, Latin American and the Caribbean.

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SUSTAIN PROGRAM

TECHNICAL ASSESSMENT

Cameroon

October 1 - 15, 1993

SUSTAIN Volunteers:

**Dr. Arnold "Bud" Denton, Senior Vice President, Campbell Soup Company (Retired)
Professor, Purdue University**

Dr. Bruce Hamaker, Associate Professor, Purdue University

and in Accompaniment:

Mr. Douglas "Jerry" Brown, AID/AFR/ONI/Agribusiness Unit, USAID

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TABLE OF CONTENTS

Report

- I. Introduction**
- II. Conclusions and Recommendations**
- III. Site Visits**
- IV. Roundtable Discussions**

Appendices

- I. SUSTAIN Description**
- II. Biographies of SUSTAIN Team**
- III. USAID Request for SUSTAIN Assistance**
- IV. SUSTAIN Team Itinerary**
- V. Review of Documentation of Food Crop Production, Processing, and Marketing**
- VI. Background Notes and Map of Cameroon**
- VII. Participants, Contacts of Site Visits**
- VIII. Description of CAMFOOD**
- IX. Letter from Rose Chips**
- X. Cable from USAID**

I. INTRODUCTION

SUSTAIN volunteers Dr. Arnold E. "Bud" Denton, Senior Vice President (Retired), Campbell Soup Co. and Dr. Bruce Hamaker, Associate Professor, Purdue University were accompanied by Mr. Douglas "Jerry" Brown, Agribusiness Advisor, AID, Africa Bureau at the request of USAID Cameroon to assess agricultural research programs and identify ways to make them more responsive to needs in the private sector (see Appendix III).

The team spent two weeks in Cameroon for the following purposes:

1. To identify specific actions that the Mission's agricultural research projects can support during the next 18 months in the areas of food crop processing and marketing (i.e., analysis, policy related seminars, training, adaptive research/outreach, pilot interventions) to benefit small and medium-scale agribusiness including cooperatives.
2. To identify general areas for medium to long-term support of agribusiness and cooperatives in processing and marketing of food crops for possible future USAID or other donor support.

The itinerary for the SUSTAIN Team is Appendix IV.

Prior to the trip, Mr. John McMahon, Director, Agricultural and Rural Development Office, USAID/Cameroon supplied the team with several studies which had been conducted on food and agriculture in Cameroon. A review of these studies, prepared in Cameroon by Nkwain, Mballa, and Numfor, is Appendix V.

Cameroon is a country of 12 million people administered in 10 provinces (see map - Appendix VI). The dense forest region of Cameroon is known for its rich volcanic soils and lush vegetation. Important crops of this area are cassava, plantain, maize, cowpeas, sweet potato, yam, and coco yam. In the Cameroon highlands cassava, potatoes, sweet potato, maize, and cowpeas are prominent crops. Going north maize becomes a more important crop until the sorghum starts to replace it as the major cereal crop. Other crops grown in the extreme north are cowpeas, millet, and rice.

There is some regional exportation of food crops, as well as some processed food products like cassava *gari*, to countries such as Gabon, Central African Republic, and Nigeria. Overseas exports of processed food products are very limited (e.g. frozen green beans to France).

The Government of the Republic of Cameroon (GRC) is faced with serious economic problems. Twice in the last few months, the GRC has defaulted on repayment of loans with the World Bank. Major portions of the World Bank's program with Cameroon are currently suspended. The GRC has also been unable to regularly meet public sector payroll, particularly for contract employees. This has resulted in strikes by university and research institution personnel. To the GRC's credit, it recently announced reductions in GRC salary levels in a bold

initiative to bring public expenditure situation more under control.

The research support personnel at National Agriculture Research Institute (IRA) have not been paid for nearly a year. Some research facilities, including IRA's headquarters and key soils laboratories, are currently non-operational or are only marginally utilized due to personnel strikes. Most research programs rely nearly entirely on donor funding to meet non-personnel operational costs. The Minister of Scientific and Technical Research (also the director of IRA) has assured USAID that the GRC is taking the necessary steps to address this situation. Beginning in March 1993, the GRC was to, but could not, resume paying support personnel.

Transformation of raw crops to processed foods that can be successfully marketed is a way a community can generate income and promote growing more local crops. It must be emphasized that products developed through this transformation must be sanitary, safe, and nutritious.

When considering the agribusiness sector it is important to put it in the context of the entire food and agricultural system. It is composed of three main phases: agriculture production at the farm level, a processing or transforming phase, and a marketing phase to meet some consumer demand. There are many other inputs necessary such as transportation, storage, etc. This system is driven by a consumer need. Therefore, this system must be directed toward meeting a consumer demand and everyone has to make a profit. Therefore, when improving the agriculture and food sector, all the people involved and those making inputs into this sector must work together. What is planted in the field will impact what the consumer is offered. How it is processed and packaged will determine its acceptability to the consumer. The challenge then, in developed as well as less developed countries, is to bring the knowledge sources together and communicate the knowledge in a way it can be understood and used. This communication takes many forms: it may require direct personal contact, written bulletins, radio, television, demonstration and testing facilities, etc. Ultimately, using this knowledge, action is taken to develop new businesses or improve current ones. This is a demand driven system.

The SUSTAIN team spent the first week visiting the Northwest province (Bamende - in the "highlands") and the Littoral province (Douala and Limbe - "forest") and returned to Yaounde ("forest"). The combination of visits to village level processing operations, processing operations on a larger scale, government laboratories, a university, regional markets, a cooperative food market and retail markets, and the four roundtables gave the team a better understanding of the current food processing and marketing system and the constraints and possible solutions. The Cameroonians who attended the roundtables made many helpful comments.

II. CONCLUSIONS AND RECOMMENDATIONS

A. Introduction

There are human resources and a high knowledge base presently in Cameroon capable of

developing the agribusiness sector more fully. What is needed, we believe, is a system that can transmit needed information in a useable form to persons striving to develop and improve their food processing businesses. Once the system starts operating, there may be gaps in the knowledge base that need to be filled. This may come from an outside source or through research from a Cameroonian government institution or university. It is important that the system be demand driven from the user at the village and community level. In this way the provider of knowledge can truly respond to the user's needs.

One way in which agribusiness development can be helped in Cameroon is through an effective system of getting food processing and marketing information to the person or persons who has or wants to establish a food processing business. Such a system can take many forms and quite frankly we cannot tell you which would be the best. However, we have given this a lot of consideration drawing from our experience in technical and business development.

Recognizing some of the constraints in Cameroon, we are proposing the following Applied Food Processing and Marketing System (Fig. 1). Concern has been expressed that this system will not work within the government structure. The success of any undertaking will therefore depend upon the people involved. For this pilot project, no new people should be hired. The system would have the following characteristics:

1) A central resource base to consist of worldwide knowledge relevant to food processing and marketing in Cameroon. It is expected that an initial base could be set up by collecting materials within Cameroon from donor agencies (e.g. FAO, United Nations Development Program (UNDP), IDRC), NGOs, IARCs (e.g. International Institute for Tropical Agriculture (IITA), CIP), the Agricultural Research Institute (IRA), and the University of Ngaoundere. Emphasis would be on appropriate food processing technologies and marketing information.

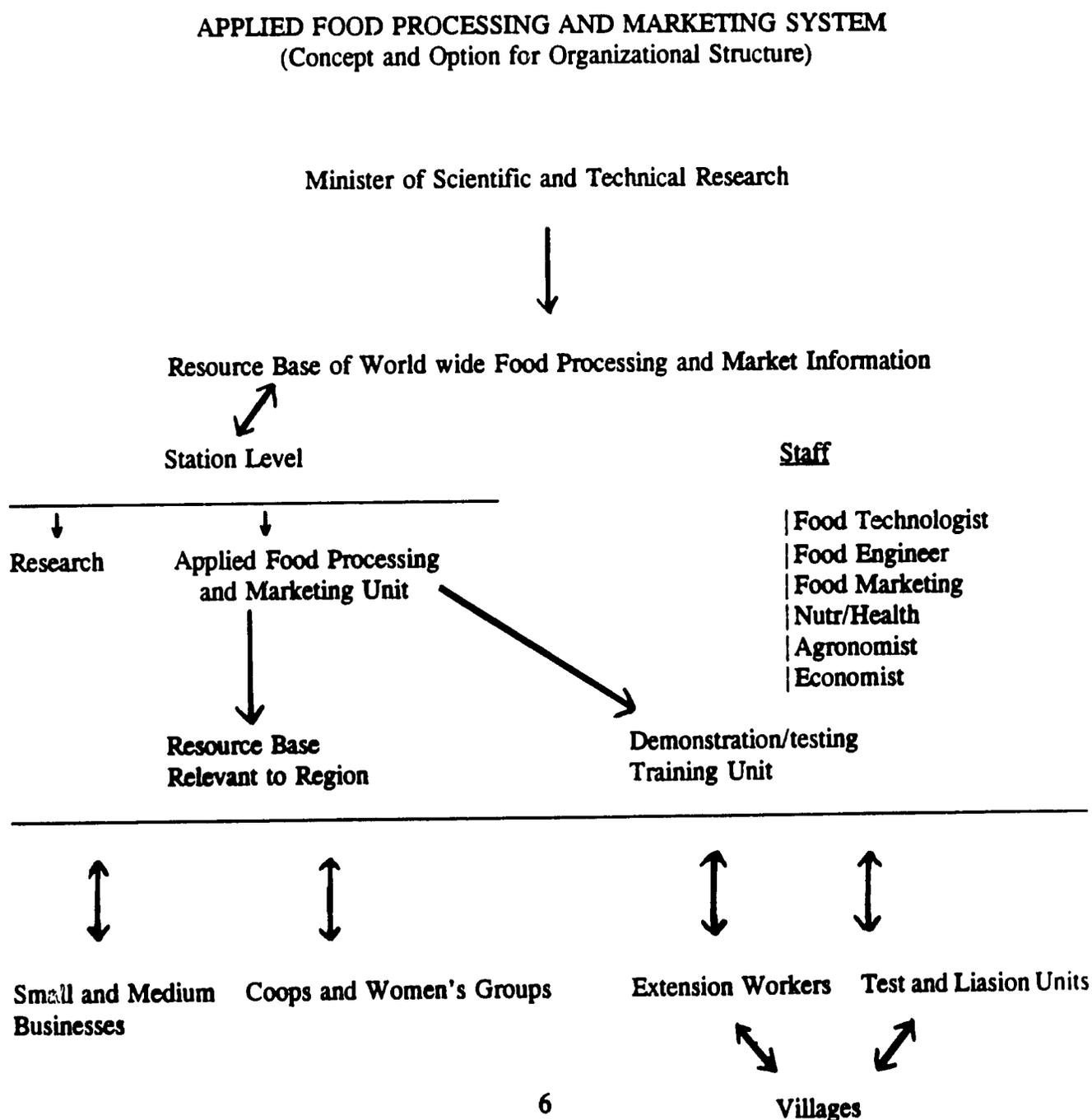
One option is to have the central base located in Yaounde at the Ministry and Technical Research as this should serve the entire country. Additional regional bases (stations) would be set up to conduct research and provide information relevant to that region. The information would be supplied mainly by the central base.

2) We propose establishing an Applied Food Processing and Marketing Unit (AFPM). Its mission would be to improve food processing and marketing activities of small processors by transferring needed information to them. The Unit would consist of the resource base relevant to the region, a lecture room, and a small facility for food processing equipment for demonstration, testing, and training. It would be expected that there would be a need for equipment of different levels of sophistication - from hand-powered to engine-driven - such as those designed at IITA and other institutions. The selection of low-cost, appropriate food processing equipment for the small and medium sized food processors would be decided upon by both the processor and the unit.

3) The staff of the AFPM unit would initially consist of two food technologists, a food engineer, a nutrition/health worker, and a food marketing specialist. Also, an agronomist and economist are needed but they may be located in the research unit. They could be called upon as needed because unit members would be seconded from relevant government agencies and

universities. The Unit members' work should be applicable to the everyday needs of the food processors. The success of this project will depend upon the people selected. The personnel must be highly motivated, have good interactive skills, be creative, and be interested in hands-on work in transferring information and training.

Figure 1. Organizational Structure of the Applied Food Processing and Marketing System



4) We visualize that demonstration training programs would be held at the station with village and perhaps larger processors in attendance. These would illustrate procedures and equipment and also include lectures on food safety and economic and business development. The people then could decide what they wanted to use from this demonstration and how they could afford to improve or develop in their businesses. Training on how to apply for small equipment loans and help to figure out other ways of obtaining equipment would be given (e.g. as a cooperative).

In addition to the training/demonstration program, there would be an outreach program through the Testing and Liaison Unit, extension workers, and other groups. It would also be expected that the personnel in the AFPM unit would work in the field. It should be emphasized that the personnel in the AFPM unit are hands-on applied people and not researchers. They are problem solvers. There must be continuous interaction between the liaison person and the end users.

We believe that an advisory board of users to the AFPM Unit be formed. Its responsibility would be to ensure that the AFPM Unit works on projects that are important to the users. The board would be composed only of user representatives from cooperatives, women's associations, small businesses, nutrition and health workers, agricultural economists, food processing association, and others.

To finance these facilities, we recommend that a foundation be formed and have an endowment go directly to the AFPM Unit for operating expenses. It should be recognized, however, that if two different units under the same organizational structure have two different sources of funding, some animosity may arise. Some operational expenses must be covered by charging for certain training and demonstration projects.

If such a unit were to be set up, there should be some team building training since the activities associated with the system will require interaction at several different levels.

The AFPM Unit should develop its own program based on the needs of the user. It is suggested that several roundtables be held with potential users to help develop the program. After this is developed, outside sources of technical and food marketing expertise could be sought if needed.

We could not identify any group, organization, or association which SUSTAIN could work through on an on-going basis, as it prefers to do, though there may be some that we are unaware of. At the present time SUSTAIN's contribution may be to answer specific requests and distributing SUSTAIN Notes. If the proposed system is established, there may be more specific assistance SUSTAIN could offer within its budget constraints.

Prior to leaving Cameroon, briefings were given to the AID Director, Peter Benedict, and his staff and later to a wider group.

B. Summary: Final briefing to representatives from various governmental agencies, research institutions credit unions, cooperatives and private companies

The SUSTAIN team gave a final briefing (see Appendix VII for attendance list) on their conclusions and recommendations on establishing a system to transfer food processing and marketing information to the private sector. There was a lively discussion and, as expected, the representatives of the Ministry of Agriculture felt that the AFPM unit should be a part of their Ministry rather than in the Ministry of Scientific and Technical Research. The participants accepted the concept, but the ramifications of the AFPM unit coordinated activities were difficult to grasp in the relatively short time we had to explain it. Also, many feel that research can be done in isolation. But we believe it can't be if it is going to be commercialized for the good of Cameroon. We believe that there has been some positive momentum generated by the many meetings and roundtable discussions that were held in conjunction with the SUSTAIN team visit. To keep the momentum, some specific appropriate training programs (e.g. marketing, packaging, etc.) could be held for village and small food processors, testing and liaison units (TLU), and extension workers and researchers. Also, it might be appropriate for the government ministries to be challenged to develop a proposal on what can be done in the areas of food processing and marketing, demonstration, etc.

III. SITE VISITS

Visit to Societe Camerounaise de Transformation des Cereales (SCTC). Daniel Yollo, Deputy Director General

We were unable to see the inside of the mill because a key could not be obtained. The facility is principally used to mill wheat flour which would be assumed to be a conventional break-reduction system for obtaining a white bread flour. SCTC mills imported wheat at a 78% extraction rate. The mill was bought from an Italian manufacturer. The technicians were trained by the Italians. The mill appeared fairly new, although we didn't know the date it was constructed. Apparently all specifications for the mill were set by the company and this is why they use what may seem like a low extraction rate for Cameroon. A higher rate would include a little more wheat bran and result in a less pure white flour. The bran and germ fractions are sold as an animal feed supplement.

At times, when the MAIZCOM plant at Ngaoundere is unable to meet market demand, the mill switches to maize and produces brewers grits. In the past 5 months since Mr. Yollo has worked there, maize was only milled once. Imported maize was used because it is cheaper than locally grown [60 CFA/kg (imported) vs 70 CFA/kg (locally grown)], is of better quality, and shipments are more dependable. Locally grown maize is not clean (insects, debris, etc.) and white and yellow corn varieties are mixed.

SCTC relies heavily on foreign expertise to back-up the technical aspects of the mill. It appears to be a well run operation, though there is no apparent attempt to integrate the mill's

operations into the Cameroon food system (production to consumer). Of course, it is obvious why the mill buys imported maize even though locally grown maize is available. A cheaper, high quality grain would always be preferable. However, in all probability, local maize could be made competitive in quality with the imported grain by opening channels of communication between the miller and farmers. As for the price differential, there was some comment that this too could be changed with a guaranteed market for the farmers.

Visit to PROLEG S.A.: Societe de Production de Collect de Transformation et de Conditionnement de Legumes

Located in Foubot, this private produce exporter ships fresh and frozen green beans (haricot verts fin) to the Rungis, France market. PROLEG contracts with 1200 farmers and each farmer owns approximately 10 hectares. PROLEG supplies five food brokers in the very lucrative French green beans market. This market, in 1992, had a 30,000 ton shortfall. Cameroon's primary African competitors are Morocco, Kenya, and the Ivory Coast.

Each farmer under contract receives inputs (fertilizer, seeds, pesticides) and technical assistance along with a guaranteed market: PROLEG. Upon payment for their production, farmers reimburse PROLEG for inputs. There are approximately 50 technicians that assist the farmers in quality control, farm practices, and product delivery. Sorting, packaging and freezing and shipping are done in a recently opened packing house in Bandjoun, 10 km south of Bafoussam.

Three expatriates, two French and one Moroccan, are charged with overseeing technical control. All of the farm and processing equipment comes from Morocco.

Currently, PROLEG is experimenting with cantaloupe.

PROLEG's director reported he faced no constraints to production, processing, and marketing of his produce. All inputs are imported from France and technologies were, for the most part, imported from Morocco. Credit is provided by the owner, Victor Fotso. Frequent road blocks are the only obstacle the company faces.

Visit to Small and Medium Size Agribusinesses

Automatic Rice Mill, Andreas Kenne, Owner and Managing Director

This small, one year old company with eleven workers processes rice to parboil rice. All of its raw materials (a ton of paddy/per day) is purchased from local farmers in Ndop and Tinga. The miller's rice screening, cleaning, and sheller equipment was purchased from Scotland for 15 million CFA. It transforms one ton of rice per hour.

Milling three types of rice-- short, medium, and long grain-- the rice is made available to consumers at 1000 CFA/5 kilos. Five kilo plastic bags are purchased in Lembe at 20 CFA/bag and are heat sealed at the rice mill. Printing on plastic bags is awkward, making it difficult to see the product.

Technology constraints faced by this company are few, yet basic: 1) The drying process currently used is not environmentally friendly--it consumes firewood and permits sizeable quantities of heat to escape into the atmosphere. 2) Packaging needs improvement. 3) Coloration of brown/black rice kernels vary widely due to rice growing and harvesting practices of the farmers. The SUSTAIN team offered to share models of appropriately designed rice dryers and made suggestions to the miller regarding improvement in his packaging presentation.

Growth Products Enterprises (GPE) Ltd. (Soybean Processing Agro-Industries). Tekum Vincent Njimgye, Managing Director

GPE, purchasing 100 percent of its raw materials locally, processes soy beans into tofu, soy flour, sprouts, soy nuts, milk and yogurt. Soy products, being new to Cameroon consumers, forces GPE to mount a strong mass media education campaign on soy preparation and consumption.

Recipe sheets, an information/demonstration center, posters, free product to primary schools, and radio and television spots are all part of GPE's effective marketing strategy. Posters were found in several cities educating consumers about the nutritional benefits of soy products. In a clean, bright, but modest demonstration center, Mr. Tekum presented refrigerated containers of soy milk (2-3 day shelf life without refrigeration), packages of tofu, neatly wrapped breads and cakes baked from soy and wheat flour and soy and potato flour, and small bags of sugar-coated roasted soy beans for snacks.

The SUSTAIN team visited GPE's small, clean and tidy processing and packaging plant. Located in back of Tekum's home, employing seven workers, the plant produces up to 500 packs of soy flour (375g) per day. Turning out one product at a time, the plant remains open year round.

GPE is faced with the following constraints: 1) Affordable packaging, especially for soy dairy products, is a major hurdle. At 20-40 CFA a bottle (plastic), soy milk, even wholesale, costs more than regular milk and is priced out of reach of the average Cameroonian. 2) Soy products, even though much improved, still have a pronounced after-taste. 3) Cameroonian farmers plant three soy varieties. Each variety differs in protein levels. GPE has yet to determine how to control the variety of seeds farmers plant. 4) Educating and marketing of soy products requires additional point of sale information. Although GPE uses posters, radio and television, the demonstration center, and school health programs, adults still are unaware of its nutritional value.

Rose Chic-Chips. Rose Simo, Owner and Managing Director. Douala, Cameroon

This company produces snack foods (chips) from potatoes, sweet potatoes, plantains, and coco yams, all fried in soy bean oil. A one-woman enterprise, Ms. Simo markets, produces, packages, and distributes her products. The snack foods are priced at 75 CFA per 50g packet. Ms. Simo has temporarily halted her business, desiring to find a permanent site to produce and package her products.

Constraints for Rose Chic Chips come include: 1) Equipment purchased to produce her product was stolen. 2) The shelf life of the chips is only two weeks, depending on the environment in which the chips are stored. 3) Problems with rancidity, thus requiring additional information about (natural) antioxidants.

Socamrico, Cassava Flour and Cassava Chips Plant

This abandoned, bankrupt, family-owned company was established about twenty years ago to produce cassava flour for the local market and cassava chips for the local and regional animal feed markets. Bankrupt in 1987, yet attempting to revive itself, the new owners claim to have an Italian joint venture agreement to provide cassava chips (cassolet) to the Italian market.

Ekona Women Farming Group. Ekona, Cameroon

Nine women came together to produce cassava gari for the local market. The market for cassava products is one of the most lucrative in Cameroon. With production cost and market analysis assistance from Dr. Manfred Besong, Agricultural Economic/Tropical Roots Crops, Ekona Agricultural Research Station, the women form a gari processing unit--peeling, washing, grating, fermenting, drying (duration: 2 days), and frying (for coloration and adding value and shelf life).

The major constraints to this group of women are: 1) Transportation. 2) Storage. 3) Increasing efficiency in production.

Batoke Women Farming Group. Batoke, Cameroon

These 12 women formed a cooperative to produce, process, and market cassava water fufu to the local market. The cassava grown by the women as a group is peeled, washed, stored for two days, ground by a IITA motorized machine, passed through a sieve (to remove fibers), pressed for two hours to remove water, and then packaged for sale.

The visit to the Batoke Women Group demonstrated the various differences in levels of appropriate technology. The Ekona women used all manual labor to produce an end product. The Batoke women used a combination of manual labor and machinery. The addition of a rented power motor grinder permits the women to produce a larger quantity of end product in less time and energy. The women work as a coordinated unit--quickly, efficiently, and orderly.

Constraints were clearly articulated and demonstrated by the Batoke Women Farming Group president. 1) Production of cassava is still done with traditional hoes and machetes. 2) Transportation of the raw materials from farm to processing unit is done on the women's heads-- a slow and tiring process. 3) The motorized grinder is rented from an entrepreneurial young man for 800 CFA/per day

Cameroon Food Cooperative Society (CAMFOOD). J.C. Maximuangu, President. Yaounde, Cameroon

This cooperative emerged from an idea of Anglophone Cameroonians desiring to offer low cost, nutritious food to consumers of Yaounde's sprawling urban population (see description of CAMFOOD, Appendix VIII). Purchasing foodstuffs, mostly dried foods, from cooperatives and farmer associations in the West and Northwest Provinces, CAMFOOD sells rice, soy beans and soy products, sugar, flour, and corn, among other basic food stuffs. Opening its doors in August of this year, sales for the first two months totaled over 2 million CFA.

Constraints faced by the CAMFOOD include: 1) Transportation costs. 2) Quality control. 3) The perishability of root crops.

Meetings with Government Officials

University of Dschang

USAID/Cameroon over the last nine years has invested over \$50 million in the University of Dschang to establish an institution modeled on the U.S. land grant university. A center of agriculture research, development, and extension, Dschang, until Belgian and U.S. donor funding abruptly ended, trained Cameroonians in agriculture economics, agriculture engineering, animal science, plant protection, rural education, agronomy, soil science, agriculture credit and finance, and statistics at the Bachelor of Sciences level.

Discussions with faculty members uncovered their frustration and uncertainty about the future of the University, given the withdrawal of donor financial support and the inability of the government to pay staff salaries and infrastructure maintenance.

In addition, the government recently announced a change in the mandate of the University. The University of Dschang, starting October, 1993 will add four year liberal arts programs. This change comes in the midst of the School of Agriculture changing from a five year French accredited "license" degree to a four year American modeled B.S. degree.

Faculty members (see Participants, Appendix VII) discussed the major constraints to agribusiness development, especially among the enterprises they assist. Financing is the chief constraint. Even if the credit is available, farmers do not have the know-how to package a proposal or business plan acceptable to a lending institution. Other constraints include marketing

food crops, need for farmer organizations, and the inability of farmers to obtain "guarantee prices" for their crops.

Agriculture Research Station/Njombe. Njombe, Cameroon

A component of the National Agricultural Research Institute, Njombe was set up to provide research and technical assistance for cassava, banana, and other tree fruit crops. Research has not been conducted in over 18 months, due to the government's inability to pay salaries, maintenance, and utility expenses.

The fruit juice processing subcomponent was leased to a private company a year ago. This processing unit, producing various types of citrus and fruit juices and marketing them in the Littoral Province, was leased out because it was profit making. The company that leased the juice processing unit went bankrupt after nine months, leaving a fully equipped free-standing, government owned facility.

The major constraints are: 1) The unit is owned by the government, which means that even if it makes a profit, the profits are drained off by less profitable units of the research station. It appears that the government is in the process of liquidating this unit. 2) Seed money is needed to make the unit operational. 3) A new proprietor and management team are needed to run the unit.

Minister of Scientific and Technical Research. Jacob Ayuk-Takem, Ministry of Scientific and Technical Research, Yaounde, Cameroon

The visit with the Minister of Scientific and Technical Research provided an excellent overview of the direction and market impact of results of agriculture research on food crops.

For example, in Cameroon's forest region, two crops have excellent demand on domestic and regional markets: cassava and plantains (domestically each is 40% of daily caloric intake). The Tropical Roots Crop Research Project, started in 1986, has assisted farmers with improved, high yielding cassava varieties, thus permitting Cameroon's cassava to compete in Nigeria as food, and cassava chips in Europe as animal feed.

