

Assessment of the Small-scale Food Processing Subsector in Tanzania and Uganda

Study Report



SMALL SCALE
CASSAVA

**Assessment of the small-scale
food processing subsector in
Tanzania and Uganda**

Assessment of the small-scale food processing subsector in Tanzania and Uganda

STUDY REPORT

H. Martin Dietz, Stephen Matee and
William Ssali

Collaborators: Peter Fellows, Monika Redecker,
Joyce Kinabo, Mr Nduguru, Robinah Sabano *and*
Michael Lubowa

The Technical Centre for Agricultural and Rural Cooperation

CTA (The Technical Centre for Agricultural and Rural Cooperation) was established in 1983 under the Lome Convention between the African, Caribbean and Pacific (ACP) States and the European Union (EU) Member States.

CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in these areas. CTA's programmes are organised around four principal themes: developing information management and partnership strategies needed for policy formulation and implementation; promoting contact and exchange of experience; providing ACP partners with information on demand; and strengthening their information and communication capacities.

CTA, Postbus 380,6700 AJ Wageningen, The Netherlands

CTA, 2000

ISBN 92 9081 232X

Published by:

Technical Centre for Agricultural and Rural Cooperation (ACP-EU)

Edited and typeset by:

Anne Sweetmore Publishing Services, Witney, Oxon, UK

Printed by:

Hobbs the Printers Ltd, Totton, Hants, UK

Cover photograph:

Demonstration of a small-scale cassava processor

© Susie Emmett, WREN*media*, Fressingfield, Suffolk, UK, www.wrenmedia.co.uk

Contents

	<i>Page</i>
Foreword	vii
Summary	ix
INTRODUCTION	1
Objectives	1
Methodology	2
General background information on Tanzania and Uganda	2
Significance of small-scale industries for economic and social development	6
1 SMALL-SCALE FOOD PROCESSING IN DEVELOPING ECONOMIES	9
The importance of food processing in developing agrarian economies	9
Why go for small-scale?	9
What are the benefits for the rural economy?	10
Impact on backward linkages to agriculture	11
Changing framework conditions	12
2 FOOD PROCESSING IN TANZANIA AND UGANDA	15
The role of commercial food processing in the economies of Tanzania and Uganda	15
Characteristics of enterprises in the sector	15
Organizational structure of food processing enterprises	16
Gender in food processing in Tanzania and Uganda	17
3 MARKETS FOR PROCESSED FOODS IN TANZANIA AND UGANDA	19
The need for increased market orientation	19
Demand for processed food products	19
Food processing branches in Tanzania and Uganda	22
Importation of processed foods	24
Distribution channels and marketing	24
Potential for improved product quality and diversification	25
4 PROBLEMS FACED BY SMALL-SCALE FOOD PROCESSING ENTERPRISES	27
Government policies towards small enterprises	27
Finance	28
Availability and choice of equipment, maintenance services and packaging materials	28
Competition from imported products	30
Technical and management skills	30
Market research, marketing and selling	31

	<i>Page</i>	
5	CURRENT SUPPORT FRAMEWORK	33
	Government policies	33
	Finance	34
	The organization of food processing entrepreneurs	36
	Research and development	37
	Technology supply	38
	Training and qualifications	39
	Market information	42
	Projects and programmes that support food processing enterprises	47
	Overview of the activities of different support organizations	48
6	POTENTIAL CONTRIBUTIONS OF SMALL-SCALE FOOD PROCESSING TO THE RURAL ECONOMY	53
7	KEY FACTORS FOR THE SUPPORT OF SMALL SCALE FOOD PROCESSING ENTERPRISES	55
	RECOMMENDATIONS	57
	ANNEX	
	Recommendations arising from the Conference on Strengthening Small Scale Food Processing in Eastern and Southern Africa: Suggestions for appropriate delivery systems for improved support services	59
	References	63
	Acronyms	65

Foreword

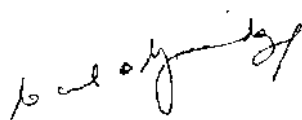
Under the stimulus of continuing economic liberalization policies, the agricultural development priorities of African, Caribbean and Pacific (ACP) countries have shifted from efforts aimed mainly at increasing agricultural productivity, towards improving income and quality of life in rural areas. CTA is responding to this wider challenge by devoting an increasing share of its resources to work supporting the promotion of market-led development.

A key aspect of CTA's work under the general theme of market-led development deals with the formulation of information and communication management strategies that facilitate the development of small-scale food processing enterprises in ACP countries. Between 1997 and 1999, CTA embarked on a series of studies on this topic, which are now being published in three separate reports. This publication presents the findings of studies carried out on Tanzania and Uganda. The report of studies on Mozambique, South Africa and Zambia was published earlier this year. The third publication will deal with studies on Benin and Senegal, and will also be published in 2000.

This report highlights the potential contribution that small-scale food processing enterprises can make to the overall development of the agricultural sector and, in particular, the rural economy in Uganda and Tanzania. The major constraints hindering the development of small-scale food processing enterprises in these countries include: a lack of access to capital for investment and operation; the limited technology choice for entrepreneurs; poorly developed technical and managerial skills among entrepreneurs; and a lack of technical and market information available to entrepreneurs.

As an outcome of the study, the authors recommend various approaches for improving the operating environment for food processors in order to increase their productivity and competitiveness. The report also notes that improving the flow of information to small-scale food processors is particularly crucial to their future success. A key recommendation on information management and skills development relates to the establishment of advisory services / business support centres.

This report should be of interest to a large spectrum of actors, including government departments, training and research institutions, business associations, and food processing enterprises themselves.



Carl B. Greenidge
Director, CTA

SUMMARY

The potential of small-scale, rural-based food processing as an element of the agro-food chain is at present still poorly developed in Tanzania and Uganda.

Markets for processed food products are expanding in both countries, in Uganda at a faster pace than in Tanzania. The diversity of food products on the shelves is increasing as changing lifestyles and increasing income levels lead rural and, in particular, urban consumers to demand snacks, drinks and convenience foods. Much of the increased demand is supplied through imports. Edible oils take up the largest share of both countries' food imports, amounting to around US\$50 million each.

The potential contributions that small-scale food processing enterprises can make to the rural economy are considerable. The value added to agricultural produce from the farmgate to the consumer's household through processing, storage and trading is very significant, usually increasing several-fold. Rural-based, small-scale food processing enterprises can play a major role in retaining some of this value added within the rural economy, as this can translate into income and employment generated, with possible knock-on effects on related support industries such as technical workshops and other service providers.

New food products for the market, for example dried fruits, fruit juices or pasteurized milk, can provide an important stimulus for agriculture, leading to diversification and the development of a stronger market orientation. Processing basic food commodities such as cereals and oilseeds in rural enterprises will provide benefits to farmers either directly (for example through service milling), or indirectly (a reliable, local market). This will serve as an incentive to producers to expand their production.

Processing of basic food commodities is already practised – mostly at the micro- and small-scale levels in rural areas. Yet there are opportunities for many more enterprises at the small-scale level to enter this market. Processing of such commodities is an obvious entry point for small entrepreneurs, as backward and forward linkages are relatively well established.

However, even in this field of basic food processing, entrepreneurs have hardly any choice of technology, while maintenance services for processing equipment are very poorly developed. To finance the investment, which generally ranges from US\$1000-5000, family savings and other sources have to be tapped. This is due mainly to the fact that banks have basically stopped lending to such businesses in rural areas in Tanzania, whereas in Uganda they are very hesitant to do so. Micro-finance institutions operate in both countries; however their focus is mainly on the urban and peri-urban environments.

Once an entrepreneur plans to venture into producing new food products for the market, he or she may face numerous challenges:

- Who can provide assistance to carry out a market study and to identify suitable products and processing technologies? Such services are currently not available in Tanzania, and are rare in Uganda.
- Who can assist in choosing and procuring an appropriate technology that will allow a profitable operation? In most cases, equipment will not be available within the country.
- What kind of packaging material can be used? In Uganda there is no packaging industry; in Tanzania it is very basic.
- Who can design an attractive label? Artists have not developed this expertise in Tanzania or in Uganda.
- Where does one obtain capital for investment and for the business operation? Most banks refuse to lend to such operations. Alternative financing institutions can assist only with small sums for working capital, generally for petty trading.
- How does one procure sufficient raw material to operate for as long as possible during the year?
- How can the product be marketed best? Again, at the present time there is no-one competent to provide the necessary advice and help.

This study assesses the support measures offered to food processing entrepreneurs by government institutions, development agencies and the private sector. Many of their services fail to address the actual needs of small entrepreneurs; or the delivery of these services is such that small entrepreneurs cannot make use of them. Key areas that need to be addressed to strengthen and develop small-scale, rurally based food processing are therefore:

- Availability of credit facilities that address the needs for investment and working capital for small entrepreneurs.
- Availability of a choice of technologies; technology packages in which individual components match; skills and competence in technology maintenance in rurally based workshops.
- Advice and training on matters of business management and technology.
- Market information, skills in market studies and assessments, marketing advice.

Uganda's growing economy and greater market orientation mean that the problems are less severe than in Tanzania, and some progress has been made towards addressing the needs of small-scale food enterprises.

The study group therefore proposes to build on existing initiatives and further develop the concept of a financially self-sustaining centre that will offer some of the key services mentioned above, on a fee-paying basis. A further component of such an intervention would be to strengthen and train existing service providers to address the needs of small entrepreneurs more appropriately.

Outside interventions need to be designed and implemented in such a way that they are congruous with the goal. If the aim is to support the development of viable in-

dustries, the support measures that are developed and offered also need to have a clear perspective of moving towards sustainability. If the aim is to impart more market orientation to small enterprises, then outside interventions need to demonstrate that they too have a strong market (client) orientation.

INTRODUCTION

Productivity in the agricultural sector in many African, Caribbean and Pacific countries has declined in recent years. Agricultural policy frameworks need to be reshaped to encourage farmers to take up a stronger market orientation and make use of new opportunities arising out of developing trade liberalization.

An increased market orientation requires a good understanding of the markets from all participants in the agro-food chain. The actors in that chain - farmers, processors, traders, retailers and scientists - need to build stronger links between themselves in order to realize more of the value-added potential in a viable, sustainable and integrated farming, food and agribusiness industry (Jackson, 1996). The potentials for value addition along the agro-food chain are considerable. Already, 40% of all manufacturing value added in Africa is created in the food processing subsector.

Small-scale, commercial food processing is rarely found as a term in the indexes of development publications. In the past, the focus was on specific technical aspects, mainly on reducing post-harvest losses through improved technologies. Only recently has small-scale food processing been regarded as a subsector that can provide significant contributions to the development of rural economies.

The importance of food processing to the development of the agro-food chain in Africa was highlighted at a number of key international workshops held recently (e.g. Jackson, 1996; Richter *et al.*, 1996).

The present study is considered as part of a process in which key actors from organizations and institutions in East Africa can jointly develop tools and instruments that will help effective planning and implementation of projects and programmes aimed at strengthening rurally based, small-scale food processing.

Moving towards that goal, this study was carried out in two countries, Tanzania and Uganda, to assess the existing situation (policies, actors, experiences, etc.) of the food processing subsector, focusing specifically on the level of small- and medium-scale enterprises. As a follow-up, some of the key actors working in this sector in eastern and southern Africa met at a conference in Entebbe in 1998, to assess the findings of this study and develop suggestions on how the recommendations arising out of the study can be implemented (CTA/FAKT, 2000).

Objectives

This study aimed at creating a picture of the current situation of small-scale food processing in Tanzania and Uganda. Existing support services and programmes were included. Specifically, the studies in the two countries aimed to:

- present a picture of the existing experience of support programmes for small-scale industries in East African countries
- identify and describe available support services offered by organizations and institutions to small-scale food processors in the selected region, and analyse their problems and constraints in delivering their services
- identify and analyse the problems faced by small-scale food processing entrepreneurs and their perceptions of the value of existing support services in addressing their problems
- identify existing and potential markets for selected processed foods produced by small-scale enterprises, and the current constraints on market development
- analyse the findings and identify the key influencing factors that are crucial for the support of the small-scale food processing sector, and suggest appropriate models for delivery of their services
- develop and present a model framework for carrying out similar studies in future.

Methodology

The study was carried out by a group of consultants from Tanzania and Uganda, and from Germany and the UK. The group of East African consultants met with one German consultant in Dar es Salaam in June 1997 to develop the detailed terms of reference for the work. Following this meeting, the two groups in Tanzania and Uganda carried out field studies. A summary of the results was presented and discussed during a meeting in Tanzania in October 1997, jointly with a consultant from Germany and a representative from CTA. The consultants from East Africa submitted the first draft report in January 1998, and their final report in May 1998. All three consultants from Germany and the UK have extensive work experience in the region, and wrote this synthesis using the two country studies as well as drawing on their own experience.

The document presented here is based on the results from both country studies. Some of the issues have been further updated with results from the Entebbe Conference on Small-Scale Food Processing (CTA/FAKT, 2000).

General background information on Tanzania and Uganda

United Republic of Tanzania

The country covers an area of 945 090 km² and has a coastline of 1400km, with ports situated on the Indian Ocean and Lake Victoria.