Other improved, high yielding food crops in the forest zone include potatoes, sweet potatoes, and coco yams. The Center for International Potato Research (CIPE) has collaborated with the National Research Institute to increase potato production by 70,000 tons annually. Market distribution points have been constructed in Makak, Ambam, and Garoua to export to Gabon as well as other regional markets.

The International Institute for Tropical Agriculture (IITA) introduced the Tibi variety of sweet potato in the Northwest, Southwest, and Ngaoundere provinces. In local markets, the sweet potato has replaced long season sorghum or guinea corn. Large quantities are also shipped to the Central Africa Republic. Sweet potatoes are also processed (boiling and drying), permitting storage for up to four months.

The National Research Institute continues its on-farm research on coco yams, whose production level, due to plant diseases, has dropped 50 percent over the last five years. Coco yams production is 1.8 million ton, and regional demand is extremely high in Nigeria and Gabon.

In the Cameroon highlands, "Irish" potatoes, corn, taro, and cowpeas (black eye peas) are the major crops. In the northern highlands, corn is replacing sorghum, in spite of recent development of high yielding sorghum varieties--S35, S34 and CS 93. The largest corn producer, MAIZCAM, cultivates approximately 8,000 hectares and contracts an additional 12,000 hectares with private farmers. This corn is processed into flour, meal, and corn feed for the breweries, bakeries, and household consumption.

When asked how technologies were transferred to farmers regarding new seed varieties and cultivation practices, the Minister said non governmental organizations (NGOs --women's groups, cooperatives, farmer associations) were best situated to transfer technologies down to the village/farm levels. For example, processing technologies for bitter leaves (available only 6 months), pasteurized palm wine, and dried eddoes were transferred by small village based cooperatives. The Minister felt IITA had contributed significantly to the processing of cassava and other food crops in Cameroon. IITA has helped Cameroon bridge one of the greatest constraints to food processing: information sharing.

Ministry of Agriculture. Steven Njinyam, Minister of Agriculture

The Minister identified four constraints to the transfer of food processing industry in Cameroon: 1) Insufficient institutional framework. 2) Lack of know how. 3) Lack of trained personnel. 4) "Garden production mentality"--a traditional food system which does not include mass processing of food products.

The Minister stressed that there is an existing food delivery system in Cameroon with trained personnel in every province, division, and subdivision. However, given the above constraints, the effectiveness of the existing system addressing the food processing demands is uncertain.

The Ministry is concentrating its efforts on crop diversification and exportation. Green bean and tomato production in Foubot and gari and cassava chip production in the Southwest and Northwest Provinces are example of new crops destined for European markets. For further information regarding diversification and export crops, RELANCE DE L'ACTIVITE ECONOMIQUE DANS LE SECTEUR AGRICOLE, August, 1993 is an excellent resource.

IV. ROUNDTABLE DISCUSSIONS

Objectives of the roundtable groups were: (1) Identify constraints to food processors within market system, and (2) Develop actions to address constraints to be recommended to

international donors, the Government of Cameroon, and the private sector.

BAMENDA

The meeting was held in the conference room of the Hotel Ayaba; 29 people attended including small entrepreneurs, representatives of women's cooperatives, a farmer, a journalist, representatives of the government, creditors, representatives of the FAO Food Loss/Reduction Project, representatives from the CIP (International Potato Research Program) composite flour project, and people interested in agricultural production, transportation, processing, distribution, and marketing.

Constraints listed by the group were:

Production

- Pests
- Fertilizer (ability to buy and lack of knowledge of what to use)
- Diseases
- Weeds
- Lack of seeds (ability to buy and availability)
- Weather
- Fertile land
- Equipment

Transportation

- Bad roads
- Lack of appropriate vehicles
- Cost of transportation
- Damage to products

Processing

- Lack of finance to buy equipment
- Lack of knowledge of appropriate equipment and processing
- Lack of produce
- Tax system
- Storage
- Capital to buy the raw material
- Bureaucracy
- Packaging and labeling
- Energy (expensive and unreliable)

Distribution/Marketing

- Market research
- Advertising costs
- Unfair competition
- Dumping of goods from neighboring countries
- Lack of appropriate marketing strategy
- Consumer preference
- Market requirements (restrictions, grades, standards, health specifications)
- Knowledge of distribution chain (transportation)

Recommendations

Processing

- Improve the access to processing and equipment information by increasing links between government research institutes and university laboratories and the private sector
- Prepare bulletins
- Improve the extension service to deliver information
- Privatize research institutions and projects
- Set up a clearinghouse of information
- Have non-governmental people out in the field (e.g. NGOs, Peace Corps)
- Form an association of people involved with food processing and marketing

Actions were summarized as:

1. Form associations of individual groups based on commodities
2. Form an association of all food processors
3. Establish a food processing extension program (maybe using the testing and liaison model of IRA)
4. Establish a clearinghouse of information

Marketing

- Ongoing market research - important for a business not to have "dead information"
- A system of brokers who could aid in distribution, especially to other countries
- Put out a list of foreign (European and U.S.) brokers

The meeting was concluded without enough time to fully cover recommendations for marketing constraints. There was a great deal of discussion during the meeting and it was quite obvious that there is a real desire to set up new businesses. There were individual entrepreneurs as well as women's cooperatives present who had successfully developed new food processing businesses. It was often repeated that knowledge, both of food processing and marketing, was needed.

DOUALA

The meeting was held in the Sawa Hotel conference room; 17 people attended. Attendees included small entrepreneurs, representatives from the Ministry of Agriculture, scientists from the national agricultural research system (IRA), and reporters. The format was similar to that used at the Bamenda meeting except we only discussed the constraints and recommendations in processing and then in marketing.

Processing

Constraints

- Financing
- Technologies (equipment, methods, processing)
- Uniformity/insufficient quantity of raw material
- Information management/sharing between provider and user
- Linking correct varieties with needs of processor
- Seasonality in production (conservation, storage)
- Collection of raw materials/middleman
- Transporting raw materials to place of demand
- Quality control
- Shelf life

Recommendations

- Need data bank of appropriate technologies
- Standardization of appropriate technologies (traditional)
- Information access to appropriate technologies
- Knowledge is needed on the process to get credit
- Feasibility of technology recommended
- Privatization of research - with private sector and international agencies among others

Marketing

Constraints

- Educating population (advertise local products) -e.g. when a traditional product is packaged people do not think it's the same product
- Cost of transformed products
- Lack of knowledge of presentation of product: packaging, portions, etc.
- Availability of packaging technology
- Market research (market feedback)
- Distribution - don't know distribution channels
- Lack of management skills

Recommendations

- Form a consumer protection organization (there are already a few standards - e.g. yogurt)
- Encourage market testing
- Encourage point of sale information
- Provide support and encourage food processing trade associations
- Use simple technologies to keep costs down
- Investigate ways of providing credit to SMEs
- Provide continuous information; e.g. appropriate packaging (trade shows)
- Provide training (seminars) on topics such as specific packaging technologies and their appeal and practicality

Since Douala is an urban area, the group was quite different. Many of the same constraints and recommendations were given in Douala as in Bamenda. Three entrepreneurs present wanted to make processed foods for the urban middle/upper class (e.g. "sculptured" plantain chips, fruit juice). The need for finance was repeated often. It was also frequently repeated that the necessary information both from the technical and marketing side is not available.

LEMBE

The meeting was held at the Council Hall and was started late; 12 people attended. Attendees included government agricultural researchers, a few entrepreneurs, and extension workers. Due to time constraints we did not have the group identify a new list of constraints for processing and marketing. Instead the lists made in Douala were used.

Recommendations included (1) review of market policy, (2) need for produce market information, and (3) support the FAO initiative on post-harvest loss/reduction. It was said that FAO will have the means by December 1993 for market information to be printed on a weekly basis. The largest group at the meeting was IRA scientists from the AID Roots and Tubers Project. There was much discussion about various marketing aspects of the project.

YAOUNDE

The meeting was held in a conference room at the Hilton Hotel; 13 people attended. Attendees included representatives from donor agencies, NCRE and Roots and Tubers projects, the World Bank, Credit Agricole (Cameroonian bank), and University of Yaounde. People from donor agencies, other than AID, were asked to describe programs and future interest they may have in the food processing and marketing area in Cameroon. Their comments follow.

- UNDP has an initiative on small and medium enterprises of which there will be an agriculture component. They have another program in environmental management.
- UNIDO is also involved in small and medium enterprise promotion and works with both

UNDP and FAO. They support feasibility and marketing studies and provided the women's gari processing unit for the FAO project near Bamenda. Their future interests in women's issues may include food processing and marketing.

- FAO Postharvest Loss/Reduction Project is primarily UNDP funded. Reduction of postharvest loss was their only initial objective. After one year, marketing became a major focus, which led to the formation of a market information service with weekly radio broadcasts, assisting a women's cooperative in Bamenda with a distribution facility, and financing simple farm to market transportation (donkeys).

There is virtually no coordination among the funding groups. This accounts for the scattering of projects with no central theme or focus. There was a real desire expressed, especially from John McMahon (USAID) and the UNDP representative, to make a coordinated effort in the agribusiness area.

The constraints can be many, as we learned in the roundtables. The Cameroonians who attended those roundtables are to be commended for their excellent comments as we strived to learn constraints and suggestions for improving the processing and marketing phase of the food and agriculture system.

One constraint that was mentioned often in roundtable discussions and elsewhere was the lack of food processing and marketing knowledge in a form that is useful to the end user. There were other constraints such as poor roads, road blocks, lack of credit, lack of packaging and business management skills. Because so many studies identifying constraints had been conducted, it was concluded the team wanted its work to recommend actions that can be taken.

Appendix I

SUSTAIN PROGRAM

The program **Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN)** provides access to U.S. expertise in food processing to help improve nutrition in the developing world. Technical assistance is provided by volunteer professionals from U.S. food companies, universities, and other organizations who donate their time and expertise.

SUSTAIN was granted a five-year renewal from the U.S. Agency for International Development (USAID) on September 30, 1991. The program is managed under a cooperative agreement with the National Cooperative Business Association (NCBA) and receives advice from a Steering Committee made up of private sector representatives.

NCBA was founded in 1916 and is a membership association representing America's 45,000 cooperative businesses. Known overseas as CLUSA, NCBA works overseas with its own member co-ops, USAID, World Bank, UNDP, and other donor agencies to promote development and joint ventures in the third world.

Many benefits can accrue to the developing world through improvements in food processing. From the standpoint of alleviating hunger and improving nutrition, food processing has much to offer. It helps meet food and nutritional requirements and reduce post-harvest food losses. From the economic standpoint, food processing provides a means for increasing foreign exchange earnings through exporting value-added processed foods rather than commodities. It helps generate employment and stimulates technological development and the growth of allied industries.

SUSTAIN helps improve food quality, expand production, and lower operating costs of locally grown and processed foods by providing technical assistance in post-harvest food systems, including: (a) food safety, quality, and sanitation (b) food preservation and storage (c) food processing (d) food fortification (e) packaging (f) marketing (g) weaning foods and (h) environmental technologies.

How the Program Works

SUSTAIN receives requests for assistance from individual food companies, research institutions, and USAID. Short-term technical assistance is provided by experienced U.S. professionals who donate their time and expertise to the project. Missions are typically one to three weeks in duration. SUSTAIN covers international travel costs. Companies or host organizations requesting SUSTAIN assistance are asked to contribute towards in-country expenses. Due to budget constraints, priority is given to requests that can demonstrate an ability to improve the nutritional quality, safety, and availability of food in the local community.

SUSTAIN is able to solve many problems by providing information that exists either in technical literature or in the "memory" of a company. If the problem cannot be solved through correspondence, then SUSTAIN volunteers may be sent to provide short-term technical assistance. Workshops and seminars can also be organized to help address food technology issues. The program does not fund product or equipment acquisitions.

The program publishes a quarterly newsletter (*SUSTAIN Notes*) on food technology issues. It is provided gratis to approximately 2300 recipients in more than 50 countries.

For more information, please write to:

SUSTAIN Program
National Cooperative Business Association
1401 New York Avenue, NW, Suite 1100
Washington, DC 20005-2160
Phone: (202) 638-6222
Fax: (202) 628-6726

A. SUSTAIN Volunteers

Dr. Arnold Denton retired from Campbell Soup Company in 1990 as the company's Senior Vice President after more than 32 years of service. Over the span of his career with Campbell's, he also served as the President of the Campbell Institute of Research and Technology (CIRT). Under his leadership, the CIRT explored the development of new varieties of agricultural products targeted for optimum quality in specific processed foods. Additionally, Dr. Denton's organization was responsible for new product and process development, production improvements, quality systems, food service, and regulatory affairs, on a corporate and worldwide basis. While serving as Sr. Vice President of Campbell Soup, Dr. Denton oversaw the implementation of Total Quality Management system in both its domestic and international operations. Dr. Denton also held the positions of Vice President International and President of Campbell Soup International divisions. His positions at Campbell Soup also included Vice President of Technical Administration and Vice President of Basic Research. Dr. Denton lectures on Total Quality Management and is currently Professor of Food Science at Purdue University. He has been active in international development assistance as a SUSTAIN Volunteer and Vice Chairman of SUSTAIN Steering Committee and has participated in the planning and delivery of dozens of SUSTAIN technical assistance missions. He is also active on numerous professional and advisory committees in the areas of nutrition, education, food science, and scientific affairs.

Dr. Bruce Hamker is Associate Professor of Food Science at Purdue University. He is a cereal chemist and technologist investigating the chemical and physical aspects of the nutritional quality of cereal grains. His areas of expertise include processing of cereals and baby/weaning foods. Under a current USAID grant, he and several colleagues are exploring the use of germinated cereals to develop low-cost, energy-dense, semi-dense diets for small children. Before joining the Purdue faculty, Dr. Hamaker was Assistant Professor of Food Science at the University of Arkansas and Post-Doctoral Fellow at Peru's Instituto De Investigacion Nutricional. Prior to his doctoral studies, he served as a Peace Corp volunteer on tuberculosis control in Liberia, West Africa.

B. AID/AFR/ONI Representative

Mr. Jerry Brown is the Agribusiness Advisor for the Agribusiness Unit of Africa Bureau of AID (AFR/ONI/PSD). His areas of specialization are marketing, trade and investment promotion, program design, management and evaluation, and research and policy evaluation. Prior to joining USAID, he held several positions with USDA including Acting Program Leader for the Trade and Investment Program, Agricultural Marketing Specialist for Office of International Cooperation and Development, and Trade Specialist for Foreign Agriculture Service. He was also the Acting Peace Corps Director at Niamey, Niger and a Peace Corps Volunteer in Yaounde, Cameroon.

Yaounde

UNITED STATES ADDRESS:
 YAOUNDE (AID)
 DEPARTMENT OF STATE
 WASHINGTON, D. C. 20506

TELEFAX TRANSMITTAL SHEET

Number of Pages _____
 Including this Cover Page

INTERNATIONAL
 USAID
 D. P. 017
 YAOUNDE, CAMEROON
 Tel: 23-05
 (237) 22-07
 23-10
 23-11

DATE PREPARED: 8/10/93PHONE EXT 355FROM: John McMahon, ARDOFAX NO. (237) 22-10-90OFFICE: USAID, CameroonTO: Elizabeth TurnerPHONE NO. (202) 638-6222OFFICE: Project SUSTAINFAX NO. (202) 628-67261401 New York AvenueSTATE/COUNTRY: Washington, D.C. 20005-2160MESSAGE:

Subject: Cameroon Food Crop Processing/Marketing
 Action Plan Development

References: (A) Cable Yaounde 03840;
 (B) Turner/Washington fax of July 8;
 (C) Turner/McMahon fax of August 2;
 (D) McMahon/Project SUSTAIN consultations in
 Chicago and Washington D.C.

USAID confirms its request for Project SUSTAIN and AID/W assistance in developing an action program to reorient Mission's agricultural research projects to better address private sector food crop processing/marketing constraints. Objective of consultancy mission is two-fold:

1. Identify specific actions that the Mission's agricultural research projects can support during the next 18 months in the areas of food crop processing and marketing (i.e., analysis, policy related seminars, training, adaptive research/outreach, pilot interventions) to benefit small and medium-scale agribusiness including cooperatives.
2. Identify general areas for medium to long-term support of agribusiness and cooperatives in processing and marketing of food crops for possible future USAID or other donor support.

Mission agrees with early to mid October startup of two-three week consultancy. Mission proposes that team be composed of following specialists: Dr. Arnold Denton as team leader, a representative from a U.S. university food technology department (Dr. Bruce Hamaker from Purdue or other to be determined based on availability), Jerry Brown (AID/W agribusiness advisor), a food crop processing specialist from IITA, and Cameroonian representatives from IRA and the University of Dschang. Separate cable is being sent to AID/W regarding Brown's participation.

Approach proposed for Action Plan development, based on McMahon's discussions with SUSTAIN personnel, is as follows:

a) Meetings are proposed to be held in Douala, Bamenda and Yaounde, to be attended by representatives from Cameroonian small/medium-scale agribusiness, IRA, University of Dschang, MINAGRI, MINDIC and others (i.e., select donors) to discuss principal constraints to marketing of processed food crops and appropriate role of GRC research institute and agricultural university in addressing these constraints.

b) Site visits are proposed to IRA's food technology lab, University of Dschang, possibly University of Yaounde and Ngaoundere, representative small/medium-scale food processors, select donor-supported food processing/marketing activities, possibly MAISCAM (major maize processor).

c) Courtesy calls are proposed to be made with key ministries.

d) A workshop is proposed at the end of the consultancy to discuss the proposed action plan with representatives of Cameroonian agribusiness, select donors and GRC institutions.

Request SUSTAIN confirm availability of Dr. Denton, university representative, and Jerry Brown. FYI. Overview of food crop processing and marketing, being prepared by Cameroonian food technologist and economists, will be completed within next few days and copy sent to you ASAP. Regards and thanks for all your assistance.

Clearance: DIR:PBenedict



Date AUG 10 1993

ITINERARY FOR FOOD CROP PROCESSING AND MARKETINGACTION PLAN - OCTOBER 1-16, 1983

- Friday, Oct. 1: - Arrival of AID/W
Agribusiness Advisor
Douglas "Jerry" Brown
- Saturday, Oct. 2: - Arrival of SUSTAIN* Team Members Dr. Bud Denton
and Dr. Bruce Kanaker

- Arrival of IITA Post-Harvest
Specialist Yong Woon Jeon (to be confirmed)
- Sunday, Oct. 3: - 07:00 - Depart for Bamenda
- 13:00 - Arrive Foumban
- Visit SOTC Industry (Green Beans)
- 14:30 - Depart Foumban to Foubot
- Visit MAJUTAM (Maize)
- 16:00 - Depart for Bamenda
- Night in Bamenda
- Monday, Oct. 4: - 09:00 - Round Table Discussion at Ayaba Hotel
(Agribusiness/Cooperatives, Donors, GRC)
- 10:30 - Coffee break (10:30-10:50)
- 10:50 - Continuation of Round Table
- 12:20 - Lunch
- 14:00 - Site Visits:
1. Automatic Rice Mill (Parboiled Rice)
3. G.P.E. Agro-Industry (Soybean Flour)
Visit markets → ~~2. IAC Food Loss Reduction Team (Potato)~~
- Night in Bamenda
- Tuesday, Oct. 5: - 07:00 - Depart Bamenda for Dschang
- 09:00 - Visit University of Dschang
(Professional Development Center
and Agricultural Economics Department)
- 11:00 - Depart Dschang for Douala via Njombe
- 14:30 - Visit IRA Njombe Food Technology
Laboratory
- 16:00 - Depart Njombe for Douala
- Night in Douala
- Wednesday, Oct. 6: - 08:30 - Round Table Discussion in Douala at
Sawa Hotel
- 10:00 - Coffee Break (10:00-10:20)
- 12:00 - Lunch
- 14:30 - Site Visits:
Visit markets → ~~1. SONE (Wheat)~~
2. Rose-chic-chips (Potatoes and
Plantains)
3. SOCAMRICO (Cassava)
- Night in Douala

- 2 -

- Thursday, Oct. 7: - 07:00 - Depart Douala for Limbe
 - 08:30 - Round Table Discussion at the Limbe Council Hall
 - 10:00 - Depart for Ekona via Muea Regional Food Crop Market
 - Visit Ekona Women Farming Group (Cassava/Garri)
 - 13:00 - Depart Ekona for Limbe
 - 15:00 - Visit Batoka Women Farming Group (Cassava/Water Fufu)
 - Night in Limbe
- Friday, Oct. 8: - 08:30 - Depart Limbe for Yaounde
~~via Mbongone Regional Feed Market.~~
 - Afternoon-Free, Report Writing
- Saturday, Oct. 9: - 08:00 - ~~Visit Makilo Food Market and CAM~~
 Food Cooperative
 - Report Writing
- Sunday, Oct. 10: - Free - Report writing
- Monday, Oct. 11: - 08:00 - Meeting with Minister of Scientific and Technical Research (MINREST)
 - 10:30 - Meeting with Minister of Agriculture (MINAGRI)
 - 13:00 - Lunch
 - 15:00 - ~~Meeting with Minister of Commerce and Industrial Development (MINDIC)~~
- Tuesday Oct. 12: - 08:00-10:30 - Round Table Discussion
 - 10:30-12:00 - ~~Discussions with USAID or Others~~
 as-Needed
 - 12:00 - Lunch
 - Afternoon- Report Writing
- Wednesday, Oct. 13: - Morning - Report Writing
 - Afternoon - Presentation of Draft Report to USAID
- Thursday, Oct. 14: - Morning - Final Report Preparation
 -Afternoon- Presentation of Final Report to GRC Representatives, Private Sector, Donors and Donor Project Staff
- Friday, Oct. 15: - Meetings as Needed with USAID, NCRE Staff
- Friday, Oct. 15:
 Saturday, Oct. 16: - Team Members Depart for the U.S. and IITA

* SUSTAIN (Sharing United States Technology to Aid in the Improvement of Nutrition) is an AID/Washington Project Through Which U.S. Business Representatives and U.S. University Personnel Volunteer Their Time to Assist Developing Country Businesses and Research/Development Institutions in Food Processing/Marketing

25

**REVIEW OF DOCUMENTATION
ON CAMEROON'S FOOD CROP
PRODUCTION,
PROCESSING AND MARKETING**

**Sama Joseph Nkwain
Ayissi Mballa J.P.
Festus A. Numfor**

August 1993

*Prepared for the Agricultural and Rural Development Office
USAID Cameroon*

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REVIEW OF CAMEROON'S FOOD PRODUCTION, PROCESSING AND MARKETING

Introduction

As a result of socio-economic variations and environmental, climatic and demographic diversity of Cameroon, the potentials for food crops production are quite high. Perishability and seasonality of most food crops, poor marketing system, and inadequate processing technologies to preserve and conserve food products, constitute a great challenge to the country in her effort to attain and maintain food self-sufficiency. Consequently, it is necessary to reorient policy measures and projects geared towards promoting small and medium size enterprises to stimulate the marketing system and sustain the food sector of the economy.

In view of the above, the United States Agency for International Development (USAID) Cameroon proposes to reorientate its food crops research/outreach and Higher education projects in Cameroon in order to improve the usefulness of their outputs in Agribusiness and Cooperative development and in the commercialization of food crops in domestic and regional markets.

The present review, which is funded by Cameroon Agricultural Policy and Planning (CAPP), National Cereals and Extension Project (NCRE) and USAID Cameroon, is therefore intended to provide background information for this purpose. The main objective is to develop an inventory of all studies and reports that have been written on food production, processing and marketing in Cameroon and to provide:

- a) a description of the general problems and constraints of Cameroon's foodcrop sector, and
- b) Technical Information Sheets covering the following for each of the major food crops:
 1. Name of crop,
 2. Total production of crop, nationally and regionally including five year trend,
 3. Post-harvest losses,
 4. Total quantities consumed,
 5. Types of products made from the crops and estimated consumption rates for each.
 6. Quantities and forms of products marketed ,
 7. Major marketing areas,
 8. Existing marketing facilities,
 9. Farm gate prices and trend over five years,
 10. Consumer prices and trend over five years,
 11. Existing processing and transformation technologies and costs,
 12. Availability of technologies for improving production, transformation and processing,
 13. Production marketing and processing constraints
 14. Export prospects,
 15. Supporting institutions availability,

16. Current policy strategies,
17. Donor activities,
- 18, Contact persons in the private sector.

To carry out the above terms of reference, the team of experts used information contained in existing documents from:

- National Cereals and Extension Project, Nkolbisson,
- Institute of Agronomic Research, Yaounde,
- Department of Economics, University of Yaounde,
- Department of Geography, University of Yaounde,
- Ministry of Commerce and Industrial Development,
- Ministry of Plan and Regional Development,
- Food and Agricultural Organization(FAO) of the United Nations, Yaounde,
- U.N Development Program Regional Information Centre, Yaounde.
- Ministry of Agriculture (CAPP), Yaounde,
- National Library, Yaounde,
- Food market, Yaounde,
- Economic commission for Africa (MULPOC), Yaounde,
- Centre for Agronomic Research, Maroua (IRA),
- Food market, Maroua,
- Institute of Agricultural Research(IRA) Station, Ngaoundere,
- Institute of Animal Research(IRZ) Centre, Ngaoundere,
- University of Ngaoundere Library,
- Union Central des Cooperatives Agricoles de L'Ouest(UCCAO), Bafoussam.
- University of Dschang Library,
- Provincial Delegation for Agriculture, West province,
- IRA Station, Fombot,
- Sub-Delegation for Agriculture, Fombot,
- Provincial Delegation for Agriculture, N.W Province,
- North West Development Authority(MIDENO), Bamenda,
- Food Market, Bamenda,
- Postharvest Service, Bamenda,
- Tomato canning company (SCAN) Fombot,
- IRA Station, Njombe
- Fonds d'Investissement pour des Micro realisation Agricole du Cameroun(FIMAC), Buea,
- Women's Food marketing cooperative, Buea,
- IRA Centre, Ekona,
- Pan African Institute for Development, Buea and
- University of Douala

Field visits were made in the North West, South West, West, Littoral, Central, Adamawa and Far North provinces. During these visits, government and private institutions including individuals involved in food crop production, processing, and marketing were consulted. Some important food crop markets were also visited. Finally, the consultants also drew from their experiences and knowledge of Cameroon' food crop sector.

GENERAL PROBLEMS AND CONSTRAINTS OF FOOD CROPS IN CAMEROON

The general problems and constraints of the food crops sub-sector are discussed under the following headings:

- a) Production,
- b) Post-harvest technology
- c) Marketing,
- d) Institutions,
- e) Policy, and
- f) Socio-cultural.

PRODUCTION PROBLEMS AND CONSTRAINTS

Cameroonian food crop producers are confronted by a number of production problems and constraints. These have been identified to include land tenure, cropping systems, technical know-how, pests/diseases, climatic/edaphic and demographic problems and constraints [1,4,5,and 16].

Land tenure system

The socio-cultural nature of most of the ethnic groups in Cameroon is characterized by an extended family structure and communal ownership of land. Community land under the custody of traditional rulers is divided among the extended families or clans which in turn subdivide the land among family members and friends. The purchase and sales of land is a foreign concept in most rural areas where land is considered as sacred family property which must be protected and reserved for family members and descendants. With time, the land is shared out in ever decreasing portions to the expanding family members.

The end result is that since land is generally not a private property of the individual, it receives little or no investment for productive and profitable farming. It is also not easy to consolidate the fragmented holdings and this in itself is a handicap to agricultural development. Those who are capable and willing to practice extensive farming usually lack adequate land especially in the more densely populated and/or rapidly growing population areas [6].

Cropping systems

In most regions of Cameroon, farmers traditionally practice mixed cropping for several reasons. In the forest zone, which is largely sparsely populated, the major reason for this practice is linked to the expensive and tedious nature of the initial phase of production -- forest clearing and the initial preparation of land for planting. Consequently, the tiny areas that farmers succeed to

develop are used for growing all the crops that provide all or most of their food and cash needs. Sometimes, over seven crops are grown on the same plot. In the savannah zones, and especially in the West and North West provinces with dense populations, the shortage of farm land is the principal reason for mixed cropping. One of the common reasons given by farmers in all the zones is that less labour, time and money is used to grow most of their food and cash crops on one plot [6, 9].

Although it is advantageous and perhaps profitable to the farmers given their traditional state of the art, the mixed cropping system hinders easy and rapid introduction of modern farming technologies which are based mostly on monoculture. Also, intensive mixed cropping with poor tools and little productive inputs (fertilizers, pesticides and improved planting materials) rapidly impoverishes the soils.

Production technology

Most rural farmers use traditional technologies and ill-adapted tools in the production of both food and cash crops. They generally lack modern tools & equipment, improved or high yielding disease/pest resistant crop varieties, and modern techniques of tilling, planting, harvesting, and storage. They also have inadequate knowledge and means for applying available modern and more suitable technologies to their environments. The problems of adapting foreign technologies to local environments and of developing appropriate technologies to these environments are also serious constraints to increased production and productivity.

Climatic and edaphic conditions

The tropical climate favours the existence and propagation of several crop, livestock and human diseases which are caused by fungi, bacteria, insects and nematodes. These diseases adversely affect the health of crops, animals and farmers, and consequently productivity and production.

Excessive rains of the rain forest and draught of the Sahel region also adversely affect the productivity of their soils. There is excessive water erosion, leaching and water-logging of the soil in areas of the forest zone of the south. Wind erosion and baking of soils is a major problem in the sahel region of the north. All these increase farmers' handicaps. They also increase costs, reduce yields and consequently the incomes of the farmers.

Crop sanitation

The chemicals and equipment required to control the many pests and diseases imposed by the tropical climate and soil conditions as indicated above are scarce and expensive to the rural farmers. Farmers also lack the financial means and skills to identify and control these diseases and pests. Some of those who have the effective demand for these inputs do not often have them supplied on a timely basis on account of poor communication facilities and bureaucratic bottlenecks.

Demography

The population of Cameroon (about twelve million) is increasing at the rate of 3% per annum and urban population growth is estimated at the rate of over 7% [12] This alarming rate of urban population growth is due mainly to the high rate of rural to urban migration. This migration involves the active and more receptive youths of the rural areas. Consequently, the active and productive farm population has been decreasing in the rural and food production zones, leaving a less active population of aging farmers and children to handle food production for Cameroon.

POSTHARVEST PROBLEMS AND CONSTRAINTS

Despite the successes of government and donor agencies in the improvement of production systems through research, a number of reports have highlighted a persistence and even an increase in postharvest losses of food crops in Cameroon [7,8]. This has been attributed in part to a number of problems and constraints in the postharvest sub-sector. These include inappropriate harvesting techniques, poor and limited transportation systems, rudimentary pre-storage and storage technologies, and inefficient traditional processing and packaging technologies [7,8 & 17]

Harvesting technologies

Generally, harvesting in most parts of the country is carried out with hand and crude local tools such as machetes, hoes, sticks and diggers [8]. The use of chemical/mechanical harvesters which improve efficiency and reduce losses is limited to the few existing corporations. This is due to lack of capital and credit facilities, and to ineffective information on the availability of improved technologies to farmers.

Transportation

Most food crop production in Cameroon takes place in rural areas, which are far away from the consumption centres--the urban areas. The absence of adequate all-season transport infrastructure hampers the movement of food to marketing centres. The transportation of goods by head load, animals, canoes, and unsuitable vehicles aggravates food spoilage and increases losses. Improvements to this situation are hindered by the lack of credit, low farmer incomes, and inadequate information [1].

Pre-storage and storage practices

Harvested crops intended for storage are usually handled in special ways that may involve sorting, curing and/or drying [8]. Such pre-storage practices are intended to reduce contamination, spoilage, and environmental hazards that may shorten the shelf life of the stored produce. Existing practices in Cameroon have largely remained rudimentary mainly because of limited resources, lack of credit facilities, and inadequate institutional support and information to farmers. Improved storage technologies and infrastructure are also lacking due mostly to insufficient capital

and ineffective information dissemination. Climatic conditions of each region affect the gravity of the pre-storage and storage problems. For example, due to prevailing dry conditions in the northern provinces, small-scale drying and storage of cereals, grain legumes and processed root and tuber products encounter less problems than in the humid forest zone of the south.

Processing technologies

Technologies that exist for the transformation of cereals, grain legumes, root/tubers, and leafy vegetables into a broad variety of local products include drying, milling and fermentation. However, in Cameroon these technologies are rudimentary and rely on local and inefficient implements which yield inconsistent and unhygienic products. Such products have precarious shelf stability and eating qualities and are limited only to certain socio-cultural groupings. Farmers' access to existing improved technologies is limited by inadequate capital and information. However, some private concerns and parastatals presently utilize improved and sometimes "a state of the art" technologies in oil extraction, corn and rice milling, and fruit processing[7].

Packaging

Packaging is still depended on traditional technologies and materials such as leaves, sticks and wood. Even so, only a small portion of the food intended for the market is so packaged. A greater bulk is marketed in open utensils with the obvious attendant health, environmental and regulatory problems. Improvements through the use of metal, plastic and improved wood packaging materials has been timid and limited to private concerns, public corporations and others who have both the information and capital.

Although there is no known simple inexpensive technology that by itself makes a profound impact on the post harvest sector of food crops in any region of Cameroon, such an impact can however be achieved through a combination of location specific organization, problem identification, training, and information, credit and adapted technology.

MARKETING PROBLEMS AND CONSTRAINTS

The problems and constraints identified within the structure, conduct and performance of Cameroon's marketing system involve transportation, market channels, information, standardization, market facilities, finance and price policy.

Transportation

Several deficiencies are found in the transportation domain of the

food crops marketing system of Cameroon. A few good roads link up the urban areas but farm to market roads are both unpaved and poorly maintained. In the rainy season particularly, regular market connections are hard to establish between most parts of the country due to poor road infrastructure. Also, means of transportation such as vehicles are inadequate and unreliable. Consequently, in most cases transportation is a major marketing cost component. It accounts for about 50% of the total marketing costs and in some cases up to 70% especially as production and consumption areas are separated by long distances [1]. Transport constraints also aggravate post harvest losses with a great deal of repercussions on the supply and demand balances due to the resulting limitations on the flows of food commodities.

Nature of marketing channels

The perishable nature of most food crops makes it difficult to expand their market areas. Consequently, their distribution channels are short and concentrated within specific locations. Seasonality of food crops also raises the problem of distribution between regions. The food crop market is dominated by a large number of small agents who handle very small quantities of the commodities. Bulky food crops such as root and tubers have a low ratio of value to the bulk and weight of the commodity [15]. Consequently, only the few agents able to invest in adequate transportation facilities benefit from economies of scale by handling larger quantities over time and space. Generally, because of the low volume of trade among the marketing agents, scale advantages in the handling and transportation of food commodities originating from remote areas, are very limited. As a result of this situation, marketing margins and consumer prices are higher than they would have been under a more efficient system [1].

Market information

Most of the large variety of food crops produced in Cameroon is consumed within the country and the consumption of certain commodities is limited to their areas of production. This is due in part to the limited free flow of information on prices and supply within the marketing system. There is no established means by which producers and traders know current demand and supply situations in the different parts of the country. The absence of such an information system has an adverse effect on the prices of food products within and among markets. Efficiency in the supply of available quantities of commodities at the right time and place and in forms demanded is a measure of the performance of a marketing system. The forces of demand and supply drive prices up and down until an equilibrium price is established. As a result of inadequate flow of information, the quantities of food items marketed vary greatly over time and space, and so do the prices.

Standardization

Reliable representative market prices of food crops are difficult to come by in Cameroon because the prices vary widely depending on

the quantity of the product, the demand and supply forces, the bargaining power and the whims of the buyer and the seller. The limited and inconsistent scales and uniform units of measurement make prices of food items somewhat ambiguous since the true quality and quantity of certain products are unknown. There is also clear evidence of inefficient handling, packaging and storage of food items in local markets. In the absence of grading, standardization and inspection for sanitation, quality is low and losses are high.

Market facilities

In most local and some urban centers, market stores, stalls and spaces for foodstuff are grossly inadequate and many of those available are inappropriate. Most of the food is marketed in the open air with little or no protection from flies and other hygiene and health hazards. Sanitary facilities such as toilets, water, electricity and refuse collection and depots are limited and poorly maintained in many markets. The absence of such facilities creates an unhealthy environment which inflates social and direct marketing costs. Consequently, food marketing in Cameroon has remained small-scaled, uncoordinated, and disorganized. It has a high cost per unit of healthful food delivered to the consumers [1].

Finance

Short and long-term credit facilities for food marketing activities are very limited. Government policy had directed the bulk of credit to the production and marketing of export crops. Since the volume of transaction by participants in the food market is relatively small, they can hardly afford equity capital for investment in the system and this constitutes a major handicap in the development of the food marketing system.

Pricing policy

Distortions and uncertainties also exist in the food marketing system of Cameroon. Policies designed to stabilize food prices have not been successful. They have instead tended to accentuate price fluctuations and instabilities in the system. It is rightly the forces of supply and demand that have served as efficient indicators in sending signals to producers and consumers.

INSTITUTIONAL PROBLEMS AND CONSTRAINTS

The public and private institutions that serve Cameroon's food sector include Research, Extension service, Cooperatives, Financial bodies, public administration, and non-governmental organizations. Their role is to provide policy, manpower, information, finance, organizational leadership, efficient technologies and market infrastructure/facilities. They have so far achieved their objectives only to a limited extent in the food sector.

Research institutions

The Institute of Agronomic Research (IRA) is in charge of the development and adaptation of crop production technologies for the benefit of the sector. The faculty of Agriculture of the new university of Dschang (formerly the university centre of Dschang) is in charge of training, research and outreach activities. Other governmental and non-governmental organizations also contribute to these objectives. However, the postharvest programs in these institutions are limited due to insufficient trained manpower, finance and limited research and development (R&D) programs. Postharvest programs such as marketing, regulations, and policy formulation in this area are not adequately emphasized.

Extension services

The extension service of the ministry of Agriculture has been in charge of liaising information/technology generating institutions with the end users. To improve the rather bureaucratic nature of the service, IRA introduced the testing and liaison units (TLU) in some parts of the country. The recent World Bank Training and Visits (T&V) extension system is another recent introduction. However, in both the old system and the recent innovations, contribution to the improvement of the postharvest sub-sector is still minimal due mainly to limited programs, inadequate trained manpower and financial/material resources.

Financial institutions

Of the numerous financial institutions in the country, only the Agricultural Credit Bank (Credit Agricole) and FIMAC and foreign donors actively support farming organizations. Most of the beneficiaries of such support are large scale (usually cash crop) organizations. The small cooperatives, small scale farmers, and subsistent farmers have only been timidly supported by these institutions. The support to postharvest programs has been minimal due mainly to a lack of a well defined policy, limited trained manpower, and lack of information in that domain.

Cooperatives

Although large cooperatives such as the North West Cooperative Association (NWCA) and Union Central des Cooperative Agricole de l'Ouest (UCCAO) exist in the country, their main objective has been the production and marketing of the so called cash crops (coffee, cocoa, and cotton). There has been little or no attention to food crops, let alone postharvest interventions. Smaller cooperatives whose activities are focused on food crop programs are often restricted to remote regions and have limited access to credit, improved technologies and resource persons.

Training institutions

All public institutions had been geared towards training civil servants neglecting the needs of the private sector. The output of these institutions has been inadequate in terms of numbers and quality even for the public positions for which they are trained.

Also, the content of training has not been sufficiently geared towards meeting the needs of the clients. For example, programs to equip trainees to meet the challenges of the post harvest problems are very limited and even non-existent in some of the schools. Also, the former Ngaoundere university Centre placed too much emphasis on Research and Development of advanced Technologies with little or no effort to research and develop appropriate low-cost technologies for the small-scale farmer/entrepreneur. To add to this problems, the advent of the Land Grant System at the University Centre of Dschang was viewed by the powers concerned as a threat to the existing extension service. All these have been constraints to the development of the food crop sector and especially the postharvest sub-sector.

Public administration.

Four ministries intervene almost independently in the food crop sector. The Ministry of Scientific and Technical Research is responsible for research-related activities, the Ministry of Commercial Development and Industries for marketing, The Ministry of Plan and Regional Development for policy and food security, and the Ministry of Agriculture for the transfer of technologies. The lack of coordination allows for inconsistencies, conflicts and inefficient resource allocation and utilization.

Non-governmental institutions

Individuals, religious bodies and other private organizations (both national and foreign) intervene at various levels and degrees in rural and urban development. Some of their programs include interventions in the food sector. However, lack of coordination, adequately trained manpower and conflicts of interests hinder the effectiveness of their interventions.

POLICY PROBLEMS AND CONSTRAINTS

Until recently, government policies in the food crop sector have been largely inappropriate and ineffective. There are several reasons for this situation at the institutional, formulation/implementation and regulatory levels.

Institutions

Unlike export crops, the production and marketing of food crops in Cameroon has been left entirely to the private sector. Also, the institutional structure in agriculture is complex and fragmented. There are overlapping policy authorities which include the ministries of Agriculture, Livestock Breeding and Animal Industries, Commercial and Industrial Development, Territorial Administration, and Health [15]. Their actions affect prices, handling, weights & measures, grades & standards, and food flows. There are also basically autonomous entities such as research institutions, cooperatives, parastatals and other non-governmental

organizations involved in food crop production and marketing. As mentioned earlier, the lack of adequate coordination among these institutions and organizations has made it difficult to implement policy decisions and render production and marketing services in a coherent and timely manner. Production and marketing activities require flexible and quick decisions which cannot come from government institutions and organizations which are faced with organizational problems and plagued with managerial and financial constraints. They consequently have limited influence in food crop development.

Policy formulation and implementation

Formulation and implementation of policy in the food crop sector has also been fragmented and uncoordinated since they come from several uncoordinated ministries and institutions. It is therefore difficult to formulate and implement coherent strategies.

Regulations

Government had promulgated a number of laws and regulations in its attempt to regulate the production, marketing and transportation systems as well as prices of food products. Price control policy regulated the system of price determination, sales, movement of commodities and other marketing practices which tended to affect prices in a speculative manner. The ministry of Commercial and Industrial Development is in charge of the implementation of the price control policy. Practically the price control system was workable only to a limited extent and only on processed products such as rice, eating oils, sugar, bread and drinks. It fixed factory prices based supposedly on the production cost while the retail prices of locally produced food products were subjected to a system of administered prices. This system created some economic difficulties as only a limited number of wholesalers were authorized to deal with certain commodities. They soon created artificial scarcities of certain commodities causing unjustified price increases and posed many problems in the distribution of food products.

The policy of issuing business licenses was soon found to be discriminatory and to restrict entry into the food marketing system thus limiting competition. Theoretically also, there are regulations on weights and measures in the food marketing system. These are hardly respected especially as most of the marketing activities are undertaken in the open air. The regulations are therefore ineffective and this renders the qualitative assessment of the market output difficult. However, it is important to note that the ineffective implementation of these regulations has inadvertently been regarded as a "blessing" to Cameroon's food sector [15]. Producers and consumers prefer the process of determining price by bargaining and this has helped to sustain price determination in this sector through the forces of supply and demand. The inter- and intra-regional flow of commodities is also seriously handicapped by road blocks set up by the forces of law and order.

The current structural adjustment program of Cameroon previews new policy measures which attempt to correct past failures. The policy of trade liberalization at the various marketing stages is a step towards the right direction.

SOCIO-CULTURAL PROBLEMS AND CONSTRAINTS

Cameroon is made up of many ethnic groups with diverse cultures. They have different languages, religious beliefs, tastes/preferences, and attitudes towards production and consumption of food. Some of these factors have tended to act as constraints to rapid agricultural development.

Language constraints

Most farmers, and particularly the female farmers, who produce most of the food crops, are illiterate. They can speak neither French nor English, which are the two official languages and the languages used by the extension staff. Communication between the farmers and the extension staff/ subject matter specialists is limited and seriously hampered when the staff and specialists are not of the same linguistic origin as the farmer they are dealing with. The number of extension workers is inadequate and it is expensive and even impracticable even in the long-run to envisage the training of extension staff from and for each linguistic group. The transfer of food production, processing and marketing technologies to the farmers and other participants is thus adversely affected by language barriers.

Differences in tastes and preferences

Each of the many ethnic groups has its own tastes and preferences for foods. They have different attitudes towards new crop varieties and towards processed foods. This factor increases the problem of introducing new and improved varieties of crops to most parts of the country. It also increases food processing constraints since each processing technology must overcome many different types of resistances to tastes, texture, colours etc. of the transformed product in order to have them acceptable to most consumers.

Religious and cultural beliefs

Diverse religious and cultural beliefs of the many ethnic groups affect the production, distribution and consumption of various foodstuffs in Cameroon. Certain cultures are known to have resisted the introduction of certain improved production techniques (ridging across the slope for example) and some consider the production and consumption of certain nutritious crop and animal products as taboo. Although most of these attitudes are gradually changing especially in urban areas, they still constitute in some regions, a serious constraint to the production and consumption of the foodstuffs that meet their urgent nutrient requirements [12].

Division of labour by gender

In most rural societies in Cameroon, food production is exclusively the duty of women while cash crops and livestock production as well as other revenue generating activities are reserved for the men [6]. Because of cultural barriers, it is difficult in some areas for the extension workers, who are for the most part male, to have direct communication with the women even though women are expected to be their major target as far as food crop production is concerned. Often, women do not have and are not allowed easy access to funds needed for the purchase of food crop production inputs such as fertilizers, pesticides and improved planting materials. These and other problems linked to the cultural dichotomy between the rights and duties of men and women in the various societies constitute serious constraints to the development of the food crop sector of Cameroon.

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**TECHNICAL INFORMATION SHEETS FOR MAJOR
FOOD CROPS OF CAMEROON**

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CAPP/NCRE/USAID CAMEROON

August 1993

MAIZE

1. Scientific name- *Zea mais*

2. National and regional production trends

Production in tons						
Province	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Ext. North	7417.7	9004.1	1124	2363	11598	12757
East	23515.8	16680.2	16546	14682	15824	30399
Centre	14127.9	18926.2	16106	17212	18780	33303
Littoral	11351.2	6631.4	9234	6153	9243	18196
S. West	13527.8	10550.6	13579	14998	19240	27822
N. West	104735.5	120990.7	156071	141383	110830	138884
West	73159.8	128762.0	107096	103995	99560	153553
North	27019.6	31703.8	22806	18791	36016	40512
Adamawa	28667.7	41317.8	39104	42862	48117	49415
South	6158.8	4690.6	5221	4296	4114	8540
National	309681.7	389257.3	386887	366735	373322	512381

Sources: 1. Agricultural survey results 1985/85 to 1990/91, MINAGRI, Yaounde

3. Post harvest losses

At national level, the 6th Plan national forecast for 1990/91 was 15% but the UNDP (1992) draft report indicates that the Bafou project in Dschang, West province reported up to 30% losses before storage and Diop (1992) reported an additional 5 to 8% losses during storage. The report also indicates that in the West and North West provinces losses due to poor drying range from 10 to 15% in addition to high predrying losses due to poor after harvest handling. Harvest losses in some cases could therefore increase to over 50%.

-43-

4. Quantities consumed and projection to the year 2000

	Annual consumption (1000 t)			Per capita consumption (kg)		
	1980	1985	2000	1980	1985	2000
a) Nationally	384	454	690	43.4	46.4	41.5
b) Regionally						
Urban	48	72	175	-	21.4	-
Rural	336	382	515	-	59.4	-

Source: Etude de commercialisation des produits vivriers (1986), MINDIC, Yaounde

5. Food products and their consumption rates

Food products	Consumption rates (t/year)
Fresh cobs	NA
Flour	NA
Grits	12000 (supplied to Breweries in 1992)*
Malt for brewing	NA

*Conte et al. (1993). Analyse economique de la filiere mais au Cameroun. CAPP/USAID Yaounde

The 1984 budget and consumption survey reports a national consumption of 52107 ton of maize grain, 6094 tons of flour and 838 ton of doughnuts

6. Quantities, forms marketed and prices by region:

Region	Form	Quantities (t)		Farm gate price (FCFA/kg)		Consumer price (FCFA/kg)
		Cycle 1	Cycle 2	Cycle 1	Cycle 2	Prov. Hqr. ('85)
National	Grain	21239	1971	NA	NA	128
Ext. North	"	475	-	80	NA	150
East	"	1312	295	140	120	110
Centre	"	1394	411	170	170	123(143)*
Littoral	"	798	12	120	170	180
S. West	"	3801	1129	80	80	116
N. West	"	2744	-	60	-	110
West	"	3805	8	40	40	99
North	"	2203	-	70	-	182
Adamawa	"	4352	-	70	-	130
South	"	354	116	130	90	140

Source: Quantities marketed and farm gate prices 1988/89

(Agricultural survey results), MINAGRI Yaounde.

-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers).

* Figure in bracket is Yaounde consumer price in 1990 (Statistics Department, unpublished), MINDIC Yaounde

7. Marketing areas

Marketed mostly in rural markets in producing provinces (West, North West and Adamawa provinces, including Logone and Chari division of the Extreme North province) and in all urban markets.

Some grain, seeds and flour are exported to Gabon and Tchad and some flour and malt to Nigeria although Cameroon also imports maize and maize products.

8. Existing marketing facilities

a) Organizations

Name	Products marketed	Location
MAISCAM	Flour, oil, & grit	Ngoundere and, Foubot
UNVDA	Dry grain	Ndop
CAMFOOD	Grain	Yaounde
Women COOPS	Grain	Kumbo in N.W. Province

b) Storage facilities

Limited number of silos and cooperative stores exist with capacities of between ten and a few hundred tons. However, the bulk of storage is in small individual storage facilities such as barns, platforms, cribs, rafters with capacities of less than a ton.

c) Transport facilities

Inadequate and poorly adapted vehicles are used for transportation on very poor roads especially in rural areas. Most of the transportation is by head loads, animals and hand pushed trucks.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations and usually only to big private and public organizations that meet the collateral requirements of the banks. Also information about these facilities is not readily available to the small-scale farmers and bureaucratic bottlenecks hinder them from having easy access to such credit. Most farmers therefore obtain their credits from "tontines" or thrift and loan societies in very limited amounts and high interests.

e) Market intelligence and information

Market intelligence and information is very limited. Apart from a recent initiative by UNDP in the North West and West provinces no other private or official service is available at any level to supply market information elsewhere in the country.

9. Existing processing and transformation technologies

Product	Technology+	Degree of sophistication	Cost/ unit product	Improvement possibilities
Flour	Hand pounding	*	NA	Available
	Hand disc/attrition	**	NA	Available
	Diesel/electric mills	***	NA	Available
	Hammer/roller mills	****	NA	None
Grits	Hammer/roller mills	****	NA	None

+ All levels of technology for flour and grit production exist but they are not easily available to small scale farmers because of cost limitations. NA = not available.

10. Production, processing and marketing constraints

a) Production constraints

Maize producers are faced with the general production constraints of Cameroon farmers, which include inappropriate land tenure and cropping systems, inadequate access to improved production technologies, pest and disease hazards, adverse climatic and soil conditions and demography related problems. The dominance of low yielding varieties/ traditional cropping systems and low acceptability or taste for high yielding maize varieties are considered most acute.

b) Processing constraints

The processing of maize into the common products of flour and doughnuts is largely done through pounding and use of hand disc mills. Improved technologies do exist but are not widely used because of costs and the fact that quantities processed per farmer/family are generally small. This may also explain why the bulk of maize is consumed in grain form.

Marketing constraints:

c) The most acute constraints to the marketing of maize are inappropriate and insufficient storage and transportation facilities resulting in high distribution costs and low marketing margins especially to producer distributors. Furthermore, farm gate prices are exceptionally low during harvests periods. Administrative bottlenecks such as frequent road blocks and checks by the forces of law and order also increase marketing transaction costs

11. Export prospects

Export prospects are high, particularly to neighboring countries like Gabon, Tchad and Nigeria and especially if the present production, marketing and other constraints are removed. Presently Cameroon exports maize and maize products to the above countries even though it still imports large quantities of maize and maize products especially for the breweries. This is so because the geographical layout of the country and the poor marketing infrastructure makes it possible for one part of the country to import a commodity which another part produces and finds it easier and more profitable to export to a neighbouring country.

12. Supporting institutions and projects

-Ministry of Agriculture, for extension, policy planning and execution.

-Institute of Agronomic Research (IRA including NCRE) for research.

technology development/adaptation, and extension.

-North West Development Authority (MIDENO) for training and extension.

-Union Central des Cooperatives Agricole de l'Ouest (UCCAO) for training and extension.

-Food and Agriculture Organization (FAO) for research and extension.

-Semi-Arid Food Grain Research and Development (SAFGRAD) for research.

-Cotton Development corporation (SODECOTON) for training and extension.

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes particularly in the North West, West and Adamawa provinces include:-

-Improvement of farmer education

-Development and support of small scale farmers

-Promoting small and medium scale farm programs, and

-increasing efficiency of production and transformation to augment added values.

14. Donor and International organizations involved

<u>Donors*</u>	<u>Activities</u>
USAID	Research and extension
CCCE/FAC	Research and extension
SAFGRAD	Research and Development
EEC/IITA	Adaptive research
CIRAD	Research
UNDP/FAO	Postharvest research and extension
World bank	Food security
CIMMYT	Research and adaptation

* see list of acronyms.