In 1997, the population was 30 million and was growing by an estimated 2% annually. The literacy rate is 68% (males 80%, females 57%).

The major natural resources are hydropower potential, tin, phosphates, iron ore, coal, diamonds, gemstones, gold, natural gas and nickel.

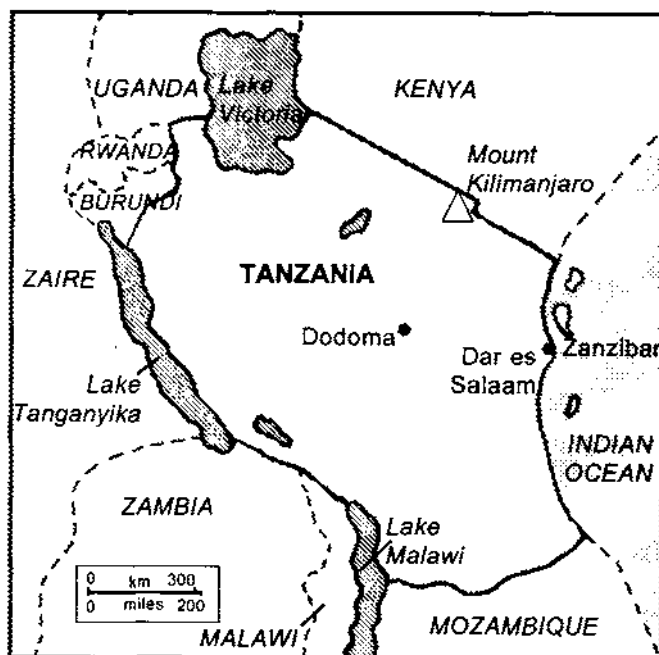
Table 1. GDP statistics for Tanzania, 1995–96

GDP purchasing power parity	US\$18.9 billion (1995 est.)
GDP real growth rate	3.5% (1995 est.)
GDP-per capita purchasing power parity	US\$8650 (1995 est.)
GDP composition by sector	
Agriculture	57%
Industry	17%
Services	26% (1994 est.)

Economic overview

Tanzania is one of the poorest countries in the world. The economy is heavily dependent on agriculture, and accounts for 57% of the gross domestic product (GDP; Table 1). Agriculture provides 85% of exports, and employs 90% of the workforce. Topography and climatic conditions, however, limit crop cultivation to only 4% of the land area. Coffee, the principal cash crop produces about 54% of total cash crop output and 21% of total export revenues. Other principal export crops include cotton, cashew nuts, tobacco, tea and sisal.

Industry accounts for 17% of GDP and is mainly limited to processing agricultural products and light consumer goods. The economic recovery programme announced



in mid-1986 has generated notable increases in agricultural production and financial support for the programme by bilateral donors. The World Bank, the International Monetary Fund and bilateral donors have provided assistance to rehabilitate Tanzania's deteriorated economic infrastructure. Growth in 1991–96 has featured a revival in industrial production and a substantial increase in the output of minerals, led by gold. Recent banking reforms have helped increase private sector growth and investment.

Inflation rate: consumer price index 30% (1995 estimate).

Industries: primarily agricultural processing (sugar, beer, cigarettes, sisal twine), diamond and gold mining, oil refining, shoes, cement, textiles, wood products, fertilizer.

Industrial production growth rate: 7.7% (1994).

Agricultural products: coffee, sisal, tea, cotton, pyrethrum, cashews, tobacco, cloves (Zanzibar), maize, wheat, cassava (tapioca), bananas, fruits, vegetables; cattle, sheep, goats.

Exports: (total value) \$679 million (1995).

Commodities: coffee, cotton, cashew nuts, cloves, tobacco, sisal.

Partners: India, Germany, Belgium, UK, Japan, Netherlands, Kenya, Hong Kong, USA.

Imports: (total value) \$1.69 billion (1995).

Commodities: manufactured goods, machinery and transportation equipment, cotton piece goods, crude oil, processed foods

Partners: UK, Germany, Italy, Japan, US, Kenya, China.

Debt (external): \$7.4 billion (1994 estimate).

Republic of Uganda

The country covers an area of 236 040 km² and has no access to the sea.

The population is just over 20 million, with growth estimated at around 2.1% in 1995. The literacy rate is 62% (male 74%, female 50%).

The major natural resources are copper, cobalt, limestone and salt.

Economic overview

Uganda has substantial natural resources including fertile soils, regular rainfall, and sizeable mineral deposits of copper and cobalt. Agriculture is the most important sector of the economy, employing over 80% of the workforce. Coffee is the major export crop and accounts for the bulk of export revenues.

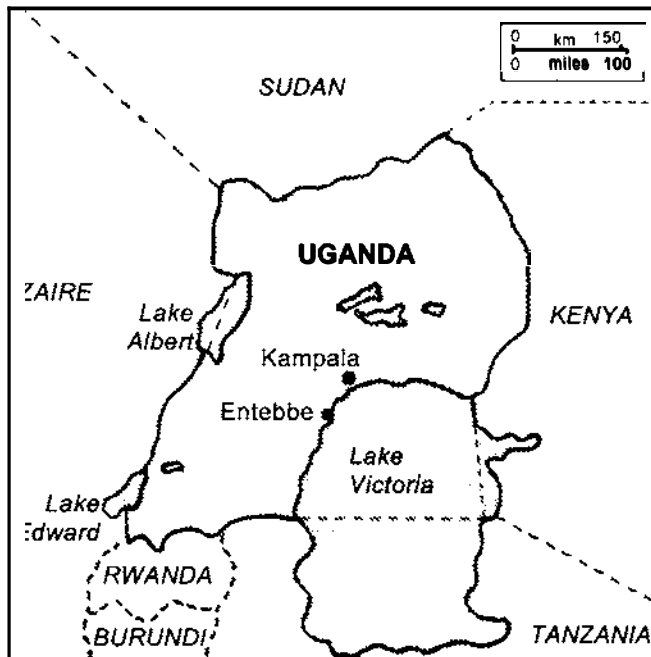
Since 1986 the Government, with the support of bilateral and multilateral develop-

Table 2. GDP statistics for Uganda, 1995–96

GDP purchasing power parity	US\$16.8 billion (1995 est.)
GDP real growth rate	7.1% (1995 est.)
GDP-per capita purchasing power parity	US\$900 (1995 est.)
GDP composition by sector	
Agriculture	55%
Industry	12%
Services	33% (1995 est.)

ment agencies, has acted to rehabilitate and stabilize the economy by undertaking currency reform, raising producer prices on export crops, increasing prices of petroleum products, and improving salaries in the civil service.

The policy changes are especially aimed at dampening inflation, and boosting production and export earnings. During 1990–94 the economy showed a solid performance, with continued investment in the rehabilitation of infrastructure and improved incentives for production and exports. The economy again prospered in 1995, with rapid growth (Table 2), low inflation, growing foreign investment, a trimmed bureaucracy, and the continued return of exiled Indian-Ugandan entrepreneurs.



Inflation rate: consumer price index 7.3% (1996 estimate).

Industries: sugar, brewing, tobacco, cotton textiles, cement.

Industrial production growth rate: 15%(1994).

Agricultural products: coffee, tea, cotton, tobacco, cassava (tapioca), potatoes, corn, millet, pulses, beef, goat meat, milk, poultry.

Exports: (total value) \$555 million (FY 1994/95).

Commodities: gold, cotton, coffee, tea, corn, fish.

Partners: Spain 23%, France 14%, Germany 14%, Italy 10%, Netherlands 8%.

Imports: (total value) \$1.18 billion (FY 1994/95).

Commodities: petroleum products, machinery, metals, transportation equipment, cotton piece goods, food.

Partners: Kenya 26%, UK 12%, Japan 8%, Germany 8%, India 5.5%.

External debt: \$3.4 billion (1995 estimate).

Significance of small-scale industries for economic and social development

Industry plays a key role in the process of economic development and growth. Planners and politicians tend to use a rather narrow definition of industry, generally implying 'modern manufacturing' and 'large-scale'. When 'small-scale' is considered, it is often used as an alternative process of (especially social) development, focusing on underprivileged target groups. Development policy and practice have not been very successful so far in integrating measures to strengthen small enterprises into larger development strategies.

An important dimension in development is change. Industrialization brings about changes through new economic and social structures in which self-sufficiency is gradually replaced by specialized economic activities and dependence on the market. Development does not restrict change to industry. Rural self-sufficiency can gradually give way to specialized agricultural production, and non-agricultural activities grow out from the farm. However, specialization in agriculture and the lack of productive arable land can lead to a shortage of employment opportunities. Another factor bringing about change in many economies in African countries has been the implementation of structural adjustment programmes, during which many people who worked with government institutions or parastatals were laid off.

The past has shown very clearly that modern, large-scale manufacturing is not the answer to the employment crisis. Its high degree of capital intensity results in a limited demand for labour, mainly for highly skilled labour. Small- and medium-scale enterprises (SMEs), on the other hand, have shown the capacity to absorb labour and

enable a relatively large number of workers to earn a moderate income, though often in informal activities with generally weak prospects for growth (Parker *et al.*, 1995).

The dividing line between different categories of enterprise remains highly specific to a particular country, and in time. Generally, three types of criteria can be used to characterize an enterprise:

- size of the enterprise
- level of technology applied
- type of entrepreneurship.

For a detailed discussion of the question of categorization, see Baud and De Bruijne (1992).

Analyses of SMEs have shown the following major strong points (Teszler, 1992).

- Employment - SMEs have a labour-intensive production mode and therefore employ large numbers of labourers. Skill requirements are generally low; what training is required is usually provided on the job.
- Capital - SMEs are highly labour-intensive, therefore they use less capital. They depend far less on imports for machines, equipment and inputs for their operation. Therefore SMEs have little adverse impact on the balance of trade of a country.
- Location - the location of an SME is mainly determined by an adequate market and/or a good supply of raw materials. Given their modest output, this target is fairly easily reached. Thus SMEs are far more flexible than large enterprises that depend on the presence of amenities (energy, water, infrastructure, skilled labour), a large supply of raw materials, and a market for their finished products. Given the high labour-absorption capacity of SMEs, this implies that they can assist in stemming the flow of rural-urban migration, at least to the most overcrowded cities.
- Low-income population - SMEs produce reasonably priced consumer goods (such as processed foods) that are within the reach of low-income sections of a country's population.
- Flexibility to adjust - due to their small size and simple management structures, SMEs can react quickly to changes in demand and/or policies. In the case of declining incomes or economic crisis, they can produce cheap substitutes for products previously supplied through imports or large enterprises.

This brief listing of the strengths of SMEs may suggest they are the answer to the developer's prayers. There are, however, some serious drawbacks.

- SMEs do not have the dynamism once hoped for. Most (some research suggests 98%) remain stagnant in size; only 2% have expanded.

- SMEs use their capital relatively inefficiently.
- Most SMEs suffer from a weak management structure.
- Working conditions in SMEs are extremely poor.
- Many SMEs work outside legal structures; they do not keep accounts. Economic and financial problems are therefore recognized very late.
- SMEs generally have a very weak political lobby; they cannot influence markets.

Strategies for strengthening the performance of SMEs

Given the potential of SMEs to contribute to the development process, it is necessary to consider whether and how their role can be enhanced. The extent to which any intervention will prove effective depends primarily on the outlook of the entrepreneur. Many SME entrepreneurs, however, tend to be loners. Financing fixed assets as well as working capital comes out of personal savings, or those of friends. Their attitude towards outside interventions is generally not very positive.

What are their main problems?

Small- and medium-scale enterprises in most countries face the problem of access to formal credit institutions. With respect to non-financial constraints, survey data from five African countries show substantial variations (Parker *et al.*, 1995). Experience has shown that, rather than assisting SMEs directly, it is important to improve the framework for their development, including:

- physical infrastructure – roads, utilities, transport
- social infrastructure – training, education
- eliminating the bias of existing institutions (e.g. banks) against small economic units
- assistance and subsidies should be directed towards developing institutions or structures that serve SMEs, rather than the clients themselves; in all cases SMEs should pay for a share of the costs.

Where should assistance be channelled and provided?

Manufacturers' associations, self-help groups, cooperatives and local NGOs are considered as potentially effective agencies to deal with individual problems (Parker *et al.*, 1995).

Chapter 1

SMALL-SCALE FOOD PROCESSING IN DEVELOPING ECONOMIES

The importance of food processing in developing agrarian economies

Agricultural produce, such as cereals, tubers and oilseeds, is generally not palatable immediately after harvest. Tubers, fruits and vegetables may be processed to extend their shelf-life; cereals are milled; and oilseeds are pressed to ease household-based food preparation. Some produce is fermented or mixed with other ingredients to improve palatability or turn it into an inviting snack.

Market demand for processed foods has developed in all cultures and societies as division of labour progresses and people specializing in particular skills have increasing levels of disposable income. Today a wide spectrum of food processing enterprises can be found in Africa, ranging from very small entrepreneurs extracting oil in laborious, manual operations, through small expeller mills providing services to customers and also selling some oil, up to large-scale enterprises processing food for national and international markets.

Agro-based industries are generally the first to develop in the industrial sector of a developing economy where, hitherto, agriculture has been the mainstay of people. Statistics suggest that the agro-based industrial sector generates 40% of all manufacturing added value, more than any other industrial activity in sub-Saharan Africa (World Bank, 1989). Figures from Uganda show that nearly half of all people employed in the manufacturing sector work in food processing-related activities.