15. Persons and private organizations recommended for contacts

-MAISCAM in Ngaoundere, Adamawa Province and Foubot (SCTC), West province

-UNVDA Ndop, N.W. province

-CAMFOOD Biyem Assi, Yaounde

-Mrs Bongadou Bamenda Central Market, N.W. Province

-SODECOTON in Garoua, North Province

-UCCAO, Bafoussam, West Province

-Nso Women cooperative, Kumbo, N.W. Province

SORGHUM/MILLET

1. Scientific names: *Sorghum vulgare/Pennisetum spp.*

2. National and regional production trends.

Production in tons						
Province	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Ext. North	260145.2	435235.8	173126	326115	259565	NA
N. West		631.4	250.4	144		NA
West	-	-	-	1	-	NA
North	70254.9	95850.3	55283	85644	78457	NA
Adamawa	7493.3	10135.4	7710	6415	5123	NA
National	338524.8	541471.9	236263	418175	343146	309760

Sources: Agricultural survey results 1985/86 to 1990/91,
MINAGRI, Yaounde.

3. Post harvest losses

Apart from the 6th Plan national forecast which puts predicted 1990/91 postharvest losses at 15%, there are no reliable documented postharvest loss figures available. However, it is known that like for maize, losses in some areas sometimes rise to over 50%.

4. Quantities consumed and per capita consumption

	Annual consumption (1000 tons)			Per capita Consumption (kg)		
	1980	1985	2000	1980	1985	2000
a) Nationally	349	355	395	39.2	36.3	24.1
b) Regionally						
Urban	1	1	5	NA	NA	NA
Rural	348	154	395	NA	55.1	NA

Source: Etude de commercialisation des produits vivriers (1986)

5. Food products and their consumption rates

<u>Food products</u>	<u>Consumption rates</u>
Flour	NA
Malt	NA
Blibli (an alcoholic drink)	NA

6. Quantities and forms marketed by region

Region	Form marketed	Quantities marketed (t)		Farm gate price (FCFA/kg)		Consumer price
		Cycle 1	Cycle 2	Cycle 1	Cycle 2	Prov.Hqtr FCFA/kg (1985)
National	Grain	6982	14290	NA	NA	162
Ext. North	"	3101	10620	50	50	160
North	"	3881	3170	80	70	161
Adamawa	"	NA	500	NA	50	165

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results), MINAGRI Yaounde

-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers), MINDIC Yaounde

7. Marketing areas

Sorghum and millet are marketed mostly in rural markets in producing provinces (Adamawa, North and Extreme north provinces) and in all urban markets of these provinces including Yaounde and Douala.

Some quantities are exported to countries like Nigeria and Tchad which border the producing areas.

8. Existing marketing facilities

a) Organizations

Name	Products marketed	Location
-SODECOTON	Grains & flour	Garoua, North Province
-CEREACAM	Flour	Garoua

b) Storage facilities

There a limited number of silos and stores provided by defunct "Office cerealier" with capacities of between ten to twenty tons. However, the bulk of storage is in small individual storage facilities such as barns, platforms, cribs, rafters with capacities of less than a ton.

c) Transport facilities

Although the defunct Office Cerealier operated a number of reasonably adapted vehicles for the collection and marketing of these crops, most of the transportation by small scale farmers is by head load, animals and hand pushed trucks. The rural areas also suffer from poor road infrastructure.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations and usually only to big private and public organizations that meet the collateral requirements of the banks. Also information about these facilities is not readily available to the small-scale farmers and bureaucratic bottle necks hinder them from having easy access to such credit. The farmers' situation is further aggravated by the non-existence of "tontines" in this part of the country. Farmers therefore resort to borrowing from friends and money lenders at very high interest rates.

e) Market intelligence and information

There is no organized market information and intelligence in the northern provinces where the bulk of these crops are produced.

9. Existing processing and transformation technologies

Product	Technology+	Degree of sophistication	Cost/ unit product	Improvement possibilities+
Flour	Pounding	*	NA	Available
	Attrition mill	**	NA	Available
Blibli	Malting	*	NA	Available
	Natural fermentation	*	NA	Available

+Improvement possibilities exist but they are not utilized because of high costs, lack of information and institutional support.

10. Production, processing and marketing constraints

a) Production constraints

The major production constraints faced by sorghum/millet farmers include very adverse climatic and soil conditions, inappropriate cropping systems, inadequate access to improved production technologies, and pests/disease hazards.

b) Processing constraints

The processing of sorghum/millet into flour is largely done through pounding and use of hand disc mills. Improved technologies do exist but are not widely used because of costs and the fact that quantities processed per farmer/family are generally small.

c) Marketing constraints

There are poor farm to market transportation facilities. There is also very limited internal market since it is consumed mostly by inhabitants of the three northern provinces. The crops face very high competition from maize which has a shorter growing season.

11. Export prospects

Even though Cameroon imports quantities of these crops, their exports especially to neighbouring countries of Nigeria and Tchad far exceed the imports (312 as opposed 50 ton between 1981/82 to 1985. as indicated by Cameroon's Long term food plan of 1986). Possibilities for exporting to these neighbouring countries which have similar tastes for the crops as the northern provinces, are therefore high since there is limited internal market for the crops.

12. Supporting institutions and projects

-Ministry of Agriculture, for extension, policy planning and execution.

-Institute of Agronomic Research (IRA including NCRE) for research, technology development/adaptation, and extension.

-Cotton Development corporation (SODECOTON) for training and extension.

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes particularly in the three northern provinces include:-

-Improvement of farmer education

-Development and support of small scale farmers

- Promoting small and medium scale farm programs
- increasing efficiency of production and transformation to augment added values and
- Organisation in rural areas, of effective means of collecting and marketing surpluses.

14. Donor and international organizations involved

<u>Donors</u>	<u>Activities</u>
USAID	Research and extension
CCCE/FAC	Research and extension
SAFGRAD	Research
EEC/IITA	Adaptive research
CIRAD	Research
World bank	Food security
ICRISAT	Research and adaptation

15. Persons and private organizations recommended for contacts

- CEREACAM, Garoua, North province
- SODECOTON, Garoua, North province

53

RICE

1. **Scientific name:** *Oryza sativa*

2. National and regional production trends (traditional sector)*

Production in tons

Province	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Ext. North	2402.3	1172.4	346	952	1130	
Centre	NA	NA	NA	20		
N. West	11925.5	9332.3	6899	2729	1397	
West	845.6	1010.4	1197	850	1053	
North	989.0	602.5	50	334	599.5	

Sources: 1. Agricultural survey results 1985/85 to 1990/91.

* The 6th plan estimated total national production of 81,000 tons for 1984/85.

3. **Post harvest losses**

Apart from the 6th Plan national forecast which predicted predicted 1990/91 postharvest losses for rice at only 10%, there are no reliable documented postharvest loss figures available. However, it is known that like for maize postharvest losses for rice during drying and winowing and milling are by far higher than the 6th plan forecast. The UNDP 1992 report indicates low milling yields of about 60% whereas broken grains and other losses account for 35 to 40%.

4. **Annual and per capita consumption projected to year 2000**

	Annual consumption (1000tons)			Per capita Consumption(kg)		
	1980	1985	2000	1980	1985	2000
a) Nationally	52	87	214	5.8	8.9	12.9
b) Regionally						
Urban	20	33	98	NA	9.8	NA
Rural	32	54	116	NA	8.4	NA

Source: Etude de commercialisation des produits vivriers (1986)
Figures exclude exports. Total demand (consumption) for 1985 was 124,000 tons. (6th plan estimates)

5. **Food products and their consumption rates**

Existing food products from rice in Cameroon are grain rice, parboiled rice, and rice flour. Consumption rates for these products are not available.

6. Quantities and forms marketed by region (1988/89)

Region	Form mkt'd	Quantities mkt'd by season (tons)		F.gate price by season(FCFA)		Consumer price Prov.Hdqters
		1st cycle	2nd cycle	1st cyl	2nd cyl	FCFA/kg 1985
National	Milled	530	557	-	-	195
Ext. North	"	298	NA	90	NA	209
N. West	"	NA	475	NA	100	189
West	"	NA	82	NA	90	190
North	"	232	NA	70	NA	182

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results).
-Consumer prices are from 1986 study on marketing of food
crops (Etude de commercialisation de cultures vivriers).

7. Marketing areas

Although rice is produced mainly by three parastatals (UNVDA in the North West, SODERIM in the West and SEMRY in the Extreme North) both locally produced and imported rice is marketed in local and urban markets all over the country.

Some of the rice produced in the Extreme North is exported to countries bordering the three north provinces -- Nigeria, Tchad and the Central African Republic.

8. Existing marketing facilities

a) Organizations

Name	Products marketed	Location
UNVDA	Grain rice	Ndop, N.W. province
SEMRY	Grain rice	Yagoua, Extreme North
SODERIM	Grain rice	Santchou, West province
CAMFOOD	Grain rice	Yaounde

b) Storage facilities

The producing organizations own modern Silos and stores but small producers store their paddy in jute bags in their houses.

25

c) Transport facilities

Although the producing parastatals have vehicles for transportation, they face the problem of poor road infrastructure from the producing areas to the urban markets. Small producers use head load, animals and hand pushed trucks for transportation.

d) Credit facilities

Credit facilities and government subsidies are available to the producing parastatals. However, very limited credit facilities are offered by banks and credit organizations (FIMAC) to small scale farmers. Most of the small-scale farmers obtain credit from "tontines" or thrift and loan societies in very small amounts and high interests.

e) Market intelligence and information

The parastatals have the means and capability of supplying themselves with some market information and intelligence. This is however not easily available to the small scale producers.

9. Existing processing and transformation technologies

Product	Technology+	Degree of sophistication	Cost/ unit product	Improvement possibilities+
Grain rice	Pounding	*	NA	Available
	Milling	***	NA	Available
Parboiled	Drum heating	**	NA	Available
Rice flour	Milling	***	NA	Available

+ Existing milling equipment are not very efficient. Improved technology is available but costs are prohibitive to small scale farmers.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints, rice production is very labour intensive and its high cost renders it less competitive with the rather cheap imported rice dumped into the country

b) Processing constraints

The processing of rice in Cameroon is hampered by limited and inappropriate milling equipment which give low milling yields of only 60%. Although milling is now liberalized, private individuals lack technical know-how and funds to compete with the parastatals.

c) Marketing constraints

The most pinching marketing constraints for rice in Cameroon include:-

- Low prices of imported rice as a result of dumping and high levels of guarantee prices to producers,
- Accumulation of stock resulting from low demand for locally produced rice.
- Inadequate transportation facilities resulting in high transportation cost and low marketing margins and the fact that the main consumption centres are too distant from the production centres.

11. Export prospects

Presently Cameroon exports rice to Tchad and Nigeria even though it still imports large quantities of the product. This is so because the geographical layout of the country and the poor marketing infrastructure makes it impossible for one part of the country to import a commodity which another part produces and finds it easier and more profitable to export to a neighbouring country.

12. Supporting institutions

- Ministry of Agriculture, for extension, policy planning and execution.
- Institute of Agronomic Research (IRA including NCRE) for research, technology development/adaptation, and extension.
- North West Development Authority (MIDENO) for training and extension.
- Food and Agriculture Organization (FAO) for research and extension.
- International Rice Research Institute (IRRI)
- Cotton Development Corporation (SODECOTON) for training and extension.

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes in the North West, West and Extreme North provinces include:-

- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs, and
- Increasing efficiency of production and transformation to augment added values.

14. Donor and international organizations involved

<u>Donors</u>	<u>Activities</u>
USAID	Research and extension
WARDA	Research and adaptation
CCCE/FAC	Research and extension
FAO/UNDP	Post harvest research/extension
World bank	Food security
IRRI	Research and adaptation

15. Persons and private organizations recommended for

CAMFOOD	Yaounde
SODERIM	Santchou, West province
UNDVA	Ndop, North West province
SEMRY	Yagoua, Extreme North
Tingo rice coop.	Tingo, North West
Mrs Bongadou	Bamenda central market, N.W.
MIDENO	Bamenda, N.W. province

CASSAVA

1. Scientific name: *Manihot esculenta*

2. National and regional production trends and projections

----- Production in tons -----							
Province	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	2000

East	201887.2	NA	229084	227327	187978		
Centre	403537.9	"	304565	328188	304644		
Littoral	169925.6	"	128916	93826	124806		
S. West	268231.6	"	180366	135556	213782		
N. West	101948.9	"	81066	80077	63343		
West	97328.3	"	131523	91016	71450		
North	14861.9	"	25770	381	20264		
Adamawa	88644.4	"	74912	51151	42348		
South	152671.3	"	180170	168959	180480		
National	1499037	1496088	1336372	1176481	1209748	1578872	1998*

Sources: Agricultural survey results 1985/86 to 1990/91

* (in 000 tons), ROTREP, 1991

3. Post harvest losses

Apart from the 6th Plan national forecast which puts predicted 1990/91 postharvest losses for cassava at 15%, there are no reliable postharvest loss figures for Cameroon. However, it is known that cassava which is very perishable experiences very high losses during harvest, transportation and processing due mainly to physiological and pathological influences. Also, Cooursey and Booth (1977) estimated postharvest losses for tropical root crops (including cassava) at 25%.

4. Annual and per capita consumption in 1985

	Annual consumption (tons)	Per capita consumption(kg)
a) Nationally	800000	81.7
b) Regionally		
Rural	664700	NA

Source: Etude de commercialisation des produits vivriers (1986)

5. Food products and their consumption rates

Food products	Consumption rates/week Littoral provinces	NW, West, SW, &
Cassava fufu	8.80 kg+	
Gari	2.00 kg+	
Myondo	3.52 kg+	
Bobolo	NA	
Mentoumba	NA	
Chips	NA	
Dough nuts	NA	
Starch	NA	
Arki	NA	

Source: + Okezie et al. (1988)

6. Quantities and forms marketed by region (1988/89)

Region	Form mkted	Quantities mkted (tons)	F.gate price FCFA/kg	Consumer price Prov. Hdqters 1985 FCFA/kg
National	Tubers	418.8	46	55
Ext. North	"	-	-	NA
East	"	35.8	52	NA
Centre	"	81.5	50	NA
Littoral	"	26.7	35	45
S. West	"	146.9	45	NA
N. West	"	61.1	40	"
West	"	23.7	41	"
North	"	-	-	"
Adamawa	"	25.6	64	"
South	"	15.0	43	"

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results).

-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers).

7. Marketing areas

Cassava and cassava products are marketed mostly in rural markets of major producing areas (West, North West, South West, Littoral, Centre, South, and East provinces), and in all urban markets it is mostly the processed product that is marketed.

Small quantities (about 6 tons) are exported to neighbouring countries.

8. Existing marketing facilities

a) Organizations

<u>Name</u>	<u>Products</u>	<u>Location</u>
Women cooperatives	Gari	Malende (SW Province)
	Gari	Bai Bikom (SW)
	Gari	Baba 1 (NW province)
	Gari	Nso (NW)
	Gari	Baligham (NW)
	Gari	Buea (SW)
CAMFOOD Yaounde	Gari	Yaounde

b) Storage facilities

Fresh cassava tubers are hardly stored traditionally. The crop is usually left in the field and harvested when needed. Cassava products are produced in small quantities and stored for short periods in small containers like bags and tins.

c) Transport facilities

Inadequate and poorly adapted vehicles are used for transportation on very poor roads especially in rural areas. Most of the transportation is by head loads, animals and hand pushed trucks.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations (FIMAC) to small scale farmers. Most of the farmers obtain credit from "tontines" or thrift and loan societies in very small amounts and high interests, but for the processing of gari, organizations like UNDP provide some financial support to groups of women farmers in the NW province.

e) Market intelligence and information

Market intelligence and information is very limited. Apart from a recent initiative by UNDP in the North West and West provinces no other private or official service is available at any level to supply market information elsewhere in the country.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Gari	Traditional	*	NA	Available
	Machine processed	**	60/kg	Available
Fufu	Milling	**	NA	Available
	Fermentation	*	NA	Available
	Hand pounding	*	NA	Available
Others	Traditional	*	NA	Available

Source: FAO project (1993)

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general constraints of crop production, cassava production specifically suffers from a high rate of tuber rot before maturity, inadequate improved planting materials, pest and disease attacks and the fact that it is labour intensive. Cassava also has very high pre-harvest losses due to birds and rodents and during harvest. due to cuts and bruises.

b) Processing constraints

Processing constraints of cassava include inefficient traditional processing techniques, labour intensive and high processing cost

c) Marketing constraints

Like all fresh root and tubers, cassava is a bulky commodity and it poses transportation problems. Distribution costs are high, market prices low, storage difficult, and it has a low ratio of value to bulk and weight. This results in low profit margins to producers and distributors.

11. Export prospects

Small quantities of cassava and cassava products are exported to France and Gabon (between 1981 and 1985 about 70 tons were exported)

12. Supporting institutions

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA including ROTREP and CNRCIP for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO for postharvest development and extension.
- UCCAO for training and extension
- SODECOTN for training and extension

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes especially in the producing areas of the NW, SW, West, Centre, Littoral, South and East provinces include:-

- Improvement of farmer education
- Development and support of small scale farmers especially in processing
- Promoting small and medium scale farm programs, and
- increasing efficiency of production and transformation to augment added values.

14. Donor organizations involved

Donors	Activities
USAID	Research and extension
FAO/UNDP	Postharvest research/extension
GASTBY/IITA	Adaptive research
EEC/IITA	Adaptive research

15. Persons and organizations recommended for contacts

- CEREACAM Garoua, North province
- ROTREP IRA, Ekona, SW province
- Women cooperatives as in item 8.

COCOYAMS

1. Scientific name: *Xanthosoma sagittifolium* (macabo)
Colocasia esculenta (taro).

2. National and regional production trends and projections

----- Production in tons -----						
Province	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91 2000
East	49165.9	52330	27474	36238	40706	
Centre	220236.3	159036	121003	121268	150515	
Littoral	95495.0	76510	60974	43490	82374	
S. West	273123.2	254095	245019	232036	305530	
N. West	177341.7	170563	201987	179631	168586	
West	183746.1	220280	185141	170116	110026	
North	161.5		769	1641	1134	
Adamawa	8874.0	8150	9139	6864	17539	
South	73801.5	64853	47235	49524	40335	
National	1081945.1	1005817	898741	840808	916746	
1	4		1		4	*

*National projections in thousands of tons under medium demand scenario.

Sources: Agricultural survey results 1985/86 to 1990/90

* (in 000 tons) ROTREP, 1991

3. Postharvest losses

Apart from the 6th Plan national forecast which puts predicted 1990/91 postharvest losses for cocoyams at 15%, there is no documented postharvest loss figures for Cameroon at our disposal. However, it is known that cocoyams experience high losses during harvest and transportation. Other losses arise from physiological, pathological and pest influences. Also, Coursey and Booth (1977) estimated postharvest losses for tropical root crops (including cocoyams) at 25%.

4. Annual and per capita consumption in 1985

	<u>Annual consumption (tons)</u>	Per capita consumption(kg)
a) Nationally	300000	30.6
b) Regionally		
Urban	26000	NA
Rural	274000	
NA		

Source: Etude de commercialisation des produits vivriers (1986)

64

5. Food products and their consumption rates

Cocoyams are consumed in tuber form and as fufu or achu

6. Quantities/forms marketed and prices by region (1988/89)

Region	Form mkted	Quantities mkted (tons)	F.gate price FCFA/kg	Consumer price Prov. Hdqters 1986 FCFA/kg
National	Tubers	44.35	53	71
East	"	2.61	42	
Centre	"	9.54	66	73*
Littoral	"	1.32	82	
S. West	"	11.72	50	79
N. West	"	9.96	43	80
West	"	4.94	46	78
Adamawa	"	-	-	126
South	"	3.07	53	205

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results).

-Consumer prices are from 1986 study on marketing of food
crops (Etude de commercialisation de cultures vivriers).

* Yaounde price in 1990 (Statistics Dept. Yaounde,
Unpublished)

7. Marketing areas

Cocoyams are marketed mostly in rural markets of major producing
areas (West, North West, South West, Littoral, Centre, South, and East
provinces), and in all urban markets.

Small quantities are exported to neighbouring countries like Gabon.

8. Existing marketing facilities

a) Organizations

CAMFOOD	Yaounde
Food cooperative	Buea

b) Storage facilities

Traditional facilities like pits and houses are used by the rural
producers.

c) Transport facilities

Most of the transportation is by headload, animals and hand pushed trucks. Inadequate and poorly adapted vehicles are used for transportation on very poor roads especially in rural areas.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations (FIMAC) to small scale farmers. Most of the farmers obtain credit from "tontines" or thrift and loan societies in very small amounts and high interests

e) Market intelligence and information

Market intelligence and information is very limited. Apart from a recent initiative by UNDP in the North West and West provinces no other private or official service is available. Although the ministry of Commerce and Industrial Development gathers information on prices such information is hardly ever diffused for the benefit of farmers and food distributors.

9. Existing processing and transformation technologies

There are no processed products for cocoyams in Cameroon

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general constraints of crop production, coco yams production specifically suffers from inadequate improved planting materials, pest and disease attacks and the fact that it is labour intensive. There are also during-harvest losses due to cuts and bruises.

b) Processing constraints

No traditional processing technology exists for cocoyams in Cameroon as producers prefer to consume it as a basic vegetable. They have not therefore developed any tastes for processed products.

c) Marketing constraints

Like all fresh root and tubers, cocoyams are a bulky commodity and they pose transportation problems. Distribution costs are high, market prices low, storage difficult, and they have a low ratio of value to bulk and weight. This result in low profit margins to producers and distributors especially as the tubers are not processed to reduce bulk.

11. Export prospects

Some cocoyams are exported to France, Gabon and Central African Republic.

12. Supporting institutions and projects

-Ministry of Agriculture, for extension, policy planning and execution.

-IRA including ROTREP and CNRCIP for research, technology development/adaptation, and extension.

-MIDENO for training and extension.

-FAO/UNDP for postharvest development and extension.

-UCCAO for training and extension

13. Current policy strategies

Strategies for increased production and improved storage, and marketing to increase farmers' incomes especially in the producing areas of the NW, SW, West, Centre, Littoral, South and East provinces include:-

-Improvement of farmer education

-Development and support of small scale farmers

-Promoting small and medium scale farm programs, and

-increasing efficiency of production

14. Donor and international organizations involved

<u>Donors</u>	<u>Activities</u>
USAID	Research and extension
FAO/UNDP	Postharvest research/extension
GASTBY/IITA	Adaptive research
EEC/IITA	Adaptive research

15. Persons and organizations recommended for contacts

-CEREACAM

Garoua, North province

-ROTREP

IRA, Ekona, SW province

-Women cooperatives as in item 8.

YAMS

1. Scientific name: *Dioscorea spp.*

2. National and regional production trends and projections

Province	Production in tons					
	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91 2000
Ext.North	322.2	186	NA	NA		
East	4506.4	3679.0	4787	3409	1358	
Centre	18216.3	18654.2	16606	10028	9696	
Littoral	7627.6	8327.9	9717	3209	5564	
S. West	11038.8	14777.5	15902	12757	2940	
N. West	12027.3	15621.7	12592	15470	9198	
West	38104.2	49039.7	37509	30284	18860	
North	2195.7	4653.2	197	407	2917	
Adamawa	1066.8	2117.9	1190	987	676	
South	2924.5	2226.3	2049	2161	2268	
National	95707.6	119519.5	100745	78714	53480	118696 168*

*National projections in thousands of tons under medium demand scenario.

Sources: Agricultural survey results 1985/86 to 1988/89

* (in 000 tons) ROTREP, 1991

Postharvest losses

The 6th Plan predicted yam postharvest losses at 15%, but it is known that yams experience high losses during harvest, transportation and storage due to physiological, pathological and pest influences. Also, Coursey and Booth (1977) estimated postharvest losses for tropical root crops (including yams) at 25%. It is also note worthy that *D. dumetorum* hardens and becomes unconsumable when stored for long.

4. Quantities consumed

	Annual consumption (tons)			Per capita consumption(kg)		
	1980	1985	2000	1980	1985	2000
a) Nationally	NA	86000	NA	NA	8.8	NA
b) Regionally						
Urban	NA	35500	NA	NA	NA	NA
Rural	NA	50500	NA	NA	NA	NA

Source: Etude de commercialisation des produits vivriers (1986)

66

5. Food products and their consumption rates

In Cameroon about 80% is consumed as a basic vegetable (boiled or roasted)

6. Quantities and forms marketed by region

Region	Form mkted	Quantities mkted by season (tons)		F.gate price by season(FCFA)		Consumer price Prov. Hdqters 1986 FCFA/kg
		1st cycle	2nd cycle	1st cle	2nd cle	
National		6335	5040			
Ext. North		-	-	-	-	147
East		1912	215	70	130	NA
Centre		209	753	110	180	NA
Littoral		202	169	120	150	161
S. West		884	616	100	90	113
N. West		2258	2039	60	60	70
West		329	800	60	60	105
North		90	6	80	30	NA
Adamawa		360	267	100	100	NA
South		91	175	110	70	NA

Source: -Quantities marketed and farm gate prices 1988/89 (Agricultural survey results).
-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers).

7. Marketing areas

Yams are marketed mostly in rural markets of all the provinces except the Extreme North and in all urban markets of the country.

Small quantities (only 38 tons exported between 1982 and 1985, according to the Long Term Food Plan) are exported to neighbouring countries like Gabon. It is however also known that Cameroon imports yams from Nigeria,

8. Existing marketing facilities

a) Organizations

CAMFOOD Yaounde	Yaounde
Food cooperative	Buea

b) Storage facilities

Traditional facilities like pits and houses are used by the rural producers.

c) Transport facilities

Most of the transportation is by headload, animals and hand pushed trucks. Inadequate and poorly adapted vehicles are used for transportation on very poor roads especially in rural areas.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations (FIMAC) to small scale farmers. Most of the farmers obtain credit from "tontines" or thrift and loan societies in very small amounts and high interests

e) Market intelligence and information

Market intelligence and information is very limited. Apart from a recent initiative by UNDP in the North West and West provinces no other private or official service is available. Although the ministry of Commerce and Industrial Development gathers information on prices such information is hardly ever diffused for the benefit of farmers and food distributors.

9. Existing processing and transformation technologies

No processing and transformation technologies are available except at research level where attempts are being made at processing the tubers into chips and yam flour.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general constraints of crop production, yam production specifically suffers from inadequate and expensive improved planting materials, pest and disease attacks and the fact that it is very labour intensive. There are also during-harvest losses due to cuts and bruises.

b) Processing constraints

No traditional processing technology exists for yams in Cameroon as producers prefer to consume it as a basic vegetable. Very few have developed tastes for processed yam products.

c) Marketing constraints

Like all fresh root and tubers, yams are a bulky commodity and it poses transportation problems. Distribution costs are high, market prices low at harvest seasons, storage difficult, and it has a low ratio of value to bulk and weight. This result in low profit margins to producers and distributors.

11. Export prospects:

Even though Cameroon imports some white yams from Nigeria, it is reported to have exported about 38 tons between 1982 to 1985.

12. Supporting institutions and projects

-Ministry of Agriculture, for extension, policy planning and execution.

-IRA including ROTREP and CNRCIP for research, technology development/adaptation, and extension.

-MIDENO for training and extension.

-FAO/UNDP for postharvest development and extension.

-UCCAO for training and extension

-SODECOTON for training and extension

-GATSBY/IITA for research and extension

-SOWEDA in the SW province for training and extension

-N.E. Benue project for training and extension

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes especially in the producing areas of the NW, SW, West, Centre, Littoral, South and East provinces include:-

-Improvement of farmer education

-Development and support of small scale farmers

-Promoting small and medium scale farm programs, and

-increasing efficiency of production and transformation to augment added values.

14. Donor and international organization involved

<u>Donors</u>	<u>Activities</u>
IITA	Research
USAID	Research/extension
EEC/IITA	Adaptive research
GATSBY/IITA	Adaptive research

15. Persons and organizations recommended for contacts

-ROTREP, IRA Ekona

-Women cooperatives in NW & SW Provinces

-Food cooperative, Buea

-CAMFOOD , Yaounde

SWEET POTATO

1. **Scientific name:** *Ipomea batatas*

2. **National production**

-Production in 1984/85 was 50000 tons (6th Plan)

3. **Postharvest losses**

The 6th Plan predicted Sweet potato postharvest losses at 15%, but it is known that sweet potatoes experience high losses during harvest, transportation and storage due to physiological, pathological and pest influences. Also, Coursey and Booth (1977) estimated postharvest losses for tropical root crops (including sweet potatoes) at 25%.

4. **Annual and per capita consumption in 1985**

	Annual consumption (tons)	Per capita consumption(kg)
a) Nationally	180000	18.4
b) Regionally		
Urban	50400	NA
Rural	129600	NA

Source: Etude de commercialisation des produits vivriers (1986)

5. **Food products and their consumption rates**

In Cameroon about 80% of Sweet potato is consumed as a basic vegetable and the rest is consumed in form of flour, dolo (a non-alcoholic beverage) and chips.

6. **Quantities and forms marketed by region**

No information available

7. **Marketing areas**

Sweet potatoes are marketed in both rural and urban markets of all the provinces.

8. Existing marketing facilities

a) Organizations

Women marketing cooperative in Melong, Littoral Province

b) Storage facilities

Traditional facilities like pits, houses and barns are used by the rural producers.

c) Transport facilities

Most of the transportation is by head loads, animals and hand pushed trucks. Inadequate and poorly adapted vehicles are used for transportation on very poor roads especially in rural areas.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations (FIMAC) to small scale farmers. Most of the farmers obtained credit from "tontines" or thrift and loan societies in very small amounts and high interests

e) Market intelligence and information

Market intelligence and information is very limited. Apart from a recent initiative by UNDP in the North West and West provinces no other private or official service is available. Although the ministry of Commerce and Industrial Development gathers information on prices such information is hardly ever diffused for the benefit of farmers and food distributors.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Flour	Traditional	*	NA	Available
Dolo	Traditional	*	NA	Available
Chips	Machine	**	NA	Available

10. Production, processing and marketing constraints

a) Production constraints

Poor farming techniques
Inadequate improved planting materials
Pest and disease attacks
Labour intensive production

12

b) Processing constraints

- Inadequate improved processing technologies

c) Marketing constraints

- Bulky products
- High transportation costs
- Low market prices
- Low profit margin
- Difficult storage due to lack of storage facilities
- Low ratio of value to bulk and weight
- Low demand

11. Export prospects:

Export prospects are low even though very insignificant quantities are currently being export to France and Tchad.

12. Supporting institutions and projects

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA including ROTREP and CNRCIP for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extension.
- UCCAO for training and extension
- SODECOTON for training and extension
- GASTBY/IITA for research and extension
- SOWEDA in the SW province for training and extension
- N.E. Benue projection in the North for training and extension

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes especially in the producing areas of the NW, SW, West, Centre, Littoral, South and East provinces include:-

- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs, and
- increasing efficiency of production and transformation to augment added values.

14. Donor and international organizations involved

Donors	Activities
-CIP	Research/postharvest/extension
-USAID	Research and extension
-EEC/IITA	Adaptive research
-BATSBY/IITA	Adaptive research
-UNDP/FAO	Postharvest research and extension

15. Persons and organizations recommended for contacts

- Women cooperatives in NW & SW provinces
- MIDENO in Bamenda
- Farmers' group in Melong, Littoral province
- ROTREP, IRA, Ekona

15

Irish potato

1. Scientific name: *Solanum tuberosum*.

2. National and regional production trends

Province	Production in tons					
	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Ext. North		11.6				
East	38.5	197.8	84	22	63	
Centre	525.6	265.6	274	165	177	
Littoral		4.1	25		400	
S. West	22.5		60		65	
N. West	9163.4	10493.8	12129	16648	24461	
West	12552.0	12861.8	8130	9575	5794	
North						
Adamawa	6.9	120.7	8	19	28	
South	274.2	307.9	139	227	127	
National	22585.1	24263.3	20849	26662	31115	38581

Sources: 1. Agricultural survey results 1985/85 to 1990/91

3. Postharvest losses

The 6th Plan predicted Irish potato postharvest losses at 15%, but it is known that Irish potatoes experience high losses during harvest, transportation and storage due to physiological, pathological and pest influences. Also, Cooursey and Booth (1977) estimated postharvest losses for tropical root crops (including Irish potatoes) at 25%.

4. Quantities consumed

	Annual consumption (tons) 1985	Per capita consumption (kg) 1985
a) Nationally	85000	8.7
b) Regionally		
Urban	47100	NA
Rural	37900	NA

Source: Etude de commercialisation des produits vivriers (1986)

5. Food products and their consumption rates

In Cameroon nearly all the Irish potatoes are consumed as basic vegetable.

6. Quantities and forms marketed by region

Region	Form mkted	Quantities mkted by season (tons)		F.gate price by season(FCFA)		Consumer price Prov. Hdqters 1986 CFA/kg
		1st cycle	2nd cycle	1st cyl	2nd cyl	
National	Tubers	9013	2620			153
Ext. North	"					198
East	"					235
Centre	"	8		80		176
Littoral	"					143
N. West	"	7942	2068	40	50	70
West	"	1060	532	80	90	85
Adamawa	"					140
South	"	3	21	130	50	261

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results).

-Consumer prices are from 1986 study on marketing of food
crops (Etude de commercialisation de cultures vivriers).

7. Marketing areas

Irish potatoes are marketed mostly in the rural markets of the producing areas (North West and West provinces including Mokolo in the Extreme North province) and the urban towns of Yaounde, Douala, Nkongsamba, Bamenda and Bafoussam.

Small quantities are exported to Nigeria and Gabon although there is some importation into the super markets in Yaounde and Douala.

8. Existing marketing facilities

a) Organizations

MIDENO	Bamenda
UCCAO	Bafoussam
CEIPS	Djutissa, Dschang
Nso women coops	Nso, NW province

b) Storage facilities

Traditional facilities like houses and barns are used by the rural producers.

Improved cribs, barns, and stores have been introduced in the major producing areas of the North West and West provinces

c) Transport facilities

Most of the transportation is by head loads, animals and hand pushed trucks. Inadequate and poorly adapted vehicles are used for transporting some quantities to urban centres sometime on very poor roads.

d) Credit facilities

Very limited credit facilities are offered by banks and credit organizations (FIMAC) to small scale farmers. Most of the farmers obtained credit from "tontines" or thrift and loan societies in very small amounts and high interests. Some financial support is being provided to some farmers in the North West and West provinces by UNDP/FAO mainly for postharvest operations.

e) Market intelligence and information

Market intelligence and information is very limited. Apart from a recent initiative by UNDP in the North West and West provinces no other private or official service is available. Although the ministry of Commerce and Industrial Development gathers information on prices such information is hardly ever diffused for the benefit of farmers and food distributors.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Flour	Machine	**	NA	Available
Chips	Machine	**	NA	Available

These technologies are still at research level and have not been widely diffused.

10. Production, processing and marketing constraints

a) Production constraints

- Poor farming techniques
- Inadequate improved planting materials
- Pest and disease attacks
- Labour intensive production

b) Processing constraints

- Inadequate improved processing technologies

c) Marketing constraints

- Bulky products
- High transportation costs
- Low market prices
- Low profit margin
- Difficult storage due to lack of appropriate storage facilities
- Low ratio of value to bulk and weight
- Supply affected by seasonality

11. Export prospects:

Export prospects for Irish potatoes are high as Cameroon is ranked as one of the highest producers in West and Central Africa. The regional centre for the International Potato Centre (CIP) is located at Bambui, Cameroon.

12. Supporting institutions and projects

-Ministry of Agriculture, for extension, policy planning and execution.

-IRA including CNRCIP for research, technology development/adaptation, and extension.

-MIDENO for training and extension.

-FAO/UNDP for postharvest development and extension.

-UCCAO for training and extension

-CEIPS in West province for production and marketing

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes especially in the producing areas of the NW and West provinces include:-

-Improvement of farmer education

-Development and support of small scale farmers

-Promoting small and medium scale farm programs, and

-increasing efficiency of production and transformation to augment added values.

- Extension of the seed production programme to the Adamawa province

14. Donor and international organizations organizations involved

Donors	Activities
-CIP	Postharvest research/extension
-FAO/UNDP	Postharvest research/extension
-IFAD	Provides funds through MIDENO
-EDF	"
-KFW	"

15. Persons and organizations recommended for contacts

-CIP, IRA, Bambui

-CEIPS, Djutissa, Dschang

-Nso Women Cooperative Society, N.W. Province

-Mrs Bongadou, Bamenda

BEANS

1. **Scientific name:** *Phaseolus spp.*

2. **National and regional production trends and projections**

Province	Production in tons				
	1985/86	1986/87	1987/88	1988/89	1989/901 1990/91
Ext. North	16938.6	14846.5	7108	22285	
East	229.0	249.2	245	59	
Centre	254.0	182.5	72	107	
Littoral	690.5	482.7	706	722	
S. West	1147.9	657.6	891	399	
N. West	17693.3	18452.8	15846	14590	
West	16516.4	23227.3	12787	16910	
North	3118.2	3438.7	2211	3596	
Adamawa	110.8	206.8	203	111	
South	217.0	219.9	183	318	
National	56915.6	61963.9	40251	59097	54055 63095

Sources: 1. Agricultural survey results 1985/85 to 1990/91

3. **Post harvest losses**

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for this crop at 20%. (Plan alimentaire a long terme 1985-1995 pg.A/12)

4. **Annual and per capita consumption in 1985**

	Annual consumption (tons)	Per capita consumption(kg)
a) Nationally	75000	7.7
b) Regionally		
Urban	32200	NA
Rural	42800	NA

Source: Etude de commercialisation des produits vivriers (1986)

5. **Food products and their consumption rates**

The only common processed product from beans in Cameroon is doughnut but the consumption rate has not been estimated.

6. Quantities and forms marketed by region

Region	Form mkted	Quantities mkted		F.gate price		Consumer price Prov. Hdqters 1986 cfa/kg
		by season (tons)		seasonal(FCFA)		
		1st cycle	2nd cycle	1st cyl	2nd cyl	
National	Grains	6395	-	-	-	202
Ext. North	"	1320	10663	100	90	327
East						270
Centre						165
Littoral	"	45	53	240	140	183
S. West	"	55	12	100	210	
N. West	"	3814	1736	115	140	176
West	"	688	2993	130	160	190
North	"	451	-	110	-	123
Adamawa	"	23	7	170	120	267
South	"	-	1	-	200	293

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results, MINAGRI).

-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers, MIDAS 1986).

7. Marketing areas

Beans are marketed in all rural and urban markets in the country.

8. Existing marketing facilities

a) Organizations

<u>Name</u>	<u>Location</u>
CAMFOOD	Yaounde
Women Cooperatives	N. W. and S.W. Provinces

b) Storage facilities

Beans are stored in small capacity cribs, Ceiling, mud, brick and bamboo stores in rural areas. Improved stores with higher capacities are used by cooperatives that market beans.

c) Transport facilities

The small-scale producers transport their beans by head load, animals and hand pushed trucks. Whole salers use vehicles such as trucks and pick-ups to move the commodity to urban markets.

-Poor road infrastructure especially in rural areas.

d) Credit facilities

-Very limited credit facilities offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

-Most credit obtained from "tontines" or thrift and loan societies in very small amounts and high interests.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Doughnut	Traditional	*	NA	Available
	Machine grinding	**	NA	Available

The available improvement possibilities are not utilized because of cost limitations.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general production constraints, bean production in Cameroon suffers from poor farming techniques inadequate improved planting materials, and pest/ disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from beans.

c) Marketing constraints

The most important constraints in the marketing of beans are high transportation and storage costs, low producer prices and low distributive profit margins.

11. Export prospects

Even though most of this commodity is consumed internally, the proximity of some high consumption zones of neighbouring countries to the production areas provides some export potential.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extension.
- UCCAO for training and extension
- CRSP for research support

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase bean farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-CRSP (USAID)	Research
-SAFGRAD	Research

15. Persons and organizations recommended for contacts

- Womens Cooperative Societies, N.W., S.W and West Provinces
- CAMFOOD, Yaounde

COWPEA

1. Scientific name: *Vigna unguiculata*

2. National and regional production trends

	Production in tons				
Province	1985/86	1986/87	1987/88	1988/89	1989/901 1990/91
National					

Sources: 1. Agricultural survey results 1985/86 to 1990/91

3. Post harvest losses

Postharvest losses resulting from weevil destruction during storage and losses during shelling are known to be as high as those for beans.

4. Annual and per capita consumption in 1985

	<u>Annual consumption (tons)</u>	<u>Per capita consumption(kg)</u>
a) Nationally		
b) Regionally		
Urban		
Rural		

Source: Etude de commercialisation des produits vivriers (1986)

5. Food products and their consumption rates

<u>Product</u>	<u>Consumption rates</u>
Doughnut	NA

6. Quantities and forms marketed by region

<u>Region</u>	<u>Form mkted</u>	<u>Quantities mkted</u>		<u>F.gate price</u>		<u>Consumer price</u>
		<u>by season (tons)</u>		<u>seasonal(FCFA)</u>		<u>Prov. Hdqters</u>
		<u>1st cycle</u>	<u>2nd cycle</u>	<u>1st cyl</u>	<u>2nd cyl</u>	<u>1986 cfa/kg</u>
National	Grains					

7. Marketing areas

Beans are marketed in all rural and urban markets in the country.

8. Existing marketing facilities

a) Organizations

Name	Location
CAMFOOD	Yaounde
Women Cooperatives	N. W. and S.W. Provinces

b) Storage facilities

Cowpeas are stored in small capacity cribs, Ceiling, mud, brick and bamboo stores in rural areas. Improved stores with higher capacities are used by cooperatives that market beans.

c) Transport facilities

The small-scale producers transport their cow peas by head load, animals and hand pushed trucks. Whole salers use vehicles such as trucks and pick-ups to move the commodity to urban markets.

-Poor road infrastructure especially in rural areas.

d) Credit facilities

-Very limited credit facilities offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

-Most credit obtained from "tontines" or thrift and loan societies in very small amounts and high interests.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Doughnut	Traditional	*	NA	Available
	Machine grinding	**	NA	Available

The available improvement possibilities are not utilized because of cost limitations.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general production constraints, cow pea production in Cameroon suffers from poor farming techniques inadequate improved planting materials, and pest/ disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from cow pea.

c) Marketing constraints

The most important constraints in the marketing of cow pea are high transportation and storage costs, low producer prices and low distributive profit margins.

11. Export prospects

Even though most of this commodity is consumed internally, the proximity of some high consumption zones of neighbouring countries to the production areas provides some export potential.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extension.
- UCCAO for training and extension
- CRSP for research support

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase cow pea farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-CRSP (USAID)	Research
-SAFGRAD	Research

15. Persons and organizations recommended for contacts

- Womens Cooperative Societies, N.W., S.W and West Provinces
- CAMFOOD, Yoande

GROUNDNUT

1. Scientific name: *Arachis hypogea*

2. National and regional production trends

Province	Production in tons					
	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
Ext. North	11111.5	11579.2	6524	9732		
East	9195.8	7963.1	11257	7634		
Centre	19100.9	16205.9	16374	16456		
Littoral	4487.4	3981.1	3675	2367		
S. West	2129.1	1651.1	2519	2114		
N. West	9408.2	12053.8	8470	27531		
West	8324.2	11611.1	7858	7199		
North	27901.7	21811.3	15230	17392		
Adamawa	1174.9	2553.3	1725	1027		
South	8096.0	8975.9	9620	8315		
National	100929.6	98385.8	84252	79767	74766	113720

Sources: 1. Agricultural survey results 1985/86 to 1990/91
(MINAGRI Yaounde)

3. Post harvest losses

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for this crop at 15%. (Plan alimentaire a long terme 1985-1995 pg.A/12)

4. Quantities consumed and per capita consumption in 1985

	Annual consumption (tons)	Per capita consumption(kg)
a) Nationally	130000	13.3
b) Regionally		
Urban	58700	NA
Rural	71300	NA

Source: Etude de commercialisation des produits vivriers (Midas, 1986)

5. Food products and their consumption rates

The common food products from Ground nuts in Cameroon are groundnut cakes, groundnut oil, and groundnut paste. No consumption rate figures are available.

6. Quantities and forms marketed by region

Region	Form mkted Grains	Quantities mkted by season (tons)		F.gate price by season(FCFA)		Consumer price
		1st cycle	2nd cycle	1st cyl	2nd cyl	Prov. Hdqters 1986 CFA/kg
National		9785	2095	-	-	365
Ext. North		1018	-	180	-	261
East		1193	519	220	220	450
Centre		1427	487	320	320	338
Littoral		326	39	230	240	308
S. West		425	670	170	180	
N. West		1071	-	120	-	324
West		802	121	190	-	382
North		2762	-	140	-	267
Adamawa		227	-	130	-	345
South		533	259	320	260	304

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results).

-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers, Midas, 1986).

7. Marketing areas

Groundnuts are marketed in rural and urban markets all over the countries.

Groundnut grains and oil are also exported (between 1982 to 1985 10 tons of oil and 339 tons of grain were exported) even though some oil and grains are also imported .

8. Existing marketing facilities

a) Organizations

<u>Name</u>	<u>Location</u>
SODECOTON	Garoua
Women's cooperatives	NW Province
CAMFOOD	Yaounde
UCCAO	Bafassam
<u>Projet Centre -Nord</u>	<u>North province</u>

b) Storage facilities

Groundnuts are stored in small capacity cribs, Ceiling, mud, brick and bamboo stores in rural areas. Improved stores and silos with higher capacities are used by cooperatives and other organizations that market groundnuts.

c) Transport facilities

The small-scale producers transport their groundnuts by head load, animals and hand pushed trucks. Wholesale cooperatives and projects use vehicles such as trucks and pick-ups to move the commodity to urban markets.

d) Credit facilities

Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

Most credit obtained from "tontines" or thrift and loan societies in very small amounts and high interests. However, projects have access to bank credits and support from financial organizations.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Cake	Traditional	*	NA	Available
Paste	Traditional	*	NA	Available
	Machine	***	NA	Available
Oil	Machine	***	NA	Available

The available improvement possibilities are not utilized because of cost limitations and lack of information.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints, groundnuts production in Cameroon suffers from poor farming techniques, inadequate improved planting materials, and pest/ disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from groundnuts.

c) Marketing constraints

The most important constraints in the marketing of groundnuts are high transportation and storage costs, low producer prices and low distributive profit margins.

11. Export prospects

Even though most of this commodity and its are consumed internally, the proximity of some high consumption zones of neighbouring countries to the production areas provides some export potential.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extention.
- UCCAO for training and extension
- CRSP for research surport

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase groundnuts farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds
- improving the marketing of local surpluses and
- increasing goundnut oil production to meet national demand.

14. Donor and international organizations involved

Donor	Activity
-CRSP(USAID)	Research
-SAFGRAD	Research
-CCCE/FAC	Research and extension

15. Persons and organizations recommended for contacts

-Womens Cooperative Societies,	N.W., S.W and West Provinces
-CAMFOOD	Yaounde
-SODECOTON	Garoua
-SODECOA	Yaounde
-UCCAO	Bafaussam
-MIDENO	Bamenda

BAMBARA GROUNDNUTS

1. **Scientific name:** *Voandzeia subterranea*

2. **National and regional production trends**

Province	Production in tons			
	1985/86	1986/87	1987/88	1988/89
Ext. North	1881.4	3125.6	1411	3208
East	72.2	23.7	2	13
Centre	147.6	176.7	183	90
Littoral	847.7	778.0	1402	782
N. West	561.7	460.0	260	108
West	505.2	1149.9	632	1473
North	756.2	986.4	208	622
Adamawa	88.3	142.6	67	224
South	4.7	11.8	15	9
National	4865.0	6855.1	4180	6529

Source: MINAGRI, Agric. survey results, 1985/86 to 1990/91

3. **Post harvest losses**

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for this crop at 20%. (Plan alimentaire a long terme 1985-1995 pg.A/12)

4. **Quantities consumed**

All what is produced is consumed locally and in the production zones as indicated in item 2.

5. **Food products and their consumption rates**

-Consumed mostly in grain form.

92

6. Quantities and forms marketed by region

Region	Form mkt'd	Quantities mkt'd		F.gate price	
		by season (tons)		by season(FCFA)	
		1st cycle	2nd cycle	1st cle	2nd cle
National	Grain	358	3	-	-
Ext. North	"	10	-	120	-
East	"	-	-	-	-
Centre	"	8	-	90	-
Littoral	"	250	-	190	-
N. West	"	35	-	50	-
West	"	32	1	60	30
North	"	7	-	70	-
Adamawa	"	15	2	160	140

Source: Etude de commercialisation des produits vivriers (1986)
(G.F.S./Midas, MINDIC, Yaounde)

7. Marketing areas

Most this commodity is marketed and consumed in the production zones and very little gets into the urban areas.

8. Existing marketing facilities

a) Organizations

None

b) Storage facilities

The commodity is stored in small capacity cribs, Ceiling, mud, brick and bamboo stores in rural areas.

c) Transport facilities

It is transported in small quantities by producers by head load, animals and hand pushed trucks to homes and rural markets.

d) Credit facilities

-Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

-Most credit is obtained from "tontines" or thrift and loan societies in very small amounts and high interests.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this

information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints this commodity in Cameroon suffers from poor farming techniques, inadequate improved planting materials, and pest/ disease attacks.

b) Processing constraints:

This commodity is consumed mainly in grain form. There are limited number of products made from it.

c) Marketing constraints:

The most important constraints in the marketing of this commodity is that consumption is limited to the production area and quantities sold are small because its demand in the urban centers is low.

11. Export prospects

Internal production of this commodity is low. Prospects for export are very limited.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- UCCAO for training and extension
- SODECOTON for training and extension.

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

14. Donor and international organizations involved

- None

15. Persons and organizations recommended for contacts

-UCCOA Bafaussam

-MIDENO Bamenda

-SODECOTON Garoua

SOYA BEAN

1. Scientific name: *Glycine soja*

2. National production trends

Production (tons)				Production projections	
1981/82	1982/83	1983/84	1984/85	1989/90	1990/91
159	318	543	1010	3635	4440

Source: UCCAO, Project soja, 1985 (p.79)

3. Post harvest losses

No figures are available but it reasonable to assume that losses are about the same rate as groundnut and bambara groundnut (20%)

4. National Consumption trends and projection

Consumption in tons				Projections	
1981/82	1982/83	1983/84	1984/85	1989/90	1990/91
103	190	250	405	1252	1490

Source: UCCAO, Project soja, 1985 (p.79)

5. Food products and their consumption rates

The major products produced from this crop in Cameroon and most of which are on experimental basis include: Flour, Soy bean milk, Doughnuts, and Cakes . However, the flour is presently being produced and marketed on commercial scale.

6. Quantities and forms marketed by region
Information not available.

7. Marketing areas

The crop and its products are consumed by producers and the rest is marketed mainly in the towns of producing areas of the North west and West provinces and in the towns of Yaounde and Douala..

8. Existing marketing facilities

a) Organizations

<u>Name</u>	<u>Location</u>
UCCAO	Bafaussam
MIDENO	Bamenda

b) Storage facilities

Soya beans are stored in small capacity cribs, Ceiling, mud, brick and bamboo stores in rural areas. Improved stores with higher capacities are used by cooperatives and projects involved.

c) Transport facilities

The small-scale producers transport their products by head load, animals and hand pushed trucks to homes and markets. Vehicles are also used to transport them to urban areas.

d) Credit facilities

Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

Most credit is obtained from "tontines" or thrift and loan societies in very small amounts and high interests. However, some financial assistance is given to farmers involved in the Soy bean project to encourage production and processing

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Doughnut	Traditional	*	NA	Available
	Machine grinding	**	NA	Available
Flour	Traditional	*	NA	Available
	Machine grinding	**	NA	Available
Milk	Traditional	*	NA	Available
	Machine	**	NA	Available

The available improvement possibilities are not utilized because of cost limitations.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints, soy bean production in Cameroon suffers from poor farming techniques, inadequate improved planting materials, and pest/ disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information and cost limitations.

c) Marketing constraints

The most important constraints in the marketing of soy bean are high transportation and storage costs, low producer prices and low distributive profit margins. and limited information about the crop and products to potential consumers.