Why go for small-scale?

Despite the myriad of problems that small enterprises face, they do enjoy some advantages and strengths over large units.

Their size is more compatible with the small and diversified farming structure and the often poorly developed transport infrastructure in rural areas. Acquisition of sufficient raw material, which is crucial to assure a maximum utilization of the enterprise's processing capacity, is therefore easier in smaller than in larger units. Large-scale processors often enter contract relationships with farmers to assure sufficient supplies of raw material of a defined quality standard.

Large enterprises often have to rely on technologies that can only be serviced and maintained with inputs (skills and spare parts) from industrialized countries, which places a heavy cost burden on the company. A United Nations Industrial Development Organization (UNIDO) consultation in 1990 found that out of 204 food processing plants visited in 24 African countries, **22%** had stopped operating altogether,

55% were malfunctioning, and only 23% were operating successfully. Part of the problem was blamed on a chronic shortage of spare parts and on maintenance difficulties. Trade liberalization and dropping of import restrictions may have reduced the magnitude of the problem.

Markets for processed foods in East African countries, although rapidly developing, are still small. With liberalization, markets and market demands are changing. In this situation entrepreneurs have to compete with others, both within the country and from abroad, rapidly entering national markets. Small enterprises are generally far more flexible when it comes to market orientation and raw material supply. A good example is the oil miller from Arusha, Tanzania who struggled in fierce competition with his competitors for sunflower procurement. He needed about 50 tons of seed every month to keep his mill (investment around US\$10,000) running. His answer to the problem was to move the business to the main sunflower-growing area in Babati, about 150km from Arusha. Purchasing raw material is now much easier and less costly to him.

What are the benefits for the rural economy?

Processing of agricultural commodities for the market adds value to them. Milk, for instance, sold pasteurized to consumers in Kenya, fetches three times the price of raw milk at the farmgate (Waweru, 1995). Sunflower oil in Tanzania increases its value by a factor of two to three after extraction from the seed (FAKT, 1993). It is common that food commodities, as they move from the farmgate to the consumer household, add value severalfold.

What are the benefits for the farmers?

Community-based, cooperatively or individually run enterprises that offer processing services allow producers to take a share in the value addition created through processing. Developing and strengthening the link between agriculture and industry will help producers to assure and expand their markets, particularly if they venture into new, non-traditional crops.

Increased employment

Commercial food processing varies in its labour intensity. Primary processing of commodities such as cereals or oilseeds has a relatively small employment effect, while processing produce such as fruits and vegetables, tubers or milk is generally more labour-intensive. Bridier (1994) quotes figures from a survey of 25 localities in southern Benin, where around 20,000 female food processors were in business.

Availability of by-products

Small-scale food processing in rural areas ensures that by-products from processing remain available within the area. These by-products often have significance as animal feeds, such as bran from the milling of cereals, or press cake, the residue from oil extraction.

Impact on the role of women in society

Food processing in Africa has traditionally been the domain of women. When directed towards the market, it assures them not only of a reliable income, but also of a strengthened position within the family and within society. Interventions from development organizations frequently do not consider sufficiently the delicate social linkages and questions of access and ownership. Technological changes introduced from outside have often had negative effects on the role of women in this sector, and they have found themselves to be on the losing side (Giinter, 1997).

Reducing post-harvest losses

In the past, preservation of harvested food was the main focus of efforts aimed at developing and strengthening rurally based food processing. Figures used to describe the extent of storage losses were often vastly exaggerated, as shown by the results of properly conducted loss assessments.

Losses are indeed significant for perishable items such as fruits and vegetables, which are seasonal and enter the market for a very short period. Preserving such foods through processing has a significant impact on loss reduction, and will help farmers to withhold their products from the market until the glut has passed and prices have again increased in their favour.

Impact on backward linkages to agriculture

For most food processing enterprises, the backward linkage to agriculture is crucial for their performance. Many small-scale processors buy raw materials from traders daily at their nearest public market. Although simple and straightforward, this creates a number of problems – the processors have little control over the price charged by traders each day, and seasonal price fluctuations make control over cash flow and pricing more difficult. The processor is also unable to schedule the raw materials in the quantities required, and production may not meet a target because there are not enough raw materials for sale on a particular day. Also, the processor has no control over the way materials are handled during harvest and transported to the markets, and thus no control over their quality.

To overcome these problems, a processor can enter direct relationships with farmers, for example through contracts. This will give the processor greater control over the amount of raw materials available, their quality, and their price. The benefits to farmers, in turn, are a guaranteed price for their crop, an assured market – often for the whole crop, and cash on hand generally immediately after harvest. When traders and middlemen procure the crop, they often show little concern for quality and do not relate it to price. Traders may be the only source of input supply for the farmer, and a source of immediate, informal credit, as farmers often have no access to banks.

Small processors are always in competition with traders who tour an area to buy crops. When processors want to negotiate contracts, farmers may already be tied to

existing arrangements with traders. Small processors have little working capital and are unable to buy larger quantities of raw material for processing at one time. This is the main limiting factor for their operation during the off-season.

Large food processing enterprises sometimes offer training and extension services to farmers. More limited types of assistance include purchasing tools or fertilizer in bulk. Alternatively, part payment for a crop may be made in advance, so that farmers can buy inputs without the need for credit.

Changing framework conditions

Demands on food marketing and processing systems have increased, and can be expected to continue increasing in future (GTZ, 1997).

An increasing demand for food

The demand for food is expected to double within the next 30 years. The number of consumers who depend on a commercial food chain will increase at a faster pace than those living in subsistence. This will considerably increase demands on the organizational, institutional and infrastructural capacities of marketing and processing systems.

Increasing diversification of demand

In some consumer segments, an increasing demand for higher-value food products can be expected. A large group of consumers, however, will continue to depend on low-cost food items. Marketing and processing systems will have to adapt in their structure and capacity to these developments in order to assure sufficient supply of food for all.

Changing policy frameworks for food marketing and processing systems due to liberalization processes

In the recent past, many governments reduced their role in marketing and processing systems because of liberalization of markets. This has significantly changed the roles and responsibilities of market participants at all levels. At the micro-level producers, traders, processors and consumers can act more freely; markets have become more flexible; and economic success increasingly depends on the skills and capacities to respond to changes in the market.

At the meso-level, services that had traditionally been provided by public institutions are either not being offered any more, or have been transferred to or taken up by private-sector organizations. Often essential services are available only in a rudimentary form. New service providers frequently lack the market and service orientation required, and do not operate on a financially sustainable basis. Another problem is the lack of coordination between different service providers.

At the macro-level, governments should now focus on their core functions: the intro-

duction of a transparent, reliable and stable political framework for market participants; the assurance of fair competition; and making available certain services, such as the elaboration of quality standards, food quality control, and the development of a market infrastructure.

Chapter 2

FOOD PROCESSING IN TANZANIA AND UGANDA

The role of commercial food processing in the economies of Tanzania and Uganda

Food processing for the market is carried out by enterprises in the formal, visible sector, and also by a large number of small and micro-enterprises which do not feature in the statistics. In terms of contribution to the overall GDP, the significance of food processing in the formal sector is relatively small. However both countries are largely agrarian, with manufacturing in its infancy, contributing only around 15% to GDP (1997 figures).

Looking at the food processing industry in the context of the manufacturing sector, the picture will change. Nearly a quarter of all registered enterprises are engaged in food processing, providing employment to around 20% of people working in the manufacturing sector. Growth was even more impressive, amounting to 15% per annum during this decade. With a growing population, increasing urbanization and higher incomes, this development can be expected to continue.

These figures certainly underestimate the importance of the sector. Many more people are engaged in small food processing enterprises that are not registered, and thus are invisible to the statisticians. People may produce snack foods, beer or dried fish in their backyards to earn additional income.

Characteristics of enterprises in the sector

Only a few enterprises in the formal sector can be referred to as large-scale: they include the breweries and soft drink manufacturers, and a few of the large parastatals such as flour and oil mills which have (so far) survived the changing role of the state. Then there are all those enterprises that process plantation crops such as coffee, tea or cashew. Most operate with foreign capital and imported machinery and equipment.

A total of around 1000 small- and medium-scale enterprises (SMEs) are registered in Tanzania; in Uganda the number comes to approximately 1700. These figures can surely be no more than an indication, as many are not registered.

Most of these enterprises produce traditional, well known products using locally established technologies. Enterprises such as flour and oil mills, and also bakeries are well established within the agro-food chain. Raw material supplies are generally obtained from within the region, close to the location of the enterprise, and are on the market for 6-9 months or even longer during the year. Markets for the finished product are also local: being basic commodities, little or no market development is required by the entrepreneur.

More than 90% of all registered enterprises in Tanzania fall into this category. In Uganda the figure may be somewhat less, but the tendency is certainly the same.

These SMEs have invested capital in the range US\$1000–10,000 in equipment and machinery. Capital costs feature highly in their financial statements, and it is important for such enterprises to use their processing capacities as best they can to break even and make profits. They have to invest efforts to ensure the functioning of both backward (supply) and forward (market) linkages.

A common characteristic for these enterprises is their lack of capacity and/or effort to diversify the range of products and services they offer in the market. Most will produce and sell the same products as their competitors, with very little variation in composition, appearance, and even price. This gives them a weak position in the market, as customers can choose among many who offer the same product.

Only a few entrepreneurs have ventured beyond the processing of traditional, basic food products. In Uganda fruit processing, in particular drying of fruits and juice extraction, is a branch that some entrepreneurs have successfully entered. Obtaining and maintaining suitable processing technologies and attractive packaging materials are some of the main headaches that these entrepreneurs are plagued with.

Opportunities for milk processing are developing close to urban and peri-urban markets in both countries. For such commodities, entrepreneurs require a very close vertical integration with producers. They also need to be very alert to requirements, needs and developments in the markets.

In nearly all cases, food processors sell their produce on the domestic market. Exceptions are plantation commodities (coffee, tea, cashew), dried spices (specifically from Zanzibar), some dried fruits produced on contract with a British company, and some other products (e.g. honey) that enter the fair trade market segment in Europe.

Organizational structure of food processing enterprises

Many of the enterprises are held and managed by individuals. However, group-owned and group-managed enterprises do play a role in both countries, particularly in Tanzania. Some have developed indigenously, facilitated by strong leadership and cohesion within the community; many were set up following interventions from outside.

Group-based enterprises have been on the agendas of many development organisations, and group formation is often a prerequisite for providing resources. A typical example is the women's group embedded within a village parish that receives funds from a charity to run a grain mill. This approach carries little business orientation, and all too often imposes an idea from outside, so hardly surprisingly, few of these 'enterprises' have the strength to survive in the market. The end will be near once the first major breakdown of the grain mill occurs, or the first conflict over money issues erupts. Another critical aspect of this type of intervention is that such heavily subsidized enterprises can sell their services more cheaply (the social aspect) and

price their competitors out of the market.

Yet group-based enterprises that have developed out of endogenous initiatives can be viable, and can have a strong impact on the economy of a community, as illustrated by case studies from Tanzania (ELCT/FAKT, 1996) and Uganda. Stringfellow *et al.* (1997) have analysed farmer-controlled enterprises in five countries, and recommend a strong participatory as well as market-oriented approach.

There are many variations to the tune of group- or community-based enterprises. The actual processing may be done on an individual basis, while marketing of the finished produce, input supply or provision of credits may be done cooperatively. The potentials and problems of this approach were recently reviewed in a workshop with participants from African and Asian countries (FAKT/PWDS, 1998).

The potentials of community-based enterprises in the context of this study are:

- Poor and low-income people can draw economic benefits directly from food processing.
- Through vertical integration (farmers' groups) the supply of raw materials for processing can be much improved.
- Joint marketing of finished produce and the procurement of raw materials and other inputs can be done with more leverage towards traders.

Enterprises that take up technological and product innovations are more likely to be run by individuals. They can act more flexibly, make decisions more quickly, and have easier access to capital. Individually owned and run enterprises do not automatically imply that the entrepreneur reaps all the benefits. A well run enterprise can mean a good and stable market for the producers, offering opportunities to expand their production.

Many of the small grain and oil millers do not have the working capital to buy sufficient raw materials for processing. So they would rather sell their milling services, and as a consequence all the value addition created goes to the producer (FAKT, 1993).

Gender in food processing in Tanzania and Uganda

Women in most African societies play a key role in the post-harvest sector, starting with storage, processing and then selling agricultural produce in the market. Much traditional food processing, such as beer-making or oil extraction, is firmly in the hands of women. In Benin 98% of palm nut processing is carried out by women (Anon., 1991).

In the past, most development organizations focused their activities in the post-harvest sector on the problem of losses. It is only recently that the field of post-harvest technology has been viewed as a system, rather than as a series of individual technical problems. As a result, the important role that women play in this context has become clearer (Gunter, 1997).

Development organizations have struggled with different approaches to initiating, developing or strengthening women's groups running food processing activities. Many projects have ended in failure, very often because development facilitators and their organizations imposed their concepts and priorities on the groups (Classens, 1993; ELCT/FAKT, 1996).

A particular problem arises out of the tension between the common perception of a small business and what its orientation should be, and the priorities that women set in their businesses. For them the business has to contribute first to the sustenance of the family. Maximization of profits and business expansion do not necessarily take first priority. The business has to fit in with all the other numerous tasks a woman has within the rural family. Thus the borders between business and family are fluid; money moves quickly from the enterprise's cash box over to the family budget.

Often women's enterprises are an expansion of traditional, domestic skills. They tend to require little in the way of capital investment for machinery or physical infrastructure, and they may lend themselves to flexible working hours which fit in well with women's domestic responsibilities. In many instances processing is done in backyards or in the home, under conditions of poor hygiene. This creates low production capacities and leads to poor product quality. Risks are low, but so are the returns. Few women make sufficient profit to re-invest in their businesses in an attempt to scale up their level of activity.

Credit is a major problem for women entrepreneurs. They usually lack the savings needed to put down the equity payment required to get a loan. Furthermore, they do not hold land titles, which could be used as collateral for a loan. A survey of 500 women's groups in Tanzania showed that only 13% had received loans, and most of these were acquired from sources other than banks (Hannan-Andersson, 1996).

The lack of capital is partly responsible for the fact that many women processors cannot invest in equipment and have to rely on manual processing methods. Development organizations also frequently assume that a diesel engine or electric motor is not suitable for a woman's hand, and often endow them with manual technologies which are meant to be more 'appropriate to women'. A good example is the ram press, an oil extraction technology that is referred to in both case studies. The press is manually operated and is described by many development organizations as a technology that is particularly suited to the needs of women. Yet operating the press is so strenuous that women cannot do the work themselves, but have to employ male labour.

The importance of supporting women in their efforts to earn an income from food processing has been recognized by the Integrated Training Programme for Women Entrepreneurship Development in Tanzania which is run by SIDO and UNIDO. The programme aims to enhance the entrepreneurial capacities of women, mainly through training. Several hundred women have participated in training measures, and 75% of these have taken up a business (Mchomvu and Gedi, 2000).

Chapter 3

MARKETS FOR PROCESSED FOODS IN TANZANIA AND UGANDA

The need for increased market orientation

In the light of trade liberalization, market orientation is playing a crucial role in the economic success of farmers and entrepreneurs. Market orientation may be expressed by the level of market knowledge, market skill and commercial attitude of the decision-makers in the business. In this chapter, the demand for processed foods and the existing supplies in Tanzania and Uganda are presented.

Demand for processed food products

The demand for processed foods in both Tanzania and Uganda is very difficult to quantify, as reliable data do not exist. Import statistics for processed food and beverages and government production statistics are listed in categories that are too broad to be useful. Market intelligence data do not exist to record actual demand.

From the experience of the consultants, it is helpful to categorize the market into consumer groups:

- Well-off urban population (plus the small number of wealthy rural people).
- People in cities and rural towns with average incomes.
- People living in rural areas with low-to-average incomes.
- Tourists and expatriates.
- Restaurants and snack bars.
- Institutions (schools, hospitals, prisons, barracks).
- Other food processing companies.
- Export (fair trading and international import agents).

Some of these categories can be further subdivided into categories based on age, sex, foods for religious or ceremonial occasions, foods for office workers, etc. Processed foods can similarly be grouped according to demand by each of the above categories. This categorization of markets can help in assessing specific segments in the market for placing a product.

In general, the demand for processed foods is low compared to industrialized countries. Rural populations have little disposable income and mostly purchase staples such as flour, cooking oil and sugar. However, the large numbers of rural poor mean that even if each family only buys a small amount occasionally, the total market is larger than would be expected from casual observation. Demand in urban areas is

larger, particularly in Uganda where economic activity and disposable incomes are higher. The following subsections describe the types of demand for foods in each category; see also Table 3 (page 23).

Dairy products

Milk is widely consumed in both countries; most is not processed, except in and around major cities. Tanzania has 22 small dairies. In Uganda, milk production is a major growth area and pasteurized milk is widely available in the western and southern cities. Increasingly, ultra-high temperature (UHT) milk from three processors is available in urban areas throughout the country. Small-scale production of butter, cheese, yoghurt and cream is confined to major urban areas where it is consumed by well-off nationals, tourists and expatriates. The market is small but expanding as the numbers of wealthy urban people increase due to the rapidly expanding economy. There is little competition from imports for any of these products (except for UHT milk), mainly because of their short shelf-life.

Fruit and vegetable products

In Tanzania, the market for juices and squashes appears to be small and largely met by imports. Numerous small-scale companies produce sauces, chutneys and jams. These products are sold mainly in urban areas, again facing strong competition from imports.

In Uganda, locally made juices, squashes, jams and sauces are sold mainly to urban consumers, tourists and expatriates. They face strong competition from imported products. Dried fruits are produced by some 80 rural families to supply the company Fruits of the Nile which exports the produce to a UK company, Whole Earth Foods.

There is little demand for dried fruits within Uganda and Tanzania, except for the seasonal demand for imported sultanas and raisins to prepare Christmas cakes.

Cooking oils

There is a high demand for sunflower oil in rural and urban areas of both countries. The number of small producers of vegetable oils in Tanzania has considerably increased in recent years, and they have to compete with large-scale producers and imported products (local production is insufficient to meet the demand). It is interesting to note that rural as well as urban consumers tend to prefer locally produced oil over imported oils, despite the fact that imported oils are often less expensive. Confidence in 'local' appears to be a particularly strong card for Tanzanian entrepreneurs that should be played more frequently in future.

There are 76 registered oil mills in Tanzania, mostly located in Dar-es-Salaam, Shinyanga and Arusha. Two to three oil mills can be categorized as large (processing more than 50 tons of oilseed per day); the others are all small expeller mills with a daily capacity of 0.5–1 ton. There are many more enterprises that are not registered, often operating locally manufactured, manually operated processing equipment (e.g.

ram presses) to extract oil from sunflower for sale.

In Uganda the market is dominated by one large-scale producer, and the vegetable oil supply from a US Agency for International Development (USAID) intervention programme (PL-480). Small-scale production is significant but is confined to rural areas, particularly in and around Lira in central Uganda. Markets for these oils are generally local.

Grain milling

In Tanzania there are 517 registered mills throughout the country, with concentrations in Dodoma, Iringa, Mbeya and Morogoro. Most are small, family-owned service mills used by local farmers.

In Uganda, demand for wheat flour is met by one large-scale miller at Jinja and from imports, as the output from the local mill does not meet demand by domestic customers and bakeries. Sorghum, millet and, to a lesser extent, rice flour are important in rural areas, particularly in the north, and demand is met mostly by service milling.

Sugar processing

In both countries most sugar is produced by a very few large sugar mills. Technologies for small sugar mills have been developed in Tanzania by the Institute of Production Innovation in Dar es Salaam, and some of these village units are now running. An independent judgement of their success was not available. The quantities they supply into the market, however, are insignificant.

Fish processing

In Tanzania chilling is an important process for fish. Drying and, to a lesser extent, smoking provide the basis for an important trade around the interior lakes.

In Uganda, there are 11 fish processors along the shores of Lake Victoria, preparing Nile perch for export and for local sale to wealthy populations along the Entebbe-Kampala-Jinja corridor. Small-scale smoking and drying of river fish for local rural markets or for regional export to Rwanda is more important in the west of the country.

Snack foods

Fried cassava products, 'Bombay mix'-type extruded products and potato crisps are becoming more popular in urban areas of both countries, and there is a growing demand from well-off nationals, expatriates and tourists. These products are also sold in markets, and to travellers from roadside kiosks. Micro- and small-scale producers face strong competition from attractively packaged, imported snack foods.

Bakery products

In Tanzania there are 227 bakeries, nearly half in Dares Salaam. Medium-scale bakeries in the major cities supply a growing demand for bread from all sections of the

population in both countries. Their economies of scale mean that micro- and small-scale producers find it hard to compete in terms of price, and therefore develop alternative, smaller niche markets. These include biscuits, cakes (especially celebration cakes in Uganda), doughnuts, and flour confectionery products. Although the demand for these is restricted to wealthy urban populations, expatriates and tourists (including cafes and some hotels), it is a highly profitable subsector and there is considerable competition. Competition from imported products is found only with biscuits, as other baked products have a short shelf-life.

Confectionery

There is a relatively small but growing demand for sugar confectionery products in both countries. The demand is largely met by imports, as the few micro- and small-scale producers are restricted by lack of know-how and appropriate packaging.

Soft drinks, alcoholic beverages and bottled water

There is a high demand for bottled drinks in both urban and rural areas of each country. Carbonated soft drinks are produced only by franchised medium- to large-scale companies. Beer and spirits are produced at both the large and micro-scale. Spirit production in non-registered enterprises is illegal, and informal beer production from sorghum or banana is restricted to the rural or peri-urban localities. A number of micro- and small-scale wine producers are attempting to compete with imports, but the market for wine is small in both countries, restricted mostly to expatriates and tourists.

There is an interesting and rapidly growing demand for bottled water. Several plants (three to four) are already running in Tanzania as well as in Uganda; the hardware for water treatment (filter modules and UV-treatment) is mostly imported from Thailand.

Spices

A limited number of spices are dried on a small scale for export and the local tourist market. This trade is mostly restricted to Zanzibar.

Tea and coffee

These 'traditional' exports are part-processed in both countries for export and for local markets.

Food processing branches in Tanzania and Uganda

The main food processing activities are described in Table 3. In general, commercial food processing activities are less developed in Tanzania than in Uganda.

Table 3. Main food processing activities in Tanzania and Uganda

Type of product	Tanzania	Uganda
Alcoholic beverages: beer, spirits, wine	Both large and micro-scale; informal sector for beer and spirits. Wine (grape) in one unit in Dodoma. High demand.	Both large and micro-scale: informal sector for beer and spirits. Wine on a small scale. High demand.
Animal feeds	Micro- and small scale; rapidly growing demand in urban and peri-urban areas.	Feed compounding for commercial supplies to farmers in medium-scale enterprises. Rapidly growing demand in urban and peri-urban areas.
Bakery products	Micro-, small and medium scale in both urban settings and small towns. High demand.	Micro-, small and medium scale, both urban settings and small towns. High demand.
Coffee	Part-processed for export at medium to large scale.	Part-processed for export and local market at medium to large scale.
Confectionery	Micro- and small scale. Low, but increasing demand.	Micro- and small scale. Moderate, but increasing demand.
Cooking oils	Large, small and micro-scale processing, mainly in rural areas and small towns. High demand.	Small, medium and large scale. High demand.
Dairy products	Small units; high demand for milk, but not widely pasteurized except around the major urban centres. Low demand and little processing of other dairy products.	Small-scale butter, cheese, yoghurt and cream in urban areas. High demand for milk – medium-scale pasteurized and UHT milk.
Fish processing	Drying on a small scale around interior lakes and some areas along the coast. Medium-scale chilling important.	Medium-scale chilling for export and small-scale smoking/drying for local markets or regional export.
Fruit and vegetable products	Medium, small and micro-scale: juices, jams, sauces, dried fruits. Low/moderate demand.	Medium, small and micro-scale: juices, jams, dried fruits for export, sauces. Moderate demand.
Grain milling	Large- and medium-scale wheat mills for bakeries; small-scale service milling for maize, sorghum and rice (only in some areas).	Large-scale wheat mills for bakeries; small-scale service milling of sorghum, millet and rice.
Processed meats	Micro- and small scale: chilled meat and sausages. Low demand.	Micro- and small scale; chilled meat and sausages. Low to moderate demand.

continued...

Table 3. continued

Type of product	Tanzania	Uganda
Snack foods	Micro- and small scale. Growing demand.	Micro- and small scale. Growing demand.
Soft drinks	Franchised medium and large scale only. Demand in urban areas; low demand in rural areas.	Franchised large scale only. High demand in urban areas.
Spices	Dried for export and local tourist market on a small scale.	Dried for export on a small scale.
Sugar processing	Mainly large scale; some small-scale activities.	Large scale.
Tea	Export, large scale	Part-processed for export and local market at medium to large scale.
Water (bottled)	Few producers. Growing demand.	No information on producers. Growing demand.

Importation of processed foods

The extent to which processed foods are being imported gives an idea about the demand and potential opportunities for local processors. It is estimated that each country imports processed food to a tune of around US\$50 million a year.

Edible oils top the list of imported foods in both countries; imports are valued at US\$30 million in Uganda and about US\$20 million in Tanzania. Fruit juice, as one example of processed fruits, was imported into Uganda to the tune of US\$1 million in 1994, while the country spent US\$250,000 on imported jams.

In Tanzania only 5–10% of the fruits and vegetables produced in the country are processed to meet 8% of the domestic market demand for canned and processed products. Thus over 90% of the products consumed are imported.

In contrast to Uganda, imported processed foods in Tanzania, particularly if they come in bulk, carry the stigma of being adulterated, and people apparently prefer local produce.

Distribution channels and marketing

There are different types of distribution systems for processed foods, depending largely on the scale of operation of the processor. At a large or medium scale of operation in both countries, brewers, distillers, millers, bakers and oil processors

have their own transport for delivery to depots in urban centres, and sell products from these to wholesalers, retailers, market sellers and street vendors. Wholesalers distribute the products to shops in rural areas, and market stallholders buy from these shops. Some street vendors, market sellers and kiosk owners in urban areas purchase products from retailers.