11. Export prospects

Low for the moment especially as the planned national soy beans project never took off.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAQ/UNDP for postharvest development and extension.
- UCCAO for training and extension

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase soy bean farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-FAO	Postharvest research and extension
-CIRAD	Research and development

15. Persons and organizations recommended for contacts

- Womens Cooperative Societies, N.W., S.W and West Provinces
- CAMFOOD, Yaounde
- Mrs Bongadou Bamenda
- MIDENO Bamenda
- UNDVA Ndop
- CAMFOOD Yaounde
- GPE Bamenda

PLANTAIN

1. Scientific name: *Musa spp*

2. National and regional production trends

Province	Production in tons					
	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
East	141977.9	NA	105421	105906		
Centre	209416.0	"	138704	156212		
Littoral	63434.3	"	66575	49465		
S. West	429890.6	"	283356	220566		
N. West	136406.0	"	110627	111516		
West	172351.8	"	187493	146176		
North	NA	"	NA	289		
Adamawa	4608.7	"	4727	3793		
South	79837.9	"	52054	60274		
National	1238102.8	"	948957	854177	1136310	869544

Sources: 1. Agricultural survey results 1985/86 to 1990/91

3. Post harvest losses

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for this crop at 20%. (Plan alimentaire a long terme 1985-1995 pg.A/12)

4. Quantities consumed by region in 1987

Region	Consumption rate/week/household
South West	20.4 kg
West	12.0
Littoral (excluding Douala)	15.6
North west	8.9
Douala	9.3

Source: Ekezie et al. (1988)

In Yaounde , consumption for 1985 was 82000 tons (Midas 1986)

5. Food products and their consumption rates

Most of the plantains in Cameroon are consumed as a basic vegetable. Only small quantities are processed into flour and chips

6. Quantities and forms marketed by region

Region	Form Mktd,	Consumer price Prov. Hdqters 1986 CFA/kg
National	Bunches	72
Ext. North	"	77
Centre	"	67
Littoral	"	64
S. West	"	50
N. West	"	81
West	"	23
Adamawa	"	106
South	"	93

Source: -Quantities marketed and farm gate prices 1988/89
(Agricultural survey results).

-Consumer prices are from 1986 study on marketing of food crops (Etude de commercialisation de cultures vivriers).

7. Marketing areas

Plantains are marketed in the rural areas where produced but large quantities are transported in sold in all the urban markets in the country.

8. Existing marketing facilities

a) Organizations

Name	Location
Women cooperatives	Kumba & Buea
CAMFOOD	Yaounde

b) Storage facilities

No traditional storage facilities exist for plantains in Cameroon. They are consumed fresh after harvest.

c) Transport facilities

Producers transport the commodity by head load, animals and hand pushed trucks to homes and village markets. Whole salers use vehicles such as trucks and pick-ups to move the commodity to urban markets.

d) Credit facilities

Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers. Most credits are obtained from "tontines" or thrift and loan societies in very small amounts and high interests. UCCAO and the government sometimes grants credit to young farmers to produce this crop along with some others.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints, plantain production in Cameroon suffers from poor farming techniques, inadequate improved planting materials, and pest/disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from plantains.

c) Marketing constraints

The most important constraints in the marketing of plantains are high transportation costs, low producer prices, high perishability of the crop, lack of storage facilities, and low distributive profit margins.

11. Export prospects

Even though most of this commodity is consumed internally, the proximity of some high consumption zones of neighbouring countries to the production areas provides some export potential (for example large quantities of this commodity are known to be exported to Gabon).

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extension.
- UCCAO for training and extension
- CRSP for research support

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase Plantain farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-INIBAP	Research and Development

15. Persons and organizations recommended for contacts

-Womens Cooperative Societies,	N.W., S.W and West Provinces
-CAMFOOD,	Yoaunde
-Mrs Bongadou	Bamenda
-MIDENO	Bamenda
-INIBAP	IRA, Njombe

BANANA

1. Scientific name: *Musa spp.*

2. National and regional production trends

Province	Production in tons					
	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
East	36168.7	40585.6	36169	28942		
Centre	105315.2	124555.3	105315	90739		
Littoral	44051.4	34818.6	44051	36704		
S. West	217396.6	141370.3	217397	112839		
N. West	104099.6	92967.2	104100	100543		
West	196615.8	259220.4	196616	199357		
North			907	2460		
Adamawa	9723.6	8427.4	9724	10909		
South	28178.8	36830.3	28179	29528		
National	741549.7	738774.9	742456	612031	593535	594100

Sources: 1. Agricultural survey results 1985/85 to 1990/91
(MINAGI)

3. Post harvest losses

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for this crop at 25%. (Plan alimentaire a long terme 1985-1995 pg.A/12)

4. Consumption rates

The long term food plan for Cameroon estimated a per capita consumption of 47.6kg for 1985/86 and a national consumption of 471100 tons (Midas 1986).

5. Food products and their consumption rates

Bananas are consumed mostly as a ripe fruit in Cameroon

6. Quantities and forms marketed

Bananas are marketed in bunches or hands, Quantities marketed locally are unavailable but it has been reported that 47000ton were exported in tn 1986/87, 47878tons in 1986/87, 37451 tons in 1987/88, and in 40000 tons in 1988/89 (Afrique agriculture, August/Sept. 1990).

7. Marketing areas

It is marketed in the rural markets in the producing areas and in all urban markets. Some of the commodity is exported to Europe.

8. Existing marketing facilities

a) Organizations

Name	Location
CDC	SW province
Del Monte	Douala
SPNP	Penja

b) Storage facilities

There are no traditional storage facilities for banana in Cameroon. Cool stores are available to producing corporations.

c) Transport facilities

The small-scale producers transport the crop by head load, animals and hand pushed trucks to homes and the local markets. The producing corporations use vehicles such as trucks and pick-ups to move the commodity to the port for export.

d) Credit facilities

Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

Most credits obtained from "tontines" or thrift and loan societies in very small amounts and high interests. The producing corporations have access to credit facilities from the banks and international financial organizations.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services, the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is only operational in the West and North West Provinces. The producing corporations have the capability to obtain the necessary marketing information from their overseas markets.

9. Existing processing and transformation technologies

Bananas are consumed mostly as a ripe fruit in Cameroon.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints, banana production in Cameroon suffers from poor farming techniques, inadequate improved planting materials to the small scale farmers, and pest/disease attacks (especially cercospora and nematods).

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from bananas.

c) Marketing constraints

The most important constraints in the marketing of banana are high transportation and storage costs, low producer prices to small scale farmers and the high perishability of the commodity.

11. Export prospects

Cameroon has been a traditional exporter of banana but the export market presently faces a lot of competition from other producing countries.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- UCCAO for training and extension
- CRSP for research support
- CIRAD for research and extension

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes in the producing areas include:-

- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved planting materials and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-CIRAD	Research
-Common Wealth Development corporation (CDC)	Production
-World bank	Production
-INIBAP	Research/ext.

15. Persons and organizations recommended for contacts

- CDC, Bota, SW Province
- INIBAP
- Del Monte, Douala
- SPNP, Penja
- INIBP, Njombe

OIL PALM

1. Scientific name: *Eleias guineensis*

2. National and regional production trends (traditional sector)

----- Production in 1000 litres (palm oil) -----						
Province	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91

East	2039.6	3103.6	2752	1773		
Centre	7789.3	4625.6	5275	4365		
Littoral	3553.0	1383.2	2180	6968		
S. West	12225.0	6955.1	10670	7758		
N. West	14503.5	15030.8	9852	6301		
West	5088.0	5100.6	6670	5176		
Adamawa	240.9	136.2	229	417		
South	2111.3	2642.8	2098	1152		
National	47550.5	38977.8	39727	33910	34330	36708

Sources: 1. Agricultural survey results 1985/85 to 1990/91

Total national production of palm oil in tons

Years	1986/87	1987/88	1988/89

Production	107000	100486	88830

Source: Afrique agriculture (August/sept. 1990)

3. Post harvest losses

The 6th plan estimated a national postharvest loss of 10% for 1984/84

4. Annual national consumption and per capita consumption (1985)

Annual consumption	105000 tons
Per capita consumption	10.7 kg

Source: Etude de commercialisation des produits vivriers (MIDAS 1986)

5. Food products and their consumption rates

The common food products from palm oil in Cameroon are palm oil and palm kernels oil and palm kernel cake for animal feed.

The consumption rate for palm oil in 1985 as indicated in item 4 above was estimated as 10.7 kg per person.

6. Quantities and forms marketed by region

Region	Form mkt'd	Consumer price (FCFA) Prov Hdqters 1986 CFA/kg	Quantities marketed
National	Palm oil	401	NA
Centre	"	440	"
Littoral	"	372	"
S. West	"	403	"
N. West	"	389	"
West	"	404	"
North	"	612	"
Adamawa	"	667	"
South	"	467	"

Source: G. F MIDAS 1986

7. Marketing areas

Palm oil is marketed in all urban and rural markets of the country. It is also exported by the producing corporations to Europe.

8. Existing marketing facilities

a) Organizations

Name	Location
CDC	Bota, SW province
PAMOL	Lobe, SW province
SOCAPALM	Souza, Littoral Province
SSP	EDEA, Littoral

b) Storage facilities

Palm oil is traditionally stored in drums and tins by the small scale farmers but the producing corporations are equipped with large tankers for storage.

c) Transport facilities

The small-scale producers transport palm oil by head load, animals and hand pushed trucks to the markets. Whole salers use vehicles such as trucks and pick-ups to move the commodity from the producing corporations to consumption centres. Trucks, lorries, tankers and railway facilities are available to the producing corporations

d) Credit facilities

Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

Most credits obtained from "tontines" or thrift and loan societies in very small amounts and high interests. The producing corporations have access to credit facilities from the banks and international financial organizations.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services, the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is only operational in the West and North West Provinces. The producing corporations have the capability to obtain the necessary marketing information from their oversea markets.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Palm oil	Traditional	*	NA	Available
	Modern machines	****	NA	

The available improvement possibilities are not widely utilized because of cost limitations.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general production constraints, oil palm production in Cameroon suffers from poor production techniques, inadequate improved planting materials in the traditional sector, and pest/ disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information and high cost of equipment.

c) Marketing constraints

The most important constraints in the marketing of palm oil are high transportation and storage costs, low producer prices to the small scale farmers and low distributive profit margins.

11. Export prospects

Even though internal demand for palm oil is often not met by national production, records show that Cameroon exports some oil to other countries.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extension.
- UCCAO for training and extension
- CRSP for research support
- SODECOA for training and extension
- SOWEDA for training and extension
- CDC for production and marketing
- CIRAD for research and extension

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes in the producing areas include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seedlings and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-World bank	Production
-CDC(Common Wealth)	Production
-CIRAD	Research and development

15. Persons and organizations recommended for contacts

- CDC, Bots, SW Province
- SOCAPALM, Littoral
- SSP, Littoral
- PAMOL, SW province
- Women cooperatives in Muya & Kumba, SW province

FRUITS

1. Scientific name: --

2. National production Forecast

6th Plan National Production forecast for 1990/91 excluding banana was 90000 tons

3. Post harvest losses

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for pineapples at 20% and other fruits excluding banana and pineapples, at 10% (Plan alimentaire a long terme 1985-1995 pg.A/11)

6. Quantities and forms marketed

<u>Forms marketed</u>	<u>Quantities</u>
Fresh fruits	NA
Juice	NA
Nectar	NA
Jam	NA
Pulp	NA
Fruit drink	NA

7. Marketing areas

<u>Areas</u>	<u>Level of activities</u>
-Rural markets	High for fresh fruits
-Urban markets	Very high
-Export market	High

8. Existing marketing facilities

a) Organizations

Name	Location
OPERA	Loum, Littoral province
Conserve-Mbanga (Royal Fruit)	Douala
Vegetable/fruits Coops.	Buea & Bamenda

b) Storage facilities

Beans are stored in small capacity cribs, Ceiling, mud, brick and bamboo stores in rural areas. Improved stores with higher capacities are used by cooperatives that market beans.

c) Transport facilities

The small-scale producers transport their beans by head load, animals and hand pushed trucks. Whole salers use vehicles such as trucks and pick-ups to move the commodity to urban markets.

-Poor road infrastructure especially in rural areas.

d) Credit facilities

-Very limited credit facilities offered by banks (CAC) and credit organizations (FIMAC) to small farmers.
-Most credit obtained from "tontines" or thrift and loan societies in very small amounts and high interests.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP FAO attemp at this information dissemination is still operational in the West and North West Provinces.

b) Storage facilities

-Some cold storage facilities are available to processing firms

c) Transport facilities

-Vehicles and trucks

d) Credit facilities

-Limited bank loans to producers

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product in FCFA/litre ++	Improvement possibilities
<u>Juices</u>				
Pineapple	Machine	***	381.8	Available
Guava	Machine	***	186.5	Available
<u>Nectars</u>				
Mango	Machine	***	215.0	Available
Lemon	Machine	***	283.3	Available
Grenadine	Machine	***	361.1	Available
Grape	Machine	***	257.6	Available
<u>Jam</u>				
Pineapple	Machine	***	392.6	Available
Mango	Machine	***	357.2	Available
Guava	Machine	***	353.6	Available
Orange	Machine	***	431.3	Available
Pineapple/ mango	Machine	***	379.2	Available

The available improvement possibilities are not utilized because of cost limitations.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general production constraints, bean production in Cameroon suffers from poor farming techniques inadequate improved planting materials, and pest/ disease attacks.

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from beans.

c) Marketing constraints

The most important constraints in the marketing of beans are high transportation and storage costs, low producer prices and low distributive profit margins.

11. Export prospects

Even though most of this commodity is consumed internally, the proximity of some high consumption zones of neighbouring countries to the production areas provides some export potential.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- FAO/UNDP for postharvest development and extension.
- UCCAO for training and extension
- CRSP for research support

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase bean farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

14. Donor and international organizations involved

Donor	Activity
-CRSP (USAID)	Research
-SAFGRAD	Research

15. Persons and organizations recommended for contacts

- Womens Cooperative Societies, N.W., S.W and West Provinces
- CAMFOOD, Yaounde

116

10. Production, processing and marketing constraints

a) Production constraints

- Disease and pest problems
- Lack of improved varieties and production technology

b) Processing constraints

- Limited technologies and high costs per unit
- Packaging and storage difficulties
- Seasonal and inconsistent supply of raw materials

c) Marketing constraints

- Bulkiness
- Highly perishable
- Seasonality of product
- High transportation costs
- Low prices during peak seasons
- Lack of storage facilities

11. Export prospects

- High

12. Supporting institutions

- MINAGRI
- IRA

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase farmers' incomes include:-

- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs, and
- increasing efficiency of production and transformation to augment added values.

14. Donor organizations involved

- FAO

15. Persons and organizations recommended for contacts

- IRA , Njombe
- SAIFO, Bafaussam (UCCAO)
- Vegetable/fruit cooperatives in Bamenda and Buea
- Savanna, Maroua in Far North province
- OPERA in Loum, Littoral province
- Conserve-Mbanga (Royal Fruit) in Douala

VEGETABLES

1. Scientific name:---
2. National production for 1984

Fruit	Quantity in tons
Tomato	42500
Onions	45000
Okro	3040
Other fresh vegetables	350000

3. Post harvest losses

Studies undertaken by MINAGRI in 1985 estimated postharvest losses for tomato at 30%, onions 25%, and dried okro at 25%. (Plan alimentaire a long terme 1985-1995 pg.A/12)

6. Quantities and forms marketed

Forms marketed	Quantities
-Fresh fruit vegetables	NA
-Leafy vegetables	NA
-Dried and ground forms	
-Pepper	NA
-Cabbage	NA
-Amaranthus	NA
-Huckle berry	NA
-Bitter leaves	NA
-Garlic	NA

7. Marketing areas

Vegetables are marketed in all rural markets of the producing areas and in most urban markets. Some are exported to neighbouring countries and some (green beans) to Europe.

8. Existing marketing facilities

a) Organizations

Name	Location
SCAN	Foumbot in West Province (for tomato)
PROLEG	Bafaussam (Green beans by Victor Fotso)
Nguevo Michel Vegetable/fruits	Foumbot (To can green beans in Bafaussam)
Coops.	Buea & Bamenda
SOCAF	Bafaussam (for Green beans)
FRIGO CAM	Douala (for green beans)

b) Storage facilities

Small farmers have no storage facilities for vegetables. Most vegetables are eaten fresh and only a few dried forms are stored for short periods. Companies that process or package vegetables have some cold storage facilities.

c) Transport facilities

The small-scale producers transport their vegetables by head load, animals and hand pushed trucks. Whole salers use vehicles such as trucks and pick-ups to move the commodity to urban markets. The processing companies have appropriate vehicles for transporting the fresh and processed forms.

d) Credit facilities

Very limited credit facilities are offered by banks (CAC) and credit organizations (FIMAC) to small farmers.

Most credit are obtained from "tontines" or thrift and loan societies in very small amounts and high interests. Processing companies have access to bank credit.

e) Market intelligence and information

Even though some market information is collected by some institutions and some government services the availability of this information to farmers is very limited. However, a recent UNDP/FAO attempt at this information dissemination is still operational in the West and North West Provinces.

9. Existing processing and transformation technologies

Product	Technology	Degree of sophistication	Cost/ unit product	Improvement possibilities
Dried	Drying & packaging	**	NA	Available
Canned	Machine	***	NA	

The available improvement possibilities are not utilized because of cost limitations.

10. Production, processing and marketing constraints

a) Production constraints

In addition to the general crop production constraints, vegetable production in Cameroon suffers from poor production techniques, inadequate improved planting materials, pest/ disease attacks and high cost of production.

b) Processing constraints

Limited use of improved processing technologies due to lack of information, cost limitations and limited products made from each type of vegetable.

c) Marketing constraints

The most important constraints in the marketing of vegetables are high transportation and storage costs, low producer prices, lack of storage facilities and bulky nature of some vegetables

11. Export prospects

Even though most of these commodities are consumed internally, the proximity of some high consumption zones of neighbouring countries to the production areas provides some export potential. Some fresh vegetables like green beans are already being exported to Europe.

12. Supporting institutions and Projects:

- Ministry of Agriculture, for extension, policy planning and execution.
- IRA for research, technology development/adaptation, and extension.
- MIDENO for training and extension.
- UCCAO for training and extension
- SODECOTON

13. Current policy strategies

Strategies for increased production and improved storage, transformation and marketing to increase bean farmers' incomes in the producing areas all over the country include:-

- Developing techniques of reducing postharvest losses
- Improvement of farmer education
- Development and support of small scale farmers
- Promoting small and medium scale farm programs,
- increasing efficiency of production
- developing and producing improved seeds and
- improving the marketing of local surpluses

15. Persons and organizations recommended for contacts

- Vegetable/fruit cooperatives in Bamenda and Buea
- Mrs Bongadou
- SCAN in Foumbot in West Province (for tomato canning)
- PROLEG in Bafaussam (Green beans by Victor Fotso)
- Nguervo Michel Foumbot (To tin green beans in Bafaussam
- Vegetable/fruits
- Vegetable Coops. in Buea & Bamenda
- SOCAF in Bafaussam (for Green beans)
- FRIGO CAM in Douala (for green beans)

INVENTORY OF STUDIES ON CAMEROON'S FOOD CROP PRODUCTION, PROCESSING, AND MARKETING

1. PRODUCTION

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128

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12/1

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133

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CONTACT PERSONS

1. Director of IRA
2. Director of IRZ
3. Director of Agric/MINAGRI
4. Director of Animal Industries/MINEPIA
5. Director of Industries/MINDIC
6. Director of Plan/MINPLAN
7. Mokolo Food Market Yaounde
8. Cameroon Food Cooperative Society, Yaoundé
9. Muea Food Market, Buea.
10. Makenene Bus Stop
11. Mme Debora Bihfor, Bafut
12. GM MIDENO
13. GM UNVDA
14. Gari Factory Babungo
15. Maroua Food Market
16. Fruit Juice Factory, Maroua
17. Cotton Oil Mill, Maroua
18. Soybean Flour Mill, Bamenda
19. Tools Manufacturing Factory Bamenda
20. Nso Womens Cooperative Society
21. Credit Agricole du Cameroon
22. Food Manufacturing Plant, Garoua
23. Garoua River Port
24. Kousseri Border Post
25. Feed Mill, IRZ Wakwa
26. IRA (Food technology Section) Njombe
27. University of Dschang, Dschang.
28. University of Ngaoundéré, Ngaoundéré

ACRONYMS

1. C.D.C. - CAMEROON DEVELOPMENT CORPORATION
2. SOPAPALM - SOCIETE CAMEROUNAISE DE PALMERIE
3. SPFS - SOCIETE DE PALMERAIES DE LA FERME SWISS
4. SODECOTON - SOCIETE DE DEVELOPPEMENT DU COTON
5. SEMRY - SOCIETE D'EXPANSION DE MODERNISATION DE LA RIZICULTURE DE YAGOUA.
6. SIAC - SOCIETE DES INDUSTRIES AGRO-ALIMENTAIRES DU CAMEROUN.
7. SOCAF - SOCIETE DE CONSERVERIE AFRICAINE
8. UNVDA - UPPER NOUN VALLEY DEVELOPMENT AUTHORITY
9. SODEBLE - SOCIETE DE DEVELOPPEMENT DE LA CULTURE DE LA TRANSFORMATION DE BLE.
10. SODERIM - SOCIETE DE DEVELOPPEMENT DE LA RIZICULTURE DANS LA PLAINE DE OMA
11. CIP - INTERNATIONAL POTATO CENTRE
12. CNRCIP - CAMEROON NATIONAL ROOT CROP IMPROVEMENT PROGRAM
13. FAO - FOOD AND AGRICULTURE ORGANIZATION
14. IITA - INTERNAL INSTITUTE FOR TROPICAL AGRICULTURE
15. IRA - AGRICULTURAL RESEARCH INSTITUTE
16. MIDENO - NORTHWEST DEVELOPMENT AUTHORITY
17. NCRE - NATIONAL CEREAL RESEARCH AND EXTENSION
18. ROTREP - ROOT AND TUBER FOOD CROP RESEARCH PROJECT
19. SODECAO - COCOA DEVELOPMENT COMPANY
20. UCCAO - UNION CENTRALE DES COOPERATIVES AGRICOLES DE L'OUEST
21. USAID - UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
22. SCAN - SOCIETE CONSERVERIE ALIMENTAIRE DU NOUN
23. INIBAP - INTERNATIONAL NETWORK FOR IMPROVEMENT OF BANANAS AND PLANTAINS
24. MINAGRI - MINISTRY OF AGRICULTURE
25. CIRAD - CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHES AGRONOMIQUE POUR LE DEVELOPPEMENT
26. CRSP - COLLABORATIVE RESEARCH SUPPORT PROGRAM.
27. UNDP - UNITED NATIONS DEVELOPMENT PROGRAM
28. EEC - EUROPEAN ECONOMIC COMMISSION
29. CCCE - CAISSE CENTRALE DE COOPERATION ECONOMIQUE
30. IFAD - INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT
31. SAFGRAD - SEMI ARID FOOD GRINS RESEARCH AND DEVELOPMENT
32. FIMAC - FONDS D'INVESTISSEMENT POUR DES MICRO-REALISATION AGRICOLES ET COMMUNAUTAIRES.
33. FAC - FONDS D'AIDE ET DE COOPERATION.
34. CAPP - CAMEROON AGRICULTURAL POLICY AND PLANNING PROJECT.

GUIDE TO THE LOCATION OF REFERNCES

University of Dschang

Category	Numbers of document
<u>Production</u>	1, 12, 13, 15, 23, 26, 28, 35, 37, 38, 51. 52
<u>Postharvest technology</u>	5, 33, 44

Marketing	1, 5, 6, 11, 16, 37, 38, 41, 42, 43, 45, 50
<u>Policy</u>	3, 4, 7, 18, 19, 20, 25, 26, 27, 28, 29
<u>General</u>	29, 30, 32

IRA Ekona	
<u>Production</u>	2, 3, 4, 8, 9, 10, 11, 20, 21, 22, 24, 25, 36, 55
<u>Postharvest technology</u>	6, 7, 34, 35, 37
<u>Marketing</u>	2, 3, 9, 10, 12
<u>Policy</u>	-----
<u>General</u>	4, 15

<u>IRA Yaounde</u>	
<u>Production</u>	5, 6, 7, 55
<u>Postharvest technology</u>	1, 6, 17, 25, 26,
<u>Marketing</u>	
<u>Policy</u>	
<u>General</u>	5, 12
<u>USAID, Yaounde</u>	
<u>Production</u>	27, 31
<u>Postharvest technology</u>	1, 2, 13, 17, 28, 30, 39, 50, 51
<u>Marketing</u>	
<u>Policy</u>	13, 20, 22, 25, 26, 46, 52
<u>General</u>	13, 14, 21, 31, 36, 5, 6, 13, 34, 37, 41, 42

MINAGRI	
<u>Production</u>	29, 30, 31

<u>Marketing</u>	32, 35
<u>Policy</u>	23, 35
<u>General</u>	2, 17, 18, 19, 20, 24
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IRA-Dschang	
<u>Postharvest technology</u>	3, 4, 24, 39
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CIP Bamenda	
<u>Production</u>	16, 17
<u>Postharvest technology</u>	12, 48
<u>Policy</u>	16, 22
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World bank	
<u>Policy</u>	8, 9
<u>General</u>	43, 44, 45, 46, 47
University of Yaounde	
<u>Production</u>	19, 40
<u>Postharvest technology</u>	19, 15
<u>Marketing</u>	19, 28, 29, 36
<u>Policy</u>	35, 41
<u>General</u>	3, 7, 9, 14, 16, 27, 31, 38
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PAID-Buea	
Production	8, 26, 33
Marketing	5, 24, 40, 44, 51
Policy	10
General	22, 23, 33, 36
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142

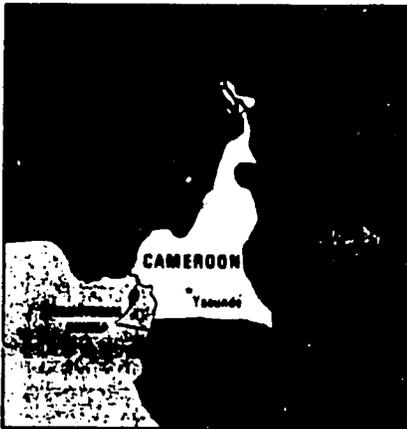
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Cameroon



United States Department of State
Bureau of Public Affairs

November 1988



Official Name:
Republic of Cameroon

PROFILE

Geography

Area: 475,439 sq. km. (183,568 sq. mi.); about the size of California. **Cities:** *Capital*—Yaounde (pop. 700,000). *Other cities*—Douala (850,000), Nkongsamba (110,000), Bafoussam (95,000), Garoua (85,000). **Terrain:** Northern plains; central and southern plateaus; western highlands and mountains; coastal plains. **Climate:** *Northern plains*—semiarid and hot (7-month dry season). *Central plateau*—cooler, shorter dry season. *Southwest*—year-round rainfall. *Coastal lowlands*—warm and humid year round.

People

Nationality: *Noun and adjective*—Cameroonian(s). **Population** (1987 est.): 10.5 million (60% in rural areas). **Annual growth rate:** 3.6%. **Ethnic groups:** 200 tribes. **Religions:** Christianity, Islam, indigenous African. **Languages:** English and French (official), more than 80 African. **Education:** *Years compulsory*—none. *Attendance*—over 70%. *Literacy*—65%. **Health:** *Infant mortality rate*—92/1,000. *Life expectancy*—54 yrs. **Work force** (1983): *Agriculture*—70%. *Industry and commerce*—13%. *Tertiary sector*—17%.