Small- and micro-scale urban producers may sell directly from their production unit to consumers, market sellers or kiosk vendors, or they may arrange periodic deliveries to a relatively small group of retailers with whom they have established links.

In general, production activities are adjusted to the size of the local market, and many producers are unwilling to sell to wholesalers as this would reduce their profits. There is also a lack of knowledge and trust between producers and wholesalers which further limits expansion. The market share of individual producers may be falling as a result of competition from other producers, and due to competition from imports for some products. This reduces their production and serves as a disincentive for investment or expansion of the enterprises.

Marketing in both countries is done mainly by newspaper advertisements and posters. Advertising is frequently perceived negatively by some producers and consumers, the implication being that products are of lower quality if they need to be advertised. In both countries there are no clear policies to promote internal trade or export of processed foods. There is no marketing assistance or market information available to producers.

The main constraints to improved marketing are:

- Finance - poor cashflow in businesses, little disposable income to spend on advertising (a major constraint especially for new products).
- Attitude - little market orientation among entrepreneurs, who do not see the value of active marketing, poor relationships with customers and retailers, no feedback, demand-led distributor mentality.
- Knowledge and skills - information on consumer requirements is not sought, information is not sought from retailers, lack of specialist marketing skills to design and organize marketing campaigns.
- Infrastructure and materials - poor storage, refrigeration and distribution systems, problems of acquiring attractive packaging.

Market trends in Uganda include increased demand for flour, bakery products, soft drinks, dairy products, fruit juices, cooking oils, snack foods and convenience foods (including supplies to restaurants and fast-food outlets in Kampala), and bottled water. In Tanzania, trends are similar but the level of purchasing power is considerably lower.

Potential for improved product quality and diversification

In the case of staple foods, such as cooking oil and cereal flours, there are few opportunities for diversification. In many other cases producers have the opportunity to

improve product quality and widen their range of products significantly. In other subsectors the opportunities for diversification depend, to a large extent, on the existence of well-off urban consumers and their taste for processed foods. The expanding economy in Uganda has generated an increasingly large number of such consumers, and there are already many examples of different types of snack foods, dairy, fruit and bakery products. It is likely that this trend will continue. The slower economic growth in Tanzania may restrict the pace of such diversification, but it is probable that similar trends will be seen.

Problems of inadequate product quality are found in all subsectors, and there is considerable room for improvement through training and technical support in appropriate quality assurance for small-scale processors.

Chapter 4

PROBLEMS FACED BY SMALL-SCALE FOOD PROCESSING ENTERPRISES

Small-scale food processing enterprises in the two countries face a range of problems. These may be considered in two categories: those that are external to an enterprise, and those that are within the control of the enterprise (internal).

Examples of external problems include:

- Government policies towards small enterprises.
- Availability and cost of finance from commercial lenders.
- Availability of equipment, packaging materials, essential ingredients and maintenance services.
- Competition from imported products.

Internal problems include:

- Lack of skills of managers and processing staff.
- Poor marketing knowledge and selling skills.
- Selection of inappropriate technologies.
- Inadequate hygiene or quality assurance.

These factors are described in the following section. It is noted that in some cases a particular constraint may consist of a combination of internal and external problems.

Government policies towards small enterprises

The business registration, regulatory and reporting environment in Tanzania is one of the worst in the whole of Africa and, more than any other factor, has driven the bulk of small- and medium-scale enterprises (SMEs) to operate in the informal sector (Calcopietro, 1999). The Tanzania Investor Roadmap showed that procedures for registration and licensing in Tanzania amount to four or five times the number of documents and forms needed to complete the process, compared with other African nations. In addition, in most cases the registration/licensing process is centralized in Dar es Salaam, involves several authorities/institutions, and is time-consuming, expensive and cumbersome. Other complications for SME operators include paying provisional taxes even before a company goes into production; and the requirement to pay several other taxes such as stamp tax, sales tax, VETA tax, payroll levy, municipal and regional taxes, industrial trading tax, etc. It is generally agreed that by reducing the number of taxes and simplifying the process, more SMEs will be regis-

tered and the tax collections will increase.

From the viewpoint of the entrepreneur, there is no coherent and perceivable support coming from government institutions. The degree to which entrepreneurs are organized in Tanzania is very low: there are no manufacturing associations that effectively lobby government on issues that are of importance and interest to small and medium entrepreneurs.

The weak capacity of government food control authorities to inspect the quality and standards of imported foods is regarded as a problem. Government authorities do not have the capacity to prevent and deal with violations against regulations on importation of processed food. For instance, importers avoid payment of duty through false labelling (e.g. refined oil is labelled as 'crude oil'). Price dumping for such products is a serious threat to local enterprises.

A severe constraint for industry in Uganda is the very high cost of utilities such as energy and water. An incoherent taxation system favours trade and penalizes industry. That system is currently being reviewed by working groups set up by the Ugandan Ministry of Trade and Industry.

Finance

A significant constraint on small-scale processors in both countries is the difficult access to credit which is needed to start or expand a processing business. Credit for financing investment and working capital is difficult to access, and is expensive. A significant stumbling block for many small-scale entrepreneurs, particularly women, is the demand for collateral that banks need to secure the loan. This severely limits enterprises to modernize or expand their production facilities.

Banks seem particularly hesitant to provide short-term loans for working capital. Food processing entrepreneurs depend on working capital for buying raw materials as stock, particularly in those cases where raw materials are in short or seasonal supply. Small volumes of raw materials bought at a time by small-scale producers make their production costs proportionally higher.

Processing by micro-enterprises is often irregular and seasonal in nature, stopping when raw material supplies are finished; they rarely have alternative products for the off-season. Once an enterprise has invested several thousand dollars in equipment, production halts are damaging, as the bills to pay fixed costs (mainly capital costs) continue coming in.

Availability and choice of equipment, maintenance services and packaging materials

The identification and purchase of appropriate equipment by small-scale entrepreneurs is a significant constraint in the development of food processing enterprises in Tanzania and Uganda.

Local manufacture and import of processing equipment

There are hardly any fabrication workshops that manufacture food processing equipment in Tanzania. This is mainly due to a very low level of market demand for equipment, which makes workshops unwilling to explore the potential for supplying machinery.

Workshops lack working capital, therefore they never keep processing equipment in stock for demonstration and display. When an entrepreneur places an order for a piece of equipment, the workshop will first ask for a substantial advance payment to buy steel and other items required for manufacturing. Due to financial strains they do not employ qualified personnel, nor do they invest in badly needed machine tools. This, in turn, leads to poor quality of the equipment they manufacture.

Attempts to manufacture relatively complex processing equipment, such as oil expellers, have been undertaken by several workshops in Tanzania. In most cases, these were 1:1 copies of foreign designs that were not adapted to the local situation, and proved to perform poorly in the field.

The opportunities for importation of small-scale equipment are very limited. Small- and medium-scale entrepreneurs find it difficult to establish contacts and correspond with suppliers abroad. Suppliers in other countries find administrative costs excessive for the small quantities involved.

There is very little information available to entrepreneurs that will allow them to judge whether a foreign-manufactured piece of equipment will suit their needs. As a result they often end up buying inappropriate equipment at high cost.

Development organizations that promote small-scale food processing often introduce and disseminate just one type of technology (the one they consider as 'appropriate'); a choice for prospective entrepreneurs is not being offered.

The situation as described here is broadly the same in Uganda.

Technical maintenance

Technical maintenance services in rural areas are poorly developed in both countries. Entrepreneurs often have to be their own mechanics. Replacing worn parts can become a nightmare for entrepreneurs. Spare parts are often only available from the organization that has developed the 'appropriate' equipment, resulting in people having to travel long distances to procure the badly needed parts. Local workshops are not trained and equipped to manufacture or recondition worn parts to a high standard. Consequently the processing efficiency of the enterprise falls, and production costs increase.

Maintaining imported equipment is even more of a problem. The high cost of spare parts is one problem, but the difficulties involved in obtaining them may be even more of a nightmare for small-scale entrepreneurs. The lack of availability of spare parts contributes to production halts and damages companies' financial situation.

Packaging materials

Packaging materials for processed foods are very difficult to obtain in both countries. Good packaging is required to assure a certain shelf-life for the food, and also to make products attractive and appealing to the customer. Glass and extruded polyethylene are available in Tanzania; Ugandan food processors have to import all their packaging materials from either South Africa or Kenya.

Competition from imported products

As the liberalization of markets gains ground, local producers lose some of the protection they used to have from foreign competitors. The complaint of 'unfair' competition was raised frequently by entrepreneurs during the course of the study. Imported goods are seen by consumers as being of better quality and more attractive, and may be less expensive as well. Consequently, locally manufactured goods are losing some of their market share. It is difficult to judge on the basis of this study how unfair the competition with foreign suppliers really is towards small- and medium-scale entrepreneurs. However, there is a clear signal that entrepreneurs have to learn and practise a stronger market orientation for their businesses. The term 'unfair' may, for instance, apply in those cases where local food inspection and customs do not apply the national standards and rules to imported goods.

Technical and management skills

Business and management skills training

Lack of knowledge and skills for business planning and management among entrepreneurs are key constraints to the development of small-scale food processing. The majority of processors do not know, for example, how to calculate the cost of their production; how to conduct rapid market appraisals or analyse consumer needs or market segmentation; how to set prices for their products; or how to plan the finances of their business.

Trained, skilled labour

Small-scale enterprises find it difficult to find technically trained and experienced staff (mechanics, food technologists) at a salary level that their business can afford. There is no intermediate training of food processing technicians in Tanzania and Uganda. Bachelor of science food technologists are being trained at Sokoine University of Agriculture (Tanzania) and at Makerere University (Uganda), but it seems they cannot fill this gap.

Technical training and advice

There are very few competent institutions or people that small entrepreneurs can turn to in case they need to solve technical problems or develop their products and processes further.

A specific problem of increasing importance is the question of hygiene and quality assurance. Very few food processing entrepreneurs have any technical training in this field. Therefore there is little appreciation among entrepreneurs of the importance of hygiene in processing, and little knowledge of how to maintain and assure it. Government food control inspectors have little practical know-how themselves as to how to maintain good hygiene in the production process.

The concept of quality is still poorly developed among entrepreneurs in both countries. This is partly due to a lack of feedback from the market: entrepreneurs themselves are not clear on what their customers want. Furthermore, market orientation and increased competition require new thinking and a new attitude from entrepreneurs with regard to product quality. This attitude is still rare.

Market research, marketing and selling

In both Tanzania and Uganda, small-scale food processors have little information on the markets in which they operate. Market assessments and analyses are not conducted due to a lack of knowledge and skills. This results in a limited range of products and services, and a failure to recognize opportunities for diversification.

A key problem is the poorly developed linkages within the agro-food chain: little or no feedback from the market filters through to processors and producers.

Chapter 5

CURRENT SUPPORT FRAMEWORK

Government policies

In Tanzania the government is moving away from the protectionist stance of previous administrations towards a free market philosophy. It recognizes the importance of the small- and medium-scale enterprise (SME) sector for employment, particularly following retrenchment in ministries, government institutions and parastatals.

In the mid-1990s the Government of Tanzania adopted a Sustainable Industrial Development Policy (SIDP) which has provided the basis for formulating an SME policy (Calcopietro, 1999). In order to foster the development of the SME sector, SIDP specifies the following measures:

- Support existing promotional institutions and new ones, with a view to strengthening the national capacity to tackle problems faced in promoting SMEs in the areas of technology, finance, consultancy, management and training. This will cover public and private organisations and NGOs.
- The conditions and bureaucracy for promotion of SMEs will be simplified in relation to taxation and regulatory aspects. Licensing and registration of SMEs will be done at regional centres.
- The current financial sector reform exercise will include mechanisms to provide credit to SMEs on softer terms, and establishment of a financial facility specializing in financing SMEs.
- In terms of industrial branches to be promoted, SIDP assigns top priority to a sector with special impact on the economy – agro-allied industries. These are resource-based industries in which Tanzania has the potential to develop competitive advantage if properly matched with efficient technologies.

The Ministry of Industry and Commerce monitors the implementation of SIDP. However, implementing these policies will take time. The ministries that relate primarily to small-scale food processing include the Ministry of Agriculture and the Ministry of Industry and Commerce.

Although there is no apparent impediment to the promotion and development of micro- and small-scale food processing enterprises, there are at the present time no specific policies to assist this subsector. Entrepreneurs perceive this as a comparative disadvantage compared with producers in neighbouring countries, especially given the relatively underdeveloped transport and communications infrastructure which results in increased costs; the large distances between urban centres; and the relatively few processors, who have little lobbying power.

Uganda has recently prepared a draft SME policy (January 1999); it deals with non-

farm micro- and small-scale enterprises. The move towards a free market economy, however, has been actively encouraged by the government and has taken place rapidly since 1987, when the government launched the Economic Recovery Programme. This resulted in the removal of price controls, liberalization of exchange rates, and removal or application of more focused subsidies. There are now numerous examples of private sector initiatives, which are competing with previously state-controlled support. Investment in roads and communications has been greater, and the infrastructure is more developed than in Tanzania, particularly in the 'industrial' south of the country. However, there is a serious problem of wage inflation, and salaries make up a considerably greater proportion of production costs than in Tanzania or in any other country in the region. Services such as water and electricity are also more expensive.