Government

Type: Independent republic.
Independence: January 1, 1960.
Constitution: May 20, 1972.

Branches: *Executive*—president (head of government and chief of state, 5-year term). *Legislative*—unicameral National Assembly (180 members, 5-year terms). *Judicial*—Supreme Court.

Administrative subdivisions: 10 provinces.

Political party: Cameroon People's Democratic Movement (CPDM or RPDC).
Suffrage: Universal adult.

Central government budget (1987-88): 650 billion francs CFA (*Communaute Financiere Africaine*) (\$2.32 billion balanced, and an 18.75% decrease in CFA terms over the 1986-87 budget).

Defense (1987-88): 11.2% of budget.

Flag: Three vertical stripes from left to right—green, red, and yellow—with one yellow star centered in red stripe.

Economy

GDP (1985-86): \$11.7 billion. **Annual growth rate** (1987): 7%. **Per capita income:** \$1,171. **Avg. inflation rate** (1987): 12%.

Natural resources: Oil (17% of GDP), natural gas, bauxite, iron ore, timber.

Agriculture (1985, 20.6% of GDP): *Products*—cocoa, coffee, cotton. *Arable land*—12%.

Industry (12% of GDP): *Types*—manufacturing (1984, 19% of GDP), food processing, beverages, tobacco, textiles, shoes.

Trade (1986): *Exports*—\$1.11 billion: petroleum, cocoa, coffee, tropical wood. *Major markets*—Netherlands 27.7%, France 22.7%, US 1.6%. *Imports*—\$1.5 billion: intermediate goods, capital goods, fuel and lubricants, foodstuffs, beverages, tobacco. *Major suppliers*—France 42%, US 7%, FRG, Japan.

Official exchange rate: 50 CFA to one French franc, which floats against the US dollar.

Fiscal year: July 1-June 30.

Membership in International Organizations

UN and some of its specialized agencies, Organization of African Unity (OAU), Customs and Economic Union of Central Africa (UDEAC), Lake Chad Basin Commission (LCBC), INTELSAT, associate member of European Community (EC).

GEOGRAPHY

The Republic of Cameroon, referred to as the "hinge" of Africa, is in the western part of the continent on the Gulf of Guinea, about midway between Senegal and the Republic of South Africa.

Cameroon has four distinct topographical regions.

- In the south is a low coastal plain with equatorial rain forests.

- In the center is a transitional plateau, reaching elevations of 1,372 meters above sea level.

- The west has mountainous forests, including Mt. Cameroon, an active volcano and the highest peak in sub-Saharan West Africa at 4,100 meters (13,500 ft.).

- The north consists of low, rolling savanna gradually sloping down to a desert basin/marshland surrounding Lake Chad.

The climate is as varied as the topography. The coast has high temperatures and humidity throughout the year, as well as one point with the second highest annual rainfall (1,150 cm.—460 in.) in the world. Inland, and to the north, the temperature fluctuates seasonally, and the humidity declines, while in the extreme north the air is very dry.

PEOPLE

Located in the geographical and ethnic crossroads of Africa, Cameroon has a complex of about 200 tribes speaking more than 80 major African languages. It is the only African nation where both French and English have been given official status. About four-fifths of the Cameroonians live in the French-speaking eastern part of the country. Some 20,000 Europeans and 800 U.S. citizens reside in Cameroon. The main seaport and largest city is Douala; the capital, Yaounde, is the second largest city.

By African standards, Cameroon's educational system is unusually extensive. In 1961, the government established the University of Yaounde, the first African university to offer courses in both French and English. Branch campuses also have been established in Ngaoundere in the north and Dschang in the West, as well as in Douala.

Muslims are concentrated in the north and Christians in the south. Nearly half of the population practice

traditional African religions, and Muslims and Christians are influenced by these beliefs.

HISTORY

European contact with the area began in the 1500s with the voyage of the Portuguese navigator Fernando Po. Throughout the next three centuries, Spanish, Dutch, and British traders visited the area. The slave trade, while it lasted, was active along the Cameroonian coast. Religious mission settlements began to appear in the mid-1800s and have been active ever since.

Modern Cameroonian history began in July 1884, when Germany, the United Kingdom, and France all attempted to annex the area. The German Consul at Tunis, Tunisia, was the first to arrive and, in a treaty with the kings of Douala, brought Cameroon under German control.

Over the years, Germany strengthened its claim and expanded its territory by various treaties with the United Kingdom and France, but in 1914 British and French armies invaded the German colony. A declaration signed at London in 1919 divided Cameroon between the United Kingdom and France, with the larger, eastern area transferred to French possession. The division was sanctioned in 1922 under a League of Nations mandate.

French Cameroon refused to accept the armistice that followed the fall of France in 1940. Gen. Charles de Gaulle's envoy, Col. Jacques Le Clerc, landed at Douala in August and seized the territory for the Free French. Troops trained in Cameroon later saw action in North Africa and Syria.

In 1946, the French and British mandates over the territory were converted by the United Nations into trusteeships. In December 1958, the UN General Assembly voted to end the French Trusteeship, and on January 1, 1960, Cameroon achieved independence as the Republic of Cameroon.

In February 1961, the British held a plebiscite in the British Cameroons, under UN auspices, to determine whether the people wished union with Nigeria or with the new Republic of Cameroon. The voters in the two northern sections chose to join Nigeria; those in the southern section, Cameroon. Cameroon contended that the total vote of the British Cameroonians should decide the issue, rather than the separate vote of the northern and

southern parts, but its position was rejected. On June 1, 1961, the northern area was attached to Nigeria. On October 1, 1961, reunification of the southern part with French Cameroon occurred, and the new Federal Republic of Cameroon was born.

From 1961 until the spring of 1972, Cameroon was governed as a federation, with East (former French) Cameroon and West (former British) Cameroon having individual governments, each with a parliament and ministries, in addition to the federal government structure.

In 1972, President Ahidjo proposed abolition of the federal structure. He declared that the cost and inefficiency of the system were slowing the country's progress toward national identity. Moreover, 11 years' experience since independence had ensured that regional interests would be well protected under the national government. A referendum held on May 20, 1972, gave widespread endorsement to the proposal, and a June 2 decree proclaimed the United Republic of Cameroon in existence since the May 20 referendum. On January 25, 1984, the National Assembly approved a constitutional amendment changing the official name to simply the Republic of Cameroon.

GOVERNMENT

The constitution that came into effect with the united state on May 20, 1972, provides for a strong executive authority. The president is empowered to name and dismiss members of the cabinet, negotiate and ratify treaties, accredit ambassadors, commute sentences, exercise pardon, and lead the armed forces. When circumstances warrant, the president can decree a state of national emergency and become invested with special powers.

In the event of the death or permanent incapacity of the president, the speaker of the National Assembly becomes acting president for a period of 20-40 days while new elections are held.

The first National Assembly under the new constitution was elected in May 1973. Laws are adopted by majority vote of members present, except cases in which the president of the republic calls for a second reading, and then adoption requires approval by a majority of the assembly's membership. The



Yaounde, situated in a lush hilly region, has a relatively mild climate during most of the year.

only formal legislative body is the National Assembly.

Each of the 10 provincial governments consists of a governor, appointed by the president, and an administrative staff. Each province is divided administratively into divisions and subdivisions. The internal administrative system is under the Ministry of Territorial Administration. Other ministries, may have representatives at each administrative level.

The judicial system follows the same administrative levels. At the top are the president and his judicial advisers (Supreme Court). In descending rank are the appeals courts, chief judges for the divisions, and local magistrates.

In addition to the formal governmental structure, traditional kingdoms and organizations exercise various functions of government among tribal groups. Tribal laws and customs are honored in the formal court system when not in conflict with national law. Formal governmental and tribal structures are mutually reinforcing, while allowing for local variation based on tribal or regional customs.

Principal Government Officials

President—Paul Biya
 President of the National Assembly—
 Lawrence Fonka Shang
 Director of the Civil Cabinet—Adolphe
 Moudiki
 Secretary General—Paul Tessa
Ministers of State
 External Affairs—Jacques Roger Booh
 Booh
 Armed Forces—Michel Meva'a
 M'Emboutou
 Justice, Keeper of the Seals—Benjamin
 Itoe
 Plan and Regional Development—Eliz-
 abeth Tankeu
 Minister in Charge of Missions at the
 Presidency—Ogork Ebot Ntui

Other Ministers

Agriculture—John Niba Ngu
 Civil Service and State Inspection—
 Joseph Owona
 Finance—Sadou Hayatou

National Education—Georges Ngango
 Labor and Social Welfare—Jean-Bedel
 Bokam
 Public Health—Joseph Mbede
 Commerce and Industry—Joseph
 Tsanga Abanda
 Higher Education and Scientific Re-
 search—Abdoulaye Babale
 Territorial Administration—Ibrahim
 Mbomo Njoya
 Social and Women's Affairs—Yaou
 Boubakary Aissatou
 Livestock, Fisheries, and Animal
 Husbandry—Hamadjoda Adjou
 Information and Culture—Henri
 Bandolo
 Youth and Sports—Joseph Fofe
 Mines, Water, and Power—Francis
 Nkwain
 Posts and Telecommunications—
 Oumarou
 Public Works and Transport—
 Tchepannou
 Town Planning and Housing—Fern
 and Leopold Oyono
 Ambassador to the United States—
 Pondi
 Ambassador to the United Nations—
 Paul Bamela Engo

Cameroon maintains an embassy
 in the United States at 2349 Ma-
 sachusetts Avenue NW., Washin
 D.C. 20008 (tel. 202-265-8790)

147

POLITICAL CONDITIONS

The two major political parties, former President Ahidjo's Cameroon Union (UC) in East Cameroon and the Kamerun National Democratic Party (KNDP) in the West, controlled their respective state assemblies and delegations in the Federal National Assembly upon reunification in October 1961. In April 1962, they joined to form one parliamentary group in support of the government and in the interest of national unity. Opposition parties continued to exist, although they were not represented in the federal National Assembly.

President Ahidjo long maintained that a single "unified" party was necessary to create national unity out of tribal diversity and to promote development of the country. He maintained that democracy could be preserved within the single-party concept. The leading opposition party in East Cameroon supported the President in the 1965 elections, and the main opposition party in the West allied with the KNDP in the state government in August 1965. The President's objective was realized on September 1, 1966, when the three West Cameroon political parties and the UC were dissolved and a single new party—the Cameroon National Union (UNC)—was formed. On September 8, 1966, two of the three small East Cameroon parties also joined the new UNC.

From 1955 until the mid-1960s, Cameroon was subjected to sustained terrorist activity, led by the outlawed Union of Cameroon Peoples (UPC) and supported by foreign communist and radical African regimes. Terrorism gradually was reduced to isolated banditry. The capture of the last important rebel leader in 1970 signaled the end of concerted rebel action and the effective achievement of political consolidation.

Political life in the country today finds its expression in the Cameroon People's Democratic Movement (CPDM). The youth and women's organizations function as divisions of the party, and a unified labor movement (UNTC) is less formally associated with it. Party membership and voting in elections are not obligatory but are important. The most recent legislative elections were held in 1983 with the CPDM providing the list of candidates. President Ahidjo, reelected unopposed, began his fifth 5-year term in May

1980. In November 1982, he resigned and was succeeded by Prime Minister Paul Biya, in accordance with the constitution.

On January 14, 1984, President Biya received his own mandate from the people, and on January 25, 1984, the position of prime minister was abolished. In April 1984, elements of the Republican Guard (the presidential security force) attempted to overthrow the government, but the army remained loyal and put down the coup attempt. Since then, President Biya has worked to consolidate his position, culminating in the Fourth Party Congress, which took place in March 1985. During the Congress, the party changed its name to the Cameroon People's Democratic Movement (CPDM, or *Reassemblément Democratique du Peuple Camerounaise, RPDC*). Based on reforms undertaken during the Congress, Cameroon has embarked on a "democratization" program, which permits the party to put forth multiple lists of candidates, thus giving voters the opportunity to choose between party approved candidates. This system was used in the 1987 municipal elections and in the 1988 National Assembly elections.

ECONOMY

Cameroon has benefited from sustained economic growth since its independence in 1960. During the last 10 years, Cameroon has averaged a 6%-7% annual increase in gross domestic product. Its per capita income—\$1,171 in 1987—is one of the highest in Africa and puts Cameroon squarely in the "middle-income" category of developing countries. Nevertheless, a decline in the market price of its principal export commodities—especially oil—and a resulting domestic liquidity crisis have hurt the economy. The government has instituted an austerity program to bring public expenditures into line with reduced revenues.

Cameroon's petroleum sector, while small by international standards, produces 60% of its export earnings and has played a significant role in its rapid economic growth. Despite this, agriculture remains the mainstay of the economy. Cameroon is agriculturally self-sufficient and employs nearly 70% of its work force in the agricultural sector. Its major cash crops—coffee, cocoa, and timber—produced 23% of export revenues in 1986. Other significant export crops include bananas, rubber, cotton, peanuts, and palm oil. This

Further Information

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For information on foreign economic trends, commercial development, production, trade regulations, and tariff rates, contact the International Trade Administration, US Department of Commerce, Washington, DC 20230 or any Commerce Department district office.

diversity of products has helped Cameroon withstand the effects of sudden fluctuations in world prices for individual tropical agricultural products.

In an effort to maintain food self-sufficiency and to improve production of cash crops, the government has made agriculture the focus of its most recent 5-year economic plan. The government provides credit, fertilizers, and insecticides and is improving marketing procedures. Cocoa, the traditional cash crop, is still grown on family farms; other crops are organized largely on a plantation basis.



Unification Monument in downtown Yaounde.

Cameroon has a relatively small manufacturing sector (12% of 1986 GDP). About 200 small manufacturing, processing, and assembly plants produce consumer goods.

The country's physical infrastructure is being improved gradually, but severe bottlenecks have resulted. Progress is being made in improving the national transportation system, but much of the country is still inaccessible during the rainy season. Vast forests in the south and east have been opened to exploitation, but transportation problems are slowing the expansion of the timber industry.

By 1975, the TransCameroonian Railway, the country's most important

development project, had linked Ngaoundere in north-central Cameroon with the port of Douala. Upgrading the original, 50-year-old portion between Douala and Yaounde began in late 1975, and was completed in mid-1987. The Port of Douala, which handles nearly all of Cameroon's traffic, was expanded recently, and the internal road system is being improved and expanded. Currently, paved roads include "links" between Kousseri-Maroua (Mokolo)-Garoua-Ngaoundere in the north, Bafia-Yaounde-Sangmelima in the south, and Edea-Douala (Limbe)-Bafoussam (Foumban)-Bamenda in the west. Paved

roads also link Douala to Yaounde and Yaounde to Bafoussam.

Electric power production, which provides about 80% of Cameroon's energy needs, has grown steadily. In February 1978, after several years of exploration, Cameroon became a modest oil producer. An oil refinery was opened at Limbe (Victoria), Southwest Province, in May 1981. The 40,000 barrel-per-day capacity refinery produces enough to meet domestic needs as well as some for export. Although oil currently accounts for nearly 60% of Cameroon's export earnings, production from present fields has declined and is expected to continue to drop steadily in the late 1980s.

Trade and Investment

Official estimates of Cameroon's balance of payments—especially of petroleum exports, capital movements, and services—are conflicting and subject to underreporting of oil revenues. The U.S. Embassy and the International Monetary Fund estimate that Cameroon maintained an improving balance-of-payments position through the first half of the decade, mainly due to oil export revenues. Lower world oil prices and reduced production led to a trade deficit in 1986 that is not expected to improve in the near future.

Petroleum is the single most important export, comprising about 60% of export revenues in 1986. Agricultural commodities, such as cocoa, coffee, and wood, are other important sources of export earnings. Notwithstanding the low prices for such products, they provided a greater proportion of export earnings in 1986 than in previous years due to the lower petroleum revenues. Other traditional agricultural exports include cotton, rubber, and bananas.

France remains Cameroon's largest trading partner, supplying 42% of Cameroon's imports in 1985. Nevertheless, the Netherlands replaced France as Cameroon's largest customer by taking 28% of Cameroon's exports. The United States provided only 7% of imports and 1.6% of exports in 1985. Other trading partners include West Germany, Italy, and Japan. Machinery and chemicals were the principal U.S. exports to Cameroon in 1986, while its principal imports were coffee, cocoa, tobacco, and crude oil.

Economic progress, realistic and moderate government policies, a favorable investment code, and a well-conceived development plan make

Cameroon attractive for foreign investment, which has been primarily French. The government encourages other foreign private investment; and in 1967, it concluded an investment guaranty agreement with the United States as further inducement to potential U.S. investors. A bilateral investment treaty was signed in 1986 but has not yet been ratified by the U.S. Senate.

As a result of Cameroon's membership in the *Banque des Etats des L'Afrique Centrale*, remittance of earnings and repatriation of capital are almost unrestricted. Depending on the magnitude and the contributions that the proposed investment makes to Cameroon's development, a new industrial or agricultural undertaking may enjoy one of four categories of benefits under the code. These benefits include exemptions from import duties and taxes on equipment and raw materials, reduced export duties, exemptions from internal consumption and income taxes, and guarantees that firms will not be subject for specified periods (up to 25 years) to any new taxes or duties that might be enacted after the investment is made.

Economic Assistance

Foreign financial assistance is important to Cameroon's development. France has been the principal aid donor. The United States has provided bilateral economic assistance to Cameroon since independence. Major projects that have received U.S. assistance are the TransCameroonian Railway, the Kumba-Mamfe Road, and the University Center for Health Sciences.

FOREIGN RELATIONS

Cameroon's nonaligned and moderate foreign policy and its record of stability and progress have brought increasing stature to Cameroon in Africa and in multinational forums. Like other African countries, in recent years Cameroon has espoused positions underlining its nonalignment and adherence to Third World principles. Its condemnation of South Africa and support for majority rule in Namibia have been consistent and emphatic.

Cameroon has close ties to France and has signed a number of accords with that country in economic, military, and cultural cooperation. In an effort to diversify its contacts, Cameroon has

Climate and clothing: During the dry season (mid-November-mid-March), the air is dusty, and washable clothing is most practical. In the rainy season, a light wrap or sweater may be needed. In Yaounde, the daily temperature can vary from a high of 30 °C (86 °F) to a low of 14 °C (57 °F).

Customs: Travelers must obtain an entry visa before arrival, unless coming from a country without a Cameroon Embassy, in which case an airport visa can be obtained. All visitors must carry return/onward tickets. Transit visitors may enter without a visa, upon presentation of proper documents, if they continue their journey on the first available means of transportation toward their country of destination.

Health: Tapwater is not potable; boil and filter water for cooking and drinking. Thoroughly wash or peel raw fruits and vegetables. Vaccination certificates against yellow fever and cholera are required, and vaccinations against tetanus, typhoid, paratyphoid, polio, and hepatitis are recommended. Health requirements change; check latest information.

Telecommunications: Local telephones in Yaounde and Douala have automatic dialing systems. International telephone service is

been seeking closer ties with other nations, including the United States and the Federal Republic of Germany. Cameroon also is an associate member of the European Community under the Lome Convention II (1980) and belongs to the Customs and Economic Union of Central Africa, the United Nations, the Organization of African Unity, the Lake Chad Basin Commission, the Non-aligned Movement, and INTELSTAT.

Although diplomatic relations with communist countries began cautiously in the mid-1960s because of communist support for Cameroonian terrorists, relations have been established in recent years with an increasing number of communist states, since the rebel cause and its foreign support dwindled. Economic and cultural cooperation agreements have been signed with several, including the U.S.S.R., China, and the German Democratic Republic.

DEFENSE

The Cameroonian military has tended to be an apolitical force dominated by civilian control. Traditional dependence upon French defense capability is being replaced by reliance on domestic forces.

Travel Notes

good. Cameroon is six time zones ahead of eastern standard time and does not observe daylight saving time.

Transportation: Several major airlines connect Douala and Yaounde to European and African cities. Cameroon has a good domestic transportation system, with trains, buses, and planes connecting major points. Taxis are available in Yaounde, Douala, and other major cities.

Tourist attractions: Waza and Benoue game parks in the north; Museum of African Art in Bamenda; beaches at Kribi and Limbe; Chefferie, a reconstructed native village, and the Sultan's Palace at Foumban; a climb up Mt. Cameroon.

National holidays: Business establishments and the US Embassy may be closed on the following Cameroonian holidays:

New Year's Day	January 1
Youth Day	February 11
Good Friday	varies
Labor Day	May 1
Ascension Day	varies
National Day	May 20
Assumption Day	August 15
End of Ramadan	varies
Fete du Mouton	varies
Christmas Day	December 25

The armed forces number 8,000-9,000 personnel in ground, air, and naval service, the majority in ground forces. U.S. military assistance to Cameroon for FY 1987 was \$250,000 in military education and training.

U.S.-CAMEROONIAN RELATIONS

U.S.-Cameroonian relations are excellent. In February 1970, William P. Rogers became the first Secretary of State to visit Cameroon. Secretary of Commerce Malcolm Baldrige and Secretary of Agriculture John Block led a U.S. trade delegation to Cameroon in January 1982. Former President Ahidjo made official visits to the United States in March 1972 and July 1982, as well as informal visits in 1963, 1967, and 1969. President Biya paid an official visit to the United States in February 1986, while Secretary of State George P. Shultz visited Cameroon in January 1987.

The United States has operated an economic assistance program in Cameroon since 1961 and a Peace Corps program since 1962. The U.S. Agency for

International Development (AID) provides about \$20 million annually in assistance, and its activities have concentrated increasingly on agriculture, public health, education, and development of human resources. In addition, about 160 Peace Corps volunteers work in Cameroon, primarily in developing cooperatives and inland fisheries and in teaching English.

Each year, the U.S. Government invites prominent Cameroonian Government officials, media representatives, educators, and scholars to visit the United States to become better acquainted with the American people and to exchange ideas and views with their American colleagues. About a dozen Cameroonian graduate students are supported by the U.S. Government. This cooperative effort in understanding is furthered through frequent visits to Cameroon by representatives of U.S. business and educational institutions,

as well as by visits of Fulbright-Hays scholars and specialists in various fields.

Principal U.S. Officials

Ambassador—Mark L. Edelman
Deputy Chief of Mission—Edward P. Brynn
Economic/Commercial Officer—Janet R. Malkemes
AID Regional Development Officer—Jay P. Johnson
Political Officer—Roger J. Moran
Public Affairs Officer (USIA)—James M. Haley
Defense Attache—Lt. Col. Scott L. Hayes
Peace Corps Director—Steven Taylor
Consul General, Douala—William Gaines

The U.S. Embassy in Cameroon is located on Rue Nachtigal, Yaounde (tel. 237-23-40-14/23-05-12; telex: 8223KN),

B.P. 817, Yaounde. The U.S. Consulate General is at 21 Avenue General de Gaulle, Douala (tel. 237-42-53-31/42-60-03; telex: 5233KN), B.P. 4006, Douala. ■

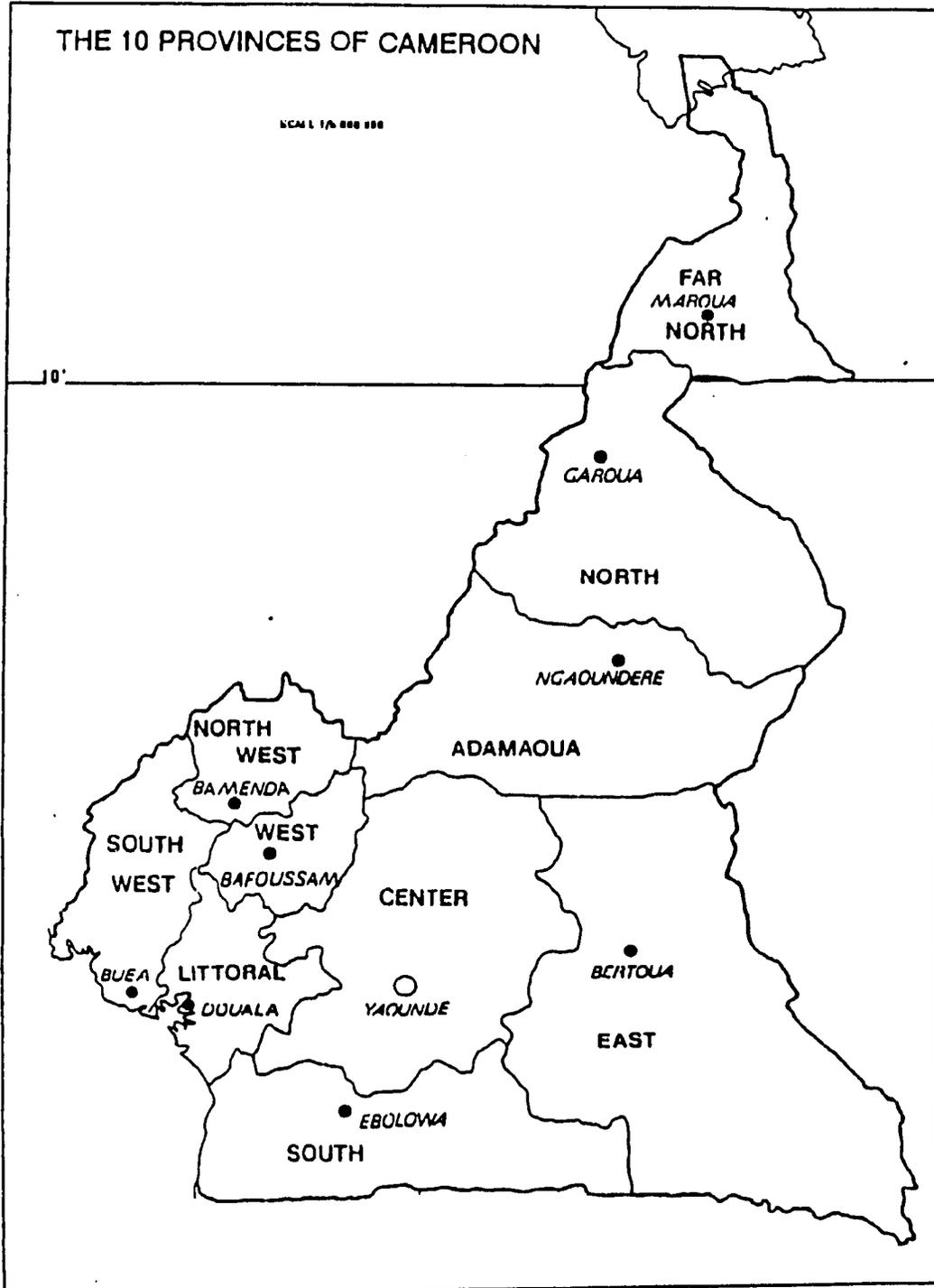
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THE 10 PROVINCES OF CAMEROON