Manufacturing enterprises in Uganda have developed to a greater extent than in Tanzania, and there are a larger number in the country. The Micro and Small Enterprise Policy Unit (MSEPU) within the Ministry of Planning and Economic Development was set up in 1994 to support the small-scale manufacturing sector, but has yet to have a significant impact on the operation of these enterprises.

Finance

The situation in Tanzania

The majority of micro-finance institutions (MFIs) in Tanzania cater for enterprises with credit requirements below TShs 2 million (approximately US\$3500). It appears that there are no facilities available for enterprises with requirements of between Tshs 3 and 10 million (US\$3500-10,000). A further limitation is that most MFIs restrict their lending activities to urban centres and their periphery.

Beyond TShs 10 million, companies with adequate collateral appear to have access to commercial bank credit, although it tends to be short term and conservatively managed. Term lending and risk capital are virtually unavailable from commercial banks. The main institutions and programmes that constitute the current support framework of financial services are as follows.

Small Industries Development Organisation (SIDO)

SIDO is a parastatal organization under the Ministry of Industry and Commerce. Its financial arm traditionally relied on donor programmes which, for various reasons, have now basically stopped their funding. For some years credit operations virtually stopped. The primary source of funds that SIDO currently operates comes from the Government budget through the National Entrepreneurship Fund. SIDO clients are almost exclusively very small entrepreneurs who also receive training as part of the support package. Since small businesses usually do not own conventional collateral, there is a need for credit delivery approaches that do not depend on such collateral, such as group lending and character-based lending. SIDO has started to use such approaches, and is focusing on the low end of loan size because the sector's internal capacity to generate savings has been found to be high (Calcopietro, 1999).

National Income Generation Program (NIGP)

The NIGP is a trust fund set up by the Government with the support of UNDP and other donors. It was designed to strengthen existing MFIs through programmes of technical assistance in both rural and urban areas. Its main objectives are poverty alleviation through income generation and employment creation. The three areas of intervention are agriculture and rural development, infrastructure, and small businesses.

Pride Tanzania

This is the largest NGO-supported MFI established in the country. It is based in Arusha and is supported by PRIDE Africa. It has the largest client base of any MFI, with more than 20,000 members. It uses the village banking methodology that was developed by the Grameen Bank in Bangladesh.

Mennonite Economic Development Associates (MEDA)

MEDA operates credit facilities in Dar es Salaam and Mbeya. In addition to its own resources, MEDA receives funds from the NIGP for lending to smaller MFIs. The majority of MEDA clients are in trading businesses, although a few are in production (especially in agriculture). Whereas MEDA caters for micro-enterprises, its future focus will also be on small enterprises with growth potential.

National Micro-finance Bank (NMB)

NMB is currently serving as a savings and financial services window for the rural and urban poor. It expects to begin lending to SMEs in 2000, first on a short-term commercial basis and eventually to extend its services to include term lending. The NMB, which emerged as a spin-off of the National Bank of Commerce, is still under-capitalized but aims to be privatized, including the participation of donor agencies and individuals or groups of customers of the bank.

Juhudi Credit Scheme

This is a programme initially developed between CRDB and the FAIDA Business Development Centre in the Arusha Region, where it has been operational for the past 2 years and is now being extended to the Kilimanjaro Region. Loans range from US\$1500 to 35,000, the interest charged is market-related, and the securities required are 70% of the loan amount. At the end of 1998 the programme that had started as an agreement through liquidity participation and risk sharing was transformed into a Guarantee Fund. CRDB Arusha contributes 100% of each loan issued, and FAIDA provides a 50% guarantee for each loan. CRDB Arusha is fully responsible for appraisal, disbursement and recovery of the credit fund.

Private Equity and Venture Capital Funds

There are numerous smaller funds that have recently been categorized.

Summary

Numerous credit lines do exist; however, small entrepreneurs in rural areas with a capital requirement of US\$5000-10,000 are currently poorly served. The available

maximum credit does not allow for investment in capital assets. There is thus a requirement to adjust the size of available loans to meet the needs of small-scale entrepreneurs and to alter the collateral requirement to enable all potential borrowers to access credit. At present it is likely that most of the expansion within the food processing SMEs is financed by loans from family members or friends, and these are generally too small for re-capitalization.

For an inventory of credit lines in Tanzania see Boliden Contech (1998).

The situation in Uganda

In Uganda the situation is different to that in Tanzania: there is no shortage of capital within the 20 main commercial banks, six credit institutions, three development finance institutions and micro-financing institutions; and loans are available. However, banks do not lend substantial amounts to the small-scale sector for the following reasons:

- Many of the banks are foreign-owned and focus their lending on larger companies.
- They are mostly located in urban centres and do not view rural borrowers as a significant market for their services.
- Banks are isolated from other support services and do not target even urban small-scale enterprises for loans.
- There is little information made available to small entrepreneurs concerning the availability of loans, and there are therefore relatively few applications.

Several micro-finance facilities are operating in Uganda. The Private Enterprise Support, Training and Organisational Development Project (PRESTO) has recently been established to provide micro-finance, while the Business Uganda Development Scheme (BUDS) is providing grants for business development. Although these programmes have been operational only since 1997 and 1995, respectively, they have the potential to make a significant difference to the credit available to small enterprises, provided that owners of the enterprises are aware of their existence. External funds for these programmes are not subject to taxes, and loans are therefore charged at lower interest rates than the commercial sector, leading to potential distortions and subsidized competition in the financial market.

The organization of food processing entrepreneurs

The lobbying power of the private sector in Uganda is considerable, through the Uganda Manufacturers' Association (UMA). UMA is part of the established Strategic Consultative Group in the Ministry of Trade and Industry, which addresses constraints and issues in the private industrial sector, and develops suggestions for strategies and policy to improve the performance of the sector.

Some branches have their own organization, as for example the Uganda Oilseed Processors' Association (UOSPA). Entrepreneurs benefit from UOSPA through training

and credit facilities.

The Tanzania Food Processors' Association (TAFOPA) was formed only a few years ago on the initiative of the Integrated Training Programme for Women Entrepreneurship Development in Tanzania. Today TAFOPA has **135** active members. With goals unifying all food processors in the country, the association is currently trying to establish its strategies and business plan for the next 5 years. It has a registered office in Dar es Salaam.

Research and development

The situation in Tanzania

In Tanzania the existing R&D institutions were set up to serve the parastatal industries. As a result, neither linkages with smaller enterprises nor the type of work that would benefit them developed. Other factors influencing the support provided by R&D institutions include:

- The institutions are isolated (geographically and intellectually) from the sector itself and from other support service providers.
- Entrepreneurs do not see the importance of spending money on contracts for R&D; they probably also have little confidence in research conducted by the R&D institutions.
- Research workers do not recognize the need for orientation towards the private sector, nor do they have the skills and ability to identify SME requirements or potential niche activities that would be of use (a demand-driven R&D service is not recognized as being necessary by the institutions themselves).
- R&D staff can gain promotion and status only from published, high-tech research that tends to be of little relevance to SMEs.
- There is an overall lack of coherence in government policy towards R&D and the needs of manufacturers; research is not coordinated and this results in duplications and omissions.
- Most R&D scientists and technicians have only a very limited commercial awareness to be able to develop new products for SMEs.

The situation in Uganda

In Uganda the situation is largely similar to that in Tanzania. There is some evidence of less entrenched attitudes, as private enterprises are more influential than in Tanzania, but the majority of institutions have a similar lack of awareness. The Uganda National Council of Science and Technology is the policy-formulating body for R&D. Research institutes in Uganda that are concerned with food processing include the National Agricultural Research Organisation (NARO), the Uganda Industrial Research Institute, Makerere University, and the Kawanda Research Station.

One trend in Uganda is the development of private consultancies by some R&D staff. Midway Centre, for instance, holds regular training programmes in 'Appropriate Quality Assurance', 'Market Research' and 'Product Development', and courses to improve the skills of local trainers and consultants, some of whom are seconded from research institutes. Other consulting groups are likely to develop this area further.

Technology supply

There are a number of constraints on the manufacture of locally made equipment in Tanzania:

- Engineering workshops have inadequate capital to expand into the market for food processing equipment; very few workshops have the capacity to invest in equipment development.
- Skilled people are available in the country, but most workshop owners cannot pay adequate salaries, and therefore personnel are always in short supply.
- Lack of demand by processors and lack of promotion by workshops means that any equipment manufactured is always a one-off prototype and therefore significantly more expensive than routinely produced items, which further discourages use of locally made equipment.
- Hardly any workshop owners have the knowledge and understanding of hygienic design or other design considerations to be able to make food processing tools and equipment that can compete with imported equivalents.
- Finishing and appearance of locally made equipment is often substandard, and inadequate attention is paid to operational safety.
- There is a lack of information on suitable designs or engineering drawings for food processing equipment, and most workshop technicians are not trained to read drawings.
- Facilities for welding stainless steel and availability of the steel itself are major constraints.
- Lack of repairs and lack of spare parts for machines are further constraints.

The Evangelical Lutheran Church of Tanzania (ELCT) Oilseed Project has trained and equipped staff of three mechanical workshops in Tanzania (Morogoro, Arusha, Iringa) to manufacture oil expellers. This intervention also included the development and implementation of quality assurance systems in workshops.

The situation is broadly the same in Uganda, although there is a potentially greater demand for equipment. Most engineering workshops are in urban centres, particularly Entebbe, Kampala and Jinja, where the main activity involves making simple welded steel gates, bedframes, shutters, etc. However, two companies in Kampala (Treeshade Engineering and Steelelex) have a history of manufacturing food processing equipment to special order and have produced, for example, fruit presses, egg

incubators and boiling pans.

As a result of the Midway Centre's training programme, other engineering workshops have begun to consider entering the market for locally produced food processing. The Midway Centre is also able to use its UK connection to import small items of equipment and ingredients that are not available in Uganda and would not be supplied directly by European manufacturers because of high administrative costs.

Training and qualifications

Vocational training

Institutions exist in Tanzania for technical training in metal-working, engineering, electrical engineering and related subjects. Graduates are often not well prepared for their tasks. Some of the reasons are as follows:

- Technical training for engineering workshops does not focus sufficiently on the needs of small enterprises; instructors at training institutions have little business orientation.
- There is poor vertical integration in service provision between institutions, workshops and small enterprises.
- Training is not available in the manufacture of food processing equipment within food science and technology courses, and examples of equipment are not used in engineering training sessions.
- Hygienic design and other design considerations needed to make food processing tools and equipment are not taught.
- Design information and engineering drawings for food processing equipment are not used in training, and workshop technicians often lack the skills to read drawings.
- Workshop equipment is outdated and not functioning.

In Uganda, different types of formal training institutions are controlled by different ministries - technical training is under both the Ministry of Education and Sports and the Ministry of Labour and Social Welfare; management training is under the Ministry of Trade and Industry and Ministry of Public Services, while agricultural training is under the Ministry of Agriculture, Animal Industries and Fisheries. There is little coordination and cooperation among the ministries and various training institutions. This situation is broadly the same for Tanzania.

However, there are some important differences in the privately run institutions. The Nile Vocational Institute at Jinja operates targeted, practical engineering workshop courses which could be readily adapted to cover design and manufacture of food processing equipment if a demand was shown to exist. Midway Centre has held training programmes in 'Design and Fabrication of Food Processing Equipment' for 3 years. These courses include hygienic design, health and safety, and aspects of equipment design and operation, and are intended for owners and technicians of

small engineering workshops. Equipment designed and constructed during the courses include electric bakery ovens, sealers for plastic bags, and fuel-fired food driers.

Appropriate Technology (ApT) has a programme that supports engineering workshops, and is one of the few organizations operating in rural areas and urban centres north of the Kampala–Entebbe–Jinja corridor. In the public sector, the Engineering Department at the Polytechnic, Kyambogo, has a more commercial outlook than most and has collaborated with a number of development agencies both to make food processing equipment under contract (oil presses for UOSPA) and to provide training facilities (for Midway Technology).

Lack of technical knowledge and skills are key constraints to the development of small-scale food processing. Many micro- and small-scale entrepreneurs have only a limited understanding of hygiene or the effects that processing conditions have on their products. Many processors, for example, only vaguely understand concepts of quality assurance and food poisoning, and most do not know how to calculate process yields or correct process times and temperatures.

Technical training

At present such technical training is supported or conducted by development agencies and donor programmes. The Austrian Development Agency, OED, supports an expatriate food technologist who is developing micro-food enterprises in the area around Jinja. The UK organization ApT is also involved in providing support for oil milling in the Central and North Districts, as is the USAID-funded UOSPA, which has conducted training with oil millers. Midway Technology is coming to the end of a UK-funded 5-year programme of support to small-scale food processors, involved in technical and business training in dairy, bakery, oilseed and fruit and vegetable processing; quality assurance; marketing, market research and product development; training of local trainers and consultants to support SMEs; and the establishment of a centre that is intended to be financially self-sustaining. Midway also assisted UMA in establishing a training programme for its members.

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) has just developed a curriculum for a food processing training programme specifically designed for women micro-entrepreneurs. The training will be run through the Vocational Education and Training Authority (Adam, 1998).

The UNIDO-funded SIDO programme 'Integrated Training Programme for Women Entrepreneurship Development' has trained women in commercial food processing. Initially trainees were mainly women who had no formal education; later the focus shifted towards women with a good educational background but without employment (Mchomvu and Gedi, 2000).

Academic training

In Tanzania, training in food processing is carried out at Sokoine University of Agri-

culture, Morogoro. In Uganda, there is a Food Science Department at Makerere University. The department has recently developed a greater focus on small-scale food processing, but has neither the experience nor the resources to conduct tailor-made courses for such entrepreneurs, or to conduct follow-up. In general there is a lack of new product ideas that are passed on to small-scale producers, and a lack of technical back-up to support them.

Business management training

In Tanzania there is one university department that teaches various aspects of business management; however the course does not focus much on the needs of the small enterprise sector. In the private sector there are a few businesses or management training institutes, and these target larger companies that can afford the fees. The main reasons for the lack of support to small enterprises from the formal education system are:

- Lack of understanding of the needs of small-scale entrepreneurs.
- A focus on long courses to diploma and degree level: these are not suitable for small enterprise owners who are unable to afford the time away from their businesses, and may not have the necessary entry qualifications.
- The cost of training is too high for most small-scale processors.
- Location of training centres in urban areas and problems of accessibility.
- No outreach or follow-up activities by institutions.
- No training courses available to address the needs of community-oriented enterprises.

Training for small-scale entrepreneurs is mostly provided by development agencies and parastatal bodies, including the Small Business Advisory Service and SIDO. Additionally, Fair Trade organizations such as Traidcraft have begun to hold orientation workshops for small-scale food processors who wish to export to Europe.

At present there is little follow-up support for trainees from institutions or development agencies, and there are very few local consulting groups that can advise SMEs. Assistance with preparatory or feasibility studies, market appraisals, etc., which could enhance the quality of business planning for SMEs, is not being provided.

The deficiencies of the formal education sector in Tanzania are also present in many institutions in Uganda, but there is a different attitude emerging as privatization and economic activity increase. There is a growing demand for business training for all scales of enterprise in Uganda, and institutions are increasingly competing to attract students. For example, Makerere University now holds evening classes for Masters of Business Administration students, many of whom are small entrepreneurs. The Management Training and Advisory Centre (MTAC) has been re-organized and now has a more commercial outlook, offering a range of short courses suitable for small businesses; and a number of private training institutions have recently been established. The UMA training centre also plans to hold some short courses in

management for its members.

A large number of development agencies and bilateral programmes have recognized the lack of business skills in Uganda, and have funded training in this area. Examples include the PRESTO and BUDS schemes described above, and Midway Centre's programmes of integrated technical and business training in different food processing subsectors (bakery, dairy, fruit, oil and vegetable processing, etc.); and its short courses in marketing, value added tax, business diagnostics, taxation, business planning, etc. are focused on SMEs. In addition, there are a number of foreign commercial consulting companies that offer highly priced short management workshops in Kampala, but these are beyond the means of all but the largest companies. Recently the UK Department for International Development and the British Council have sponsored external consultants to hold short workshops for business consultants, emulating the work begun by the Midway Centre 2 years ago. A large number of private consulting companies have begun operations in Kampala within the past few years, offering services to larger companies in business planning, feasibility studies, etc. As yet few of these have targeted SMEs, as their rates are prohibitive for most. An independent consultancy group attached to UMA has also offered services for feasibility studies to large- and medium-scale manufacturers, but with mixed success.

Training and educational institutions are limited in providing suitable training because of:

- Content and curricula.
- Lack of business orientation of training.
- Training skills of trainers.
- Resources of the training institution.
- Length of courses.
- Lack of follow-up.
- Accessibility and cost of the training programme.

Market information

Processors need information on prices and the availability of raw materials, and on market potentials for their finished products. Another key area is knowledge about customers and their likes and dislikes.

There are few routes available for transmission of such information to small-scale processors. Some information is provided in daily newspapers, and in Uganda a magazine produced by UMA publishes information four times a year. Assistance with marketing is also provided by trade fairs organized by UMA, and marketing assistance from the Uganda National Chamber of Commerce and Industry. There is also a Marketing News Office (under the Directorate of Marketing) which supplies information on raw material supplies, but it is not clear how many SMEs receive this.

There are no institutions or private sector organizations providing market information that are accessible by, and appear to be of use to, small-scale food processors. Both countries have Export Development (or Promotion) Boards, but these focus on 'traditional' agricultural exports such as tea, cotton, and other part-processed commodities. More recently they have begun to focus on 'non-traditional exports', but the benefits to small-scale processors have yet to be seen.

In Tanzania, the UK-based Tradecraft has initiated the establishment of the AMKA Trust to assist small-scale producers to export their products. This market segment in Europe, however, is very small, and the impact that can be expected from such initiatives is minor.

Most small-scale producers do not understand the concepts of marketing, market segmentation, and designing sales and marketing strategies to meet specific market niches. Additionally, because the majority of teaching and research institutions and development agencies do not have a commercial focus, there are few people available with the skills and, in particular, the practical experience to offer training in these areas for SMEs.

The situation is compounded when SME owners have poor selling skills and cannot negotiate effectively with retailers, agents and distributors. The UNIDO programme in Tanzania (Mchomvu and Gedi, 2000) has recognized this as a constraint among female entrepreneurs, and has introduced sessions on confidence building and negotiating skills to its training programme.

Entrepreneurs particularly lack an understanding of their customers' preferences and dislikes. Very little information on consumer reactions to a product filters back through the trading chain to the entrepreneur. This is certainly one factor contributing to efforts for product quality improvement ranking so low in most enterprises.

The lack of adequate packaging to compete with imports and, in some companies, the lack of adequate quality assurance result in both retailers and consumers regarding locally produced foods as inferior to imported brands. Few printing companies can supply full colour packaging of good quality - this is a significant constraint, and successful processors use imported labels or packages at a high cost.

There is limited support to companies from graphic artists or designers to enable attractive label and package designs to be produced locally. Art schools and art or design departments in universities have no links to small-scale processors.

This is compounded when poor distribution, linked to poorly organized distribution channels, results in the absence of local products from the shelves for months at a time.

Table 4 Main focus of organizations working in Tanzania to support small-scale food processing

Organization	Lobby- ing	Finance	Market info.	Technical/ business info.	Business training	Technical training	Technology supply	Product/ technology developmt	On-site technical advice/ consultancy	On-site business advice/ consultancy
AMKA Trust			x		x					
Centre for Agricultural Mechanisation and Rural Technology (CAMATEC)					x	x	x	x	x	
CRDB		x								
ELCT Oilseed Processing project (VYAHUMU)		x			x		x	x	x	
FAIDA										x
Business Development Service Centre										
Gatsby Trust Institute of Product Innovation (IPI)		x				x				
Iringa NGO Network	x									

Table 4 continued

Organization	Lobby- ing	Finance	Market info.	Technical/ business info.	Business training	Technical training	Technology supply	Productl technology developmt	On-site technical advice/ cbnsultancy	On-site business advice/ consultancy
Ministry of Agriculture Training Institute						x				
Ministry of Industries & Trade (see SIDO)		x				x	x	x		
National Bank Corporation		x								
National Food Control Commission (NFCC)								x		
NIGP		x								
PRIDE (NORAD)		x								
Regional Trading Offices Small			x							
Industries Development Org. (SIDO)					x	x	x			
Small Enterprise Development Agency (World Vision)		x			x					
Sokoine University of Agriculture (SUA)					x	x		x		

45

Table 4 continued

Organization	Lobby- ing	Finance	Market info.	Technical business info.	Business training	Technical training	Technology supply	Product technology developmt	On-site technical advice consultancy	On-site business advice consultancy
Tanzania Bureau of Standards (TBS)				x						
Tanzania Engineering and Manu- facture Design Org. (TEMDO)					x	x				
University of Dar es Salaam, Dept. of Mechanical Engineering					x					
UNIDO training programme				x	x	x	x			
Tanzania Food and Nutrition Commission (TFNC)				x						
Tanzania Food Processing Association	x									
TIRDO						x		x		
TISCO						x		x		

Projects and programmes that support food processing enterprises

Small-scale commercial food processing in rural areas is slowly being recognized by development agencies as an area with significant potential for strengthening rural economies. However, only a few development projects focus on the food processing subsector.

Most development activities centred around food processing in the past aimed at providing disadvantaged people with a source of income. Youth, farmers' and women's groups received assistance to operate a grain or oil mill. Women were taught how to process fruits into jams and marmalades, and the finished product was then sold to the foreign community.

These 'island approaches' are rarely embedded into a local support structure. Thus, once a piece of equipment breaks down there is no one to repair it competently; no one can provide advice in times of crisis. When 'market assistance' from the project staff ceases, the stores fill up with the product and the income dries up quickly.

Other development activities are centred around disseminating a particular technology. There was the large screw press that was developed at a technical institute in Dar es Salaam, and the much-cited ram press, invented by a North American. Both technologies, particularly the latter, were disseminated with considerable effort and resources. When visiting villages around Babati, Arusha or Iringa, many of these presses can be found – however, in most cases they are not in operation. Repairs are needed, but welders are hard to find in rural areas, or the owner does not want to spend the money to bring the press back into operation. More often than not, a few bags are processed during the year but then the owner cannot buy seeds any more.

Other projects or programmes are centred around agriculture or horticulture and consider food processing as a means to develop a market for new agricultural products, or for expanded production which they have initiated.

An interesting approach is taken by Midway Uganda: food processing entrepreneurs can seek advice and training on specific problems from the consulting firm; entrepreneurs have to pay for the services which they request from Midway.

The ELCT Oilseed Project in Tanzania is in the process of developing a private sector consultancy (VYAHUMU) that provides advice and support to existing and prospective entrepreneurs in oil and grain milling. The project started only 2 years ago, and is still struggling with teething problems.

The UNIDO-funded SIDO programme 'Integrated Training Programme for Women's Entrepreneurship Development in Tanzania' has managed to train about 600 women on various aspects of commercial food processing since 1994. Of these women, 75% have already started micro- and small-scale food processing enterprises, employing over 400 people. Thirty-five trainers facilitate the programme in the six regions, offering training and advisory services on technology, business management, quality assurance and marketing.

Other private or semi-private sector approaches include the AMKA Trust, which provides marketing assistance to existing or potential suppliers of Fair Trade organizations in Europe. Also worth mentioning because of their subcontracting arrangements are the producer groups in Uganda which dry and sell fruits to a UK-based firm.

Overview of the activities of different support organizations

Tables 4 and 5 summarize the main focus of each organization working in Tanzania and Uganda to support small-scale food processing. In Tanzania, with the exception of the ELCT oilseed processing project and the SIDO training programme for female food processing entrepreneurs, no project or programme focuses on strengthening the food processing subsector. In Uganda, the main activities to support small-scale food processors are conducted by Midway Technology, OED, ApT and, to a lesser extent, NARO and the Food Science Department at Makerere University.

Table 5 Main focus of organizations working in Uganda to support small-scale food processing

Organization	Lobby- ing	Finance	Market info.	Technical/ business info.	Business training	Technical training	Technology supply	Product/ technology developmt	On-site technical advice/ consultancy	On-site business advice/ consultancy
Friedrich Ebert Foundation					x					
GTZ (Germany)					x	x				
Midway Centre (funded by DIFD)				x	x	x	x	x	x	x
OED (Austria)				x	x	x				
PRESTO (USAID)		x						x		
Private Sector Competitive- ness Project (World Bank)	x	x								
UK Department for International Development					x	x				
Association of Ugandan Micro-Finance Institutions			x							
Centenary Rural Development Bank		x								

Table 5 continued

Organization	Lobbying	Finance	Market info.	Technical/business info.	Business training	Technical training	Technology supply	Product/technology developmt	On-site technical advice/ consultancy	On-site business advice/ consultancy
Federation of Informal Sector Associations	x									
Micro and Small Enterprise National Coordination (Private Sector Foundation)	x									
Poverty Alleviation Project										
Private Sector Foundation Uganda	x	x								
Federation of Employers Uganda Gatsby Trust	x									
Uganda Manufacturers Association	x		x	x	x	x			x	x
Uganda National Chamber of Commerce & Industry	x									

Table 5 continued

Organization	Lobby- Ing	Finance	Market info.	Technical/ business info.	Business training	Technical training	Technology supply	Product/ technology developmt	On-site technical advice/ consultancy	Onsite business advice/ consultancy
Uganda Oilseed Processors' Association (UOSPA) (funded by USAID)			x	x		x	x			
Uganda Small Scale Industries' Association (nowpartof UMA)	x			x						
Uganda Women's Finance & Credit Trust		x								
Government institutions include: Dept. Food Science, Makerere University						x		x		
Directorate of Industrial Training					x					

Table 5 continued

Organization	Lobby- Ing	Finance	Market info.	Technical ¹ business info.	Business training	Technical training	Technology supply	Product/ technology developmt	On-site technical advicel consultancy	On-site business advicel consultancy
Entandikwa Credit Scheme (at the Ministry of Finance)		x								
Management Training & Advisory Centre (MTAC)				x	x					
Micro and Small Enterprise Policy Unit (MSEPU) Ministry of Labour and Social welfare	x				x	x				
Polytechnic, Kyambogo				x	x	x	x	x		

Chapter 6

POTENTIAL CONTRIBUTIONS OF SMALL-SCALE FOOD PROCESSING TO THE RURAL ECONOMY IN TANZANIA AND UGANDA

Both country studies have shown that small-scale food processing enterprises in rural areas can, and already do, contribute significantly to the development of rural economies through income and employment generation. They can provide stimuli to the agricultural sector for diversification, to expand production, and to develop a stronger market orientation.