SCALE 1/6 000 000



**LIST OF PARTICIPANTS AND GROUPS IN
THE SUSTAIN FOOD PROCESSING/MARKETING
ASSESSMENT - OCTOBER 3-8, 1993**

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
MEMBERS			
John McMahon	B.P. 817 Yaounde Tel. 23-05-81	USAID/Cameroon	
Peter Mbianyor	B.P. 817 Yaounde Tel. 23-05-81	USAID/Cameroon	
Festus Numfor	Food Technolo- gist, IRA Ekona P.M.B. 25 Buea	IRA/MINREST	Roots and Tubers
Bruce Hamaker	Dept. of Food Sc. Purdue University West Lafayette IN 47905, USA	SUSTAIN	Food Technology
Jerry Brown	USAID/AFR/ONI/ PSD Room No. 210 1111 N. 19th St. Rosslyn, Va 22209 USA	USAID/ AFR/ONI/PSP	Agric. Business Unit
Arnold E. Denton	6 Walnut Court Moorestown N.J. 08057-1809 U.S.A.	SUSTAIN Vo- lunteer	Technical Assistance

1. FOUMBOT
- 10/3/93

Daniel Yollo	SCTC, B.P. 299 Foumbot Tel. 44-66-02	Societe Cam. De Transf. Des Cereales	Maize and Wheat
Jacques Guillemot	PROLEG S.A. B.P. 90 Bandjoun	PROLEG S.A.	Green Beans

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
2. <u>BAMENDA</u> — <i>ROUND TABLE PARTICIPANTS</i> <u>- 10/4/93</u>			
Michael Boyo	P.O. Box 5 Mankon- Bamenda Tel. 36-11-66	Not Yet Established	
Alfred Ndi	E.N.S. Bambilli Tel. 36-18-57	Private Farmer	Roots and Tubers
Tatah Sabastian	P.O. Box 434 Bamenda Fax 36-39-21	SEDEPRO (Self Dev. Program) NGO	Production and Marketing
Kenne Andreas	B.P. 87 Bamenda	Automatic Rice Mill	Rice Processing
David Munkefor	B.P. 117 Bamenda	Vegetable Coop. Society Ltd.	Production/Marketing
Vincent Tekum	Box 257 Bamenda Tel. 36-25-46 Fax 36-21-11	Growth Pro- ducts Enter- prise (GPE Agro. Indus- tries	Soybeans, Cereals and Root Processing
Jonathan Agwe	Post-Harvest Food Systems P.B. 281 Bamenda	DIRAGRI	Roots, Tubers and Cereals
Rose Wanzie	Delegation of Agriculture (FAO)	DIRAGRI	Roots, Tubers and Cereals
Victor Deffo	IRA, Bambui B.P. 80 Bamenda	IRA/MINREST	Roots and Tubers
Christopher Forgwe	Box 252 Bamenda	INADES For- mation	Saundry Food Items
Grace Ngafor	Box 100 Bamenda	Nacho Compre- hensive College	Green Beans
Pauline Malu	Educare Center	Mundani Women's Group	Roots and Tubers
Forba Bongfen	GTHS Bamenda (Private)	-	-

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
Simon Zibo	IPAR/GTTC P.O. Box 468 Bamenda	IPAR/GTTC	Pupil Groups
George Mbah	P.D. A. Bamenda	Guinness Cameroon	Drinks
Niba Tafor	PEM-MIDENO Bamenda	MIDENO Bamenda	Extension Service
Mboh Michael	Pioneer Soya Bean Processing Unit B.P 5038, Bamenda Tel. 36-25-36	Pioneer Soy- bean Proces- sing Unit	Soya Bean Seeds and Flour
Felicia Yensin	Nso Women Coop. B.P. 46, Bamenda	Cooperative	Roots and Cereals
Monica Saka	Nso Women Coop. B.P. 46, Bamenda	Cooperative	Roots and Cereals
Mbakwa Godfred	Delegation of Agric.	Post Harvest Food Loss Reduction Project	Roots and Cereals
Koi Joseph	Inter. Potato Center B.P. 279 Bamenda	IRA, Bambui	Sweet Potatoes
Foncho Margaret	Pee Meg Enter- prise	Potatoes Project	Potatoes
Felix Ngwafor	Pee Meg Company P.O. Box 568 Bamenda	Potatoes Project	Agro-Chemicals
Tanyi Christine	CamCCUL Ltd.	CAMCCUL	Savings and Credit to Farmers
Robert Tchoutat	CamCCUL Ltd.	CAMCULL	Savings and Credit to Farmers
Wanki Samuel	UNVDA B.P. 25 Ndop	Development Cooperation	Rice, Maize, Soybeans
Charles Yamoah	NCRE/IRA B.P. 80 Bamenda	IITA/USAID	Maize Research

155

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
Tata William	NWCA Ltd. B.P. 41 Bamenda	Northwest Co- operative Association Ltd.	Arabica and Robusta Coffee
Bantar Paul	NWCA, Bamenda	Adminis- trative Assistant	Arabica and Robusta Coffee
3. <u>UNIVERSITY OF DSCHANG - 10/5/93</u>			
Njikam Njifutie	Vice Rector	University of Dschang	Administrator
Ayissi Mballa	Asst. Prof. Dept. of Econs. Tel. 45-19-25	University of Dschang	Lecturer
Nkwain Sama	Asst Professor Dept. of Econs. B.P. 22, Dschang Tel. 45-13-55	University of Dschang	Lecturer
Mathias Fonteh	Asst. Professor Dept. of Enginee- ring Tel. 45-17-01	University of Dschang	Lecturer
Tsannang David	Cadre D'entreprise Coop. CAPLAME, B.P. 130 Tel. 45-11-25	Cooperative	Credit and Loan
Joyce Endeley	Senior Lecturer Extension Dept. C/o Dr. Endeley University of Buea Tel. 32-23-50)	University of Dschang/	Lecturer

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
4. <u>IRA - NJOMBE</u> <u>- 10/5/93</u>			
Tchango Jean	Agric. Technologist, IRA/Njombe B.P. 13, Njombe Tel. 42-71-29	IRA/Njombe MINREST	Roots and Tubers
Mpondo Ticky	Food Techologist IRA - Njombe	IRA/Njombe MINREST	Roots and Tubers
5. <u>DOUALA</u> <i>ROUND TABLE PARTICIPANTS</i> <u>- 10/6/93</u>			
Bomia Philomene	Delegation of Agriculture B.P. 257 Douala	MINAGRI	Agric. Specialist
Wamba Guy-J	Delegation of Agriculture B.P. 257, D'la	MINAGRI	Agric. Specialist
Djilemo Louis	Delegation of Agriculture B.P. 257, D'la	MINAGRI	Agric. Specialist
Ayukegba Peter	Delegation of Agriculture B.P. 257, D'la	MINAGRI	Provincial Delegate of Agric. Littoral
Djatche Emmanuel	B.P. 921	MINAGRI	Agric. Engineer
Ekabouma Marie- Claire	SOTEMA B.P. 752 Douala Tel. 42-16-21	SOTEMA	Promotrice
Fiky-Mpondo	IRA Njombe B.P. 13 Njombe	MINREST	Roots and Tubers
Tchango Jean	IRA Njombe B.P. 13 Njombe	MINREST	Roots and Tubers
Jobill Marcel	B.P. 1365 Douala Fax 42-39-16	Jardin de Massoumbou	Roots and Tubers

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
Rose Simo	B.P. 15244 Tel. 43-14-77 Fax 43-14-78	Rose-chic- Chips	Food Crop Chips
Sankeu Roger	B.P. 6102 Douala Tel. 42-48-06	Camfruits	Fruit juice
Njoyum Samuel	B.P. 8063 Douala Tel. 40-31-03	SOCATRAFNA	Transformation of Fruit juice
Egbe Peter	CRTV, Douala	-	-
Gaston Wafo	Photographer B.P. 935 Douala	Presse le Combattant	Reporter
Mibgo Luc	SOTEMA B.P. 752 Douala Tel. 42-16-21	SOTEMA	Reporter
Otele Joseph-Marie	SOTEMA B.P. 752 Douala Tel. 42-16-21	SOTEMA	Reporter
Ngenefeme Tendo	B.P. 1443 Douala Tel. 40-24-92 Fax 40-24-92	Pharmacy Mondial	Farmer

6. LIMBE *ROUND TABLE PARTICIPANTS*
- 10/7/93

Paul Swinner	Polyworks B.P. 142 Limbe Tel. 32-24-19	Polyworks	Processing and Marketing
Meboka Mary	ROTREP/IRA B.P. 25 Buea	MINREST	Roots and Tubers
Robert Dadson	ROTREP/IRA B.P. 25 Buea	MINREST	Roots and Tubers
Gobina Simon	ROTREP/IRA	MINREST	

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
Manfred Besong	TLU-IRA Ekona Tel. 32-22-23	MINREST	Food Crops
Mbu Rhoda	Mbu's Brother's Enterprise B.P. 337 Limbe Tel. 33-22-11	Business Lady	Garri Processing
Tume Emmanuel	Delegation of Agriculture B.P. 10, Buea	FAO/UNDP Post-Harvest	Food Crops
Ojong O. Emmanuel	Divisional Treas- urer, Limbe	Limbe Treas- ury	Farming Prospects
Fonkem Rebecca	O.I.C. Buea B.P. 57 Tel. 32-25-86	O.I.C.	Women's Group
Bakia Besong	SOWEDA B.P. 336, Buea	SOWEDA	Food Crops
Marvin Burns	ROTREP Ekona	USAID/Ekona ROTREP	Food Crops
Poubon Christine	TLU/IRA Ekona	IRA/Ekona	Food Crops
7. <u>EKONA FARMERS GROUP</u> <u>- 10/07/93</u>	Ekona Garri Processing Group	Garri Coop.	Garri Processing

157

<u>Names</u>	<u>Address/Tel.</u>	<u>Company/ Institution</u>	<u>Products</u>
8. <u>BATOKE FARMERS</u> <u>GROUP - 10/7/93</u>			
Ayafor Peter	Batoke Water-Fufu Processing Group	Water-Fufu Cooperative	Water-fufu Processing
9. <u>CAMFOOD MARKET</u> <u>COOP. - 10/9/93</u>			
Maximuangu J.	President CAMFOOD Market Cooperative, Yaounde	CAMFOOD	Food Crop Sales
Njinyam Doreen	Vice President CAMFOOD Market Yaounde	CAMFOOD	Food Crop Sales
Forfuh Vincent	Ministry of Information and Culture	MINFOC	Journalist
10. <u>MINISTRIES</u> <u>- 10/11/93</u>			
Jacob Ayuk-Takem	Minister of Scientific and Technical Research Yaounde	MINREST	Policy and Direction
Stephen Njinyam	Minister of Agri- culture, Yaounde	MINAGRI	Policy and Direction

11. YAOUNDE - 10/12/93 *ROUND TABLE PARTICIPANTS*

Aliou Diop	c/o FAO Representation B.P. 281, Yaounde	FAO Promotion of Post Harvest Systems Project	Foodcrops
George Mboge	Project CMR/92/001 Post Harvest FAOR, Box 281, Yaounde	FAO Promotion of Post Harvest Systems Project	Foodcrops
Polycarpe Awono	Credit Agricole du Cameroun B.P. 11801 Yaounde Tel: 23-23-60	C.A.C.	Credits
Tefang Andre	Credit Agricole	C.A.C.	Credits ruraux
Thomas Stilwell	NCRE, B.P. 2067 Yaounde, 22-30-22	NCRE	Research
Sophia Moestrup	UNIDO, B.P. 836 Yaounde, 23-73-16	UNIDO	Technical Assistance
Anthony Wood	UNDP, B.P. 836 Yaounde, 23-73-16	UNDP	Technical Coopera- tion
Roider Werner	World Bank, Yaounde Tel: 21-08-36, 20-31-57	W.B. Yde	Agric. Sector
Mrs. Njom Esther	Dept. of Community Development B.P. 2729, Yaounde, Tel. 22-48-41	MINAGRI	Women's Income Generating Projects, e.g. fish smoking and garri pro- cessing
Dr. Tchakoa Jonas	UNIYAO II, B.P. 1198, Yde Tel: 22-59-76 (Home)	University of Yde II	Lecturer No parti- cular crop

16!

Jacob Ngeve	Institute of Agricultural Research, B.P. 2123 Yde	IRA/MINREST	Roots, Tubers and Cereals and other agro-nomic crops
Emmanuel Atayi	NCRE/IRA/IITA, B.P. 2067 (Messa) Yaounde	NCRE/IRA/IITA	Cereals
Robert Dadson	ROTREP/Ekona PMB 25 Buea 32-21-44 or 32-23-04	ROTREP/IRA	Roots, Tuber and Crop Improvement Rapid Seed Stock Multiplication
Y.W. Jeon	IITA, Post-harvest Technology Unit PMB 5320, Oyo Road Ibadan, Nigeria	IITA	Post-harvest Technologis

**SUSTAIN/USAID FINAL DEBRIEFING MEETING
OCTOBER 15, 1993**

ATTENDANCE LIST

<u>No.</u>	<u>Name</u>	<u>Address/Tel Number</u>	<u>Company/Insti.</u>	<u>Product</u>
1.	Jacob M. Ngeve	IRA, B.P. 2123,	IRA/MRST	Research
2.	Thomas Stilwell	NCRE, B.P. 2067 Yaounde	NCRE	Research
3.	Robert Dadson	ROTREP Ekona PMB 25, Buea	ROTREP/IRA	Research
4.	Emmanuel Atayi	NCRE/IITA B.P. 2067, Messa Yaounde	NCRE/IITA/IRA	Research
5.	Y.W. Jeon	IITA, PMB 5320 Oyo Rd, Ibadan Nigeria	IITA	Researcher
6.	G.M. Mboge	Post-Harvest Project FAO, B.P. 281 Yaounde	Post-Harvest Project MINAGRI	Implemen- tation
7.	Sophia Moestrop	UNIDO, B.P. 836 Yaounde	UNIDO	Technical Assistance
8.	Moussibe A. Tiati	FRUICAM, B.P. 538 Yaounde Tel. 22-12-72	FRUICAM	Jus de fruits
9.	Dr. Tchakoa Jonas	UNIYAO II Lecturer B.P. 11986, Yaounde Tel. 22-59-76 (H)	UNIYAO II	Lecturer in Econs.
10.	Ayissi Justin	APICA Yaounde B.P. 7483, Yaounde Tel. 20-22-39	APICA	NGO
11.	Elzadia Washington	USAID/Cameroon B.P. 817, Yaounde Tel. 23-15-15	USAID	Project Officer
12.	Taga Rene	AGRO-PME B.P. 10087, Yaounde Tel. 22-16-57	AGRO-PME	Research
13.	Peter Mbianyor	USAID/Cameroon B.P. 817, Yaounde Tel. 23-05-81	USAID/ARD	Assistant Project Officer

<u>No.</u>	<u>Name</u>	<u>Address/Tel Number</u>	<u>Company/Insti.</u>	<u>Product</u>
14.	Besong Moses B.	Ministry of Plan and Regional Dev. Tel. 23-59-49	MINPAT/DCET/	S/DAAA
15.	Ngenge Wawa N.	Ministry of Agric. Projects Division Tel. 22-35-41	MINAGRI/DPA	Charge d' Etudes 1
16.	Cavana Jean- Francois	Ministry of Agric. Projects Division Tel. 22-35-41	MINAGRI/DPA	Con- seille Technique
17.	Tchomobe Pierre	CCEI Bank, Research and Investments Dept. Tel. 23-63-27	CCEI Bank	Chef de Division Projects Agricoles et Elevage
18.	Howard N. Fube	Ministry of Agric. Projects Division Tel. 22-35-41	DPA/MINAGRI	Research
19.	Festus A. Numfor	IRA Ekona, PMB 25 Buea, Tel. 32-21-44	MINREST	Roots and Tubers
20.	Mbesse Bolomiki	MINAGRI/DDC B.P. 729, Yaounde Tel. 22-48-34; 48-41	Direction du Developement Communautaire	Produit Agri- cole, et Alimen- taires
21.	Jill Wilson	ROTREP, IRA Ekona Research Center PMB 25, Buea	ROTREP	Cocoyams
22.	Gillet Remy	Credit Agricole du Cameroun, Yaounde Tel. 23-23-60	Credit Bank	C.T.
23.	Polycarpe Awono	Credit Agricole du Cameroon (C.A.C) Tel. 23-23-60	C.A.C.	Direction du Genie Rurale
24.	Djilo Gabriel	MINPAT/DP/DR Tel. 23-04-91	MINPAT/DP/DR	Planifica- tion du develop- ment
25.	Ngwessit Chen Victor	DDC/MINAGRI Yaounde Tel. 22-58-98	Development Communautaire MINAGRI	Sous Dir. de Genie Rural

No.	Name	Address/Tel Number	Company/Insti.	Product
26.	Nguidjoi M.M.	MINDIC/CAB/MARF Tel. 23-40-40 Poste 5162	MARF	----
27.	Rostand Longang	USAID/Cameroon B.P. 817, Yaounde Tel. 23-05-81	USAID/EAPRI	Economiste
28.	John McMahon	USAID/Cameroon B.P. 817, Yaounde Tel. 23-15-15	USAID/ARD	Director ARD
29.	Jerry Brown	USAID/AFR/ONI/PSD 1111 N 19th Street Rm. # 210 Rosslyn, Va. 22209	USAID/AFR/ ONI	Agrib unit
30.	Ambe Tanifum	USAID/Cameroon B.P. 817, Yaounde Tel. 23-05-81	USAID/ARD	Program Specialist

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CAMFOOD

CAMEROON FOOD COOPERATIVE SOCIETY

B.P. 1068 YAOUNDE

VISIT OF FOOD CRCP PROCESSING AND MARKETING PLAN TEAM TO CAMFOOD, - YAOUNDE

I N T R O D U C T I O N

The Cameroon Food Cooperative Society (CAMFOOD) was founded as a Food Handling and Marketing Organisation, through the Private initiative of a group of men and women of all walks-of-life, resident in Yaounde and its environs. CAMFOOD operates according to and in keeping with the Provisions of the Cooperative Law N° 92/006 of 14 August 1992 and the decree of application n° 92/455/PM of 23 November 1992.

GOAL AND OBJECTIVES

The goal of CAMFOOD is to develop the food supplies sector, to create awareness in the consumption of Cameroon's local food products and to encourage joint action in Food Marketing. Its objectives include, the following : -

- To undertake the purchase and resale in wholesales and retail sales of Cameroonian food stuffs ;
- To undertake foodstuffs handling so as to improve their nutritional and preservative quality ; and
- To promote foodstuffs commercialisation within Cameroon and in the neighbouring countries.

CREATING-UP OF CAMFOOD

CAMFOOD was opened on 02/08/1993. Its membership has grown to 50 with a working capital of 4 million francs CFA. The CAMFOOD

shop is handling UNVDA Rice, Maize and Coya Beans. Assorted beans and Irish potatoes have been hauled in from Ndu and Kumbo in the North West Province. Our sales in two months amounted to 2,636,290 frs CFA.

CAMFOOD is managed by a Board of Directors and a Supervisory Committee while day-to-day activities are handled by the Shop Manager and his assistant.

PERSPECTIVES AND PROBLEMS

CAMFOOD'S immediate future strategy is to open-up a network of FRANCHISED food stores in the city of Yaounde and to be more involved in appropriate Processing technologies, so as to improve keeping quality of the produce it handles. Major problems so far experienced include transportation difficulties, perishability of root and tuber foodstuffs and the lack of facilities for handling fresh fruits and vegetables. We are open to your criticisms and advice.



Maximilien
XIMUANGU J. C.
PRESIDENT
CAMFOOD

CAMEROON FOOD COOPERATIVE SOCIETY (CAMFOOD)

- NDOP RICE
(Including Uncle Ben's)
- MAIZE
- BEANS
- EGGS
- BEEF
- CHICKENS
- DAIRY PRODUCTS
- HONEY
- CARROTS
- ONION
- FISH
- CRAYFISH
- etc ...



- RIZ DE NDOP
(y compris Oncle Ben's)
- MAÏS
- HARICOT
- OEUFS
- VIANDE
- POULET
- PRODUITS LAITIERS
- MIEL
- CAROTTES
- OIGNON
- POISSON
- CREVETTES
- etc ...

**QUALITY FOODS AND SERVICES
AT LOWER PRICES**
*VISIT OUR FOOD STORE AT BISCUITERIE
(on your right 200 meters before Mobil
BIYEMASSI from carrefour OBILI)*

Appendix IX

Welcome to CAMEROON and particularly at ROSE CHIC-CHIPS.

Thank you for having come to discover the products of the new art on which I have imposed myself : THE SCULPTURE OF VEGETABLES.

I am sure that some of you must be surprised not to see huge machines, and that I am exposing to you a workshop and not a big factory. If I have also accepted this visit, it is just to permit you to focus more deeply on problems faced by young business promoters in Cameroon.

As USAID made me to understand, that the aim of this visit is to permit you take note of the difficulties that hinder the economic development of the country, so that together we should seek for solutions. This is reasonable, since to cure an ailment, one needs to diagnose before knowing the type of treatment to administer.

It is for this reason that I feel delighted to present to you these products that I have concretised out of my imagination.

If CHIP-CHIPS did not exist, it would have been worthwhile to invent them. That is what I have done.

It is also an opportunity to be present here today, to understand that the difficulties faced by ROSE CHIP-CHIPS are the prototype of what faces newly established businesses.

At the higher school of commerce, we were told that there are no openings in the Labour Market. At the same time, we were taught that to get a job in an enterprise, one had to offer his or her services to the employer.

Whereas, coming from a developing country and that our raw materials are consumed without any added value, and considering my passion for cooking since my tender age, I have got myself a new job : The Sculpture of Vegetables. This will contribute in adding a value on fruits and vegetables, and at the same time develop a market for new jobs, thus bringing in reserves to the country.

Once more you are welcome.

Thank you.

MADAME S. 170

UNCLASSIFIED
AGENCY FOR INT'L DEV.
TELECOMMUNICATIONS CENTER

INCOMING
TELEGRAM

PAGE 01 YAJUNZ 08047 041134Z 5709 025623 4 06169 YAJUNZ 05047 041134Z 5709 025623 4 06169
ACTION 213-03

ACTION OFF CE 2520-05
INFO AFCA-01 B-PA-01 C-PP-01 CC-01 CGAT-01 C/PP-01 NCAA-01
DFCA-01 P-AA-01 DTAC-01 STAG-02 DTCO-01 C/OP-01 DEC-01
FFP-00 SERP-01 SACS-02 ARIAC-01 TELE-01 PPD-01 FADP-02
PCC-01 LAV-01 7042 AB 04/1392Z

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R 041133Z NOV 83
FM AMEMBASSY YAJUNZ
TO SECRETARY WASHDC 0291

UNCLAS YAJUNZ 05047

AIRDC DIRECT RELAY

FOR ATTENTION: JERRY BROWN AFR/CC/PA DON CLARK AND
DANA HANDELI

E.O. 12356: N/A
SUBJECT: CAMEROON FOOD CROP PROCESSING/MARKETING ACTION
PLAN; AID/DA PROJECT SUSTAIN

TO: ELIZABETH TURNER
PROGRAM 3 DIRECTOR, PROJECT SUSTAIN
1481 NEW YORK AVENUE
WASHINGTON, D.C. 20005-2100
TEL: (202) 638-6222
FAX: (202) 638-6726

REFS: (A) YAJUNZ 03046;
(B) JMC/MARON/TURNER FAX OF AUGUST 18, 1983;
(C) YAJUNZ 06025

1. USAID CAMEROON EXPRESSES ITS APPRECIATION TO SUSTAIN
VOLUNTEERS ADMIN P (MR) GENTON AND DR. BRUCE MANAKER,
AND TO AID/DA AFR/DAI AGRIBUSINESS ADVISOR DOUGLAS
(JERRY) BROWN FOR THEIR TIMELY HIGHLY RELEVANT
ASSISTANCE IN DEVELOPING AN ACTION PLAN FOR FOOD CROP
PROCESSING AND MARKETING INTERVENTIONS. THE TEAM
EFFEKTIVELY FACILITATED BRANK DIALOGUE AMONG THE VARIOUS
ACTORS INVOLVED IN SUPPORTING SMALL TO MEDIUM-SCALE FOOD
COOPERATIVE/AGRIBUSINESS DEVELOPMENT IN CAMEROON (I.E.
GRC POLICY ANALYSTS, RESEARCHERS, EXTENSIONISTS,
UNIVERSITIES, DONOR AGENCIES, CREDIT INSTITUTIONS). THE
PRACTICAL, IMPLEMENTABLE NATURE OF THE TEAM'S
RECOMMENDATIONS SHOULD ENCOURAGE FOLLOW-UP BY THE GRC
AND FOSTER GREATER COORDINATION OF DONOR ACTIVITIES IN
THIS SUBJECT AREA WHICH IS OF IMPORTANCE TO CAMEROON'S
AND THE REGION'S FOOD SECURITY AND ECONOMIC DEVELOPMENT.

2. USAID CAMEROON WOULD ALSO LIKE TO THANK SUSTAIN
COORDINATOR ELIZABETH TURNER AND HER STAFF FOR MAKING
ALL OF THE ADMINISTRATIVE ARRANGEMENTS FOR THIS
IMPORTANT MISSION. JOHN MCMAHON EXTENDS HIS PERSONAL
REGARDS.

3. THIS COPY IS AWAITING RECEIPT OF FINAL EDITED VERSION

OF FOOD CROP PROCESSING/MARKETING ACTION PLAN FOR
OFF CIAL. TRANSMIT TO GRC OFF CIALS AND OTHER
INTERESTED PARTIES. PLEASE ADVISE STATUS.

4. FOR JERRY BROWN PER DISCUSS ON IN CAMEROON, JOE
MCMAHON WOULD GREATLY APPRECIATE RECEIPT SOONEST OF ANY
REPORTS WHICH YOU HAVE ON AGENCY'S EXPERIENCE IN
ESTABLISHING AGR BUSINESS FOUNDATIONS, AS THIS TOPIC IS
OF CONSIDERABLE INTEREST TO OUR OLD FRIENDS NOLLO NC
USAID.

REGARDS.

JOHN P. MCMAHON
DIRECTOR
AGRICULTURE AND RURAL DEVELOPMENT OFFICE
USAID
AMERICAN EMBASSY
YAJUNZ 05047 041134Z

NOTE: PASSED TO ABOVE ADDRESSEE

171