Primary processing of basic food commodities, mainly cereal and oil milling at the small-scale level, is the obvious starting point for many entrepreneurs. Backward and forward linkages are relatively well developed. Other support services, mainly the provision of suitable technologies, training, advice and credit, are still weak.

Primary food processing at the small-scale level will benefit producers

- Entrepreneurs who sell processing services will allow producers to claim most of the added value. The processed food can be used to cover the family's need for sustenance; any surplus can be sold locally.
- Entrepreneurs who buy their raw material for processing, for instance cereals or oilseeds, provide a local market to farmers. They can then sell when they need to at a relatively low marketing cost. This situation also provides farmers with choices, which is crucial for a fair deal.
- Increased returns will encourage producers to expand their crop production. Interviews with farmers in Tanzania have shown that in areas where oil milling services are provided locally, producers are keen to expand their oilseed production.

Primary food processing at the small-scale level will benefit the rural economy

- Small-scale processing enterprises will assure that basic, processed agricultural commodities are locally available at competitive prices. By-products such as oilseed cakes and bran are locally available. Further value addition is possible through animal feed compounding. If processing takes place in urban centres, by-products rarely find their way back into rural areas. When the trading chain is short and processors are known, the likelihood of adulteration is much smaller

compared with products coming out of centralized industries.

- Primary food processing is an opportunity to generate income directly from processing, but also from secondary activities (shops, restaurants, other services) that follow the establishment of a processing unit.
- In terms of employment generation, however, the impact of primary food processing should not be overestimated. Small mills with capacities of less than 1 ton a day rarely employ more than three or four people.
- Decentralized, small-scale processing will offer choices to farmers and communities.

Manufacturing of processed food products that do not have a local tradition

- Numerous agricultural products that are already cultivated in rural areas have the potential to be locally processed, resulting in added value. Innovative and bold entrepreneurs have started new types of processing, some of which have been mentioned in the case studies.
- Very few small- and medium-scale manufacturers in Tanzania have dared to enter the market for sauces and similar products made from vegetables. Those who have done so appear to be quite successful. The first experience in Uganda has been with small-scale manufactured fruit juices and dried fruits sold on the domestic market.
- Heat treatment and processing of milk for the peri-urban and urban markets is already practised in Tanzania and Uganda, and there is much room for expansion. India and Thailand are good examples, demonstrating the enormous potentials of dairy farming and processing for the rural economy in terms of income and employment generation.
- Food processing will have a direct effect on agriculture, once producers can benefit directly or indirectly from value adding activities and an incentive is provided to them to expand and/or diversify their production.
- With rapidly increasing urbanization and changing lifestyles, it can be expected that the demand for processed staple foods will increase at a similar pace; also the demand for convenience foods is expected to grow, especially in urban markets. At present many of these products are imported, or just not available.

Chapter 7

KEY FACTORS FOR THE SUPPORT OF SMALL-SCALE FOOD PROCESSING ENTERPRISES

Credit facilities

Both country studies have underlined that access to credit is crucial for the development of food processing enterprises. Entrepreneurs need medium- to long-term capital in order to invest in equipment and, in the short-term, for the procurement of raw materials. The capital requirement commonly ranges from US\$5000 to 15,000.

Critical issues are easy access (e.g. facilities in rural areas); administrators who understand the economics and operation of a food processing enterprise; and the conditions for credit. High rates of interest for bank loans were mentioned in both studies as a significant problem. However, a closer analysis generally shows that capital costs do not weigh that heavily in the cost accounting of SMEs (FAKT, 1993). For these enterprises the issues of collateral, securities and the bureaucracy linked with processing loan applications are more crucial.

Technology choice, technology maintenance

A choice of technology is required to allow entrepreneurs to select those that are suitable for their particular situation. The absence of capacity to identify and manufacture suitable processing technologies is a severe restriction on the development of small-scale food processing enterprises in both countries.

In some cases, suitable technologies may be available abroad. There are hardly any resources to assist entrepreneurs in identifying manufacturers abroad, in obtaining sufficient information describing the available technologies, or by offering support services for importing technologies.

An infrastructure of qualified workshops and mechanics is needed that can assist the entrepreneur to maintain equipment. Unless such services are available, enterprises will face severe difficulties in maintaining the operation of equipment.

Advice and training

Many entrepreneurs have limited experience in running an enterprise. With the opening of the markets, entrepreneurs have become much more exposed to competition, while demands and expectations from consumers have increased. Entrepreneurs have to respond to these changes.

Support through training and situation-specific advice on matters of business management is often crucial for the long-term success of enterprises operating in an open

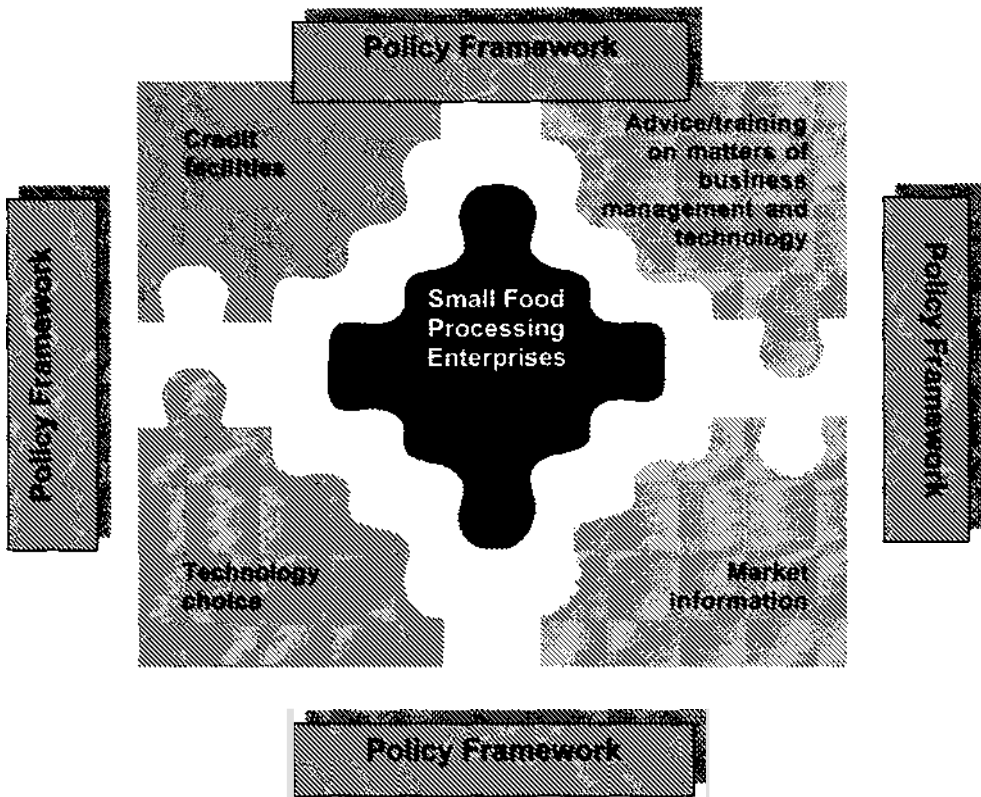


Figure 1. Key support for small-scale food processors

market. The same applies to training in processing technology and quality management.

Market information, marketing advice

For entrepreneurs to stay in business they have to understand the market in which they want to operate: they need to know the potential consumers in their market segment and their preferences and dislikes, and they have to observe developments in the market and adapt to changes (Figure 1). These skills and attitudes are not well developed among small-scale entrepreneurs, particularly among those who are new entrants to the field.

RECOMMENDATIONS

For the development of sustainable and economically viable food processing enterprises, it is necessary to consider the enterprise and the support network that every business needs for its sustenance. Such a network may include many actors whose roles need to be understood. Past experience has shown that interventions and assistance directed to individual enterprises are not an efficient way of reaching this goal; rather, the support network and the political framework need to be strengthened and adjusted so that enterprises can develop and expand.

The key elements of such a support network have been identified for small-scale food processing enterprises in this study. They are:

- Access to credit facilities.
- Technology choice for the entrepreneur and infrastructure for technology maintenance.
- Advice and training on matters of business management and technology.
- Market information, marketing advice.

Some elements in the required support network for food processing enterprises do exist, but are weak (such as mechanical workshops), or are not well prepared to deal with small enterprises (such as financial institutions). They may need to be strengthened and trained in specific fields.

In other areas, particularly food technology-specific issues, market information and marketing advice, new capacities may have to be initiated and established.

Backward linkages into agriculture are particularly critical for food processing enterprises. The national agricultural research system, as well as agricultural extension agencies, should be included in the development of strategies and the planning of activities for the support of food processing enterprises. Appropriate forms of supply linkages between farmers and entrepreneurs need to be developed.

Outside interventions need to be designed and implemented in such a way that they are not incongruous with the set goal. If the aim is to support the development of viable industries, the support measures that are developed and offered need to carry a clear perspective of moving towards sustainability themselves. If the aim is to impart more market orientation to small enterprises, then outside interventions need to demonstrate that they themselves carry a strong market (i.e. client) orientation.

The study team suggests considering the establishment of a private sector-based advisory service as an appropriate and sustainable delivery system. Details are described in the Annex to this report.

A further component of such an intervention should be to strengthen and qualify already existing service providers, such as mechanical workshops, so that they can

better respond to the needs of small entrepreneurs.

R&D institutions can and should play an important role in this process. However, they need to adjust and develop a stronger client orientation, as well as be more accountable for their work.

International financial institutions should be lobbied to assist national banks in setting up a credit line for small entrepreneurs in the field of food processing. Provision of credit should be closely coordinated with the above proposed Centre (to assist, for example, in carrying out technical and financial feasibility studies).

Recommendations elaborated during the International Conference on Strengthening Small Scale Food Processing

The recommendations that were elaborated during the International Conference on Strengthening Small Scale Food Processing are included in the Annex. This meeting took place in Entebbe in December 1998, with one of its functions to look critically at the results of the present study (CTA/FAKT, 2000).

Annex

RECOMMENDATIONS ARISING FROM THE CONFERENCE ON STRENGTHENING SMALL SCALE FOOD PROCESSING IN EASTERN AND SOUTHERN AFRICA: SUGGESTIONS FOR APPROPRIATE DELIVERY SYSTEMS FOR IMPROVED SUPPORT SERVICES

Advisory services need to have a strong market, i.e. client, orientation. Trainers and consultants should know how to assess the requirements of small-scale producers and design and implement interventions that will meet these needs. This may require a re-orientation of attitudes by many technical and business teachers, advisers and researchers. Additionally, greater exchange of information, ideas and collaboration is important to support this re-orientation approach. A support service for small-scale food processors may include the following elements:

- Provision of appropriately designed training in technical and business aspects of operating an enterprise. To achieve this it is likely that 'Training of Trainers' programmes are required.
- Provision of information on technology choices, product ideas, sources of materials and equipment, markets, management and credit.
- Provision of experienced and skilled advisers to assist with solving specific problems on-site, develop business plans, conduct market appraisals, etc. To achieve this it is likely that training or re-orientation of technical and business consultants from government institutions and the private sector will be required.
- Assistance in obtaining equipment and specialist materials.
- Improved networks between support agencies, government institutions, graphic design services, credit providers and private sector service companies.
- Improved access to credit.

It is proposed that these services are implemented from the outset on the basis of a commercial orientation and financial self-sustainability. This should involve the establishment of a privately operated 'Support and Reference Centre' which would coordinate and employ individual specialists (not institutions) to provide the above services on a fee-paying basis. The Centre would be set up so that it is directly responsive to the needs of small-scale entrepreneurs, and operates effectively and efficiently in an accountable and transparent way. Income to the Centre would be through the provision of high quality training, provision of advice and information on technical, managerial and market aspects, and the sale of equipment, publications and materials.

Proposed activities

It is proposed that a Centre will have three components:

- A trading section that can supply publications, small items of equipment, packaging, ingredients, etc. at a fixed profit margin.
- A training and consultancy section that has a network of people, trained by the project to be trainers and/or advisers, who design and hold training programmes and provide on-site consultancy services on a fee-paying basis. A proportion of the fees to be used by the Centre to cover administrative costs.
- A market intelligence section that gathers and disseminates market information, and advises on and conducts market research on a fee-paying basis. It maintains links with graphic designers and printers to advise SMEs on marketing and promotional materials. This section also designs and sells appropriate technical and business information to entrepreneurs and agencies, and has a collection of catalogues and other resource materials that are available for entrepreneurs to consult.

These three components could be identified as separate divisions within the company structure of the Centre, or alternatively as three interlinked companies. In more detail, the operation and activities of each component are described below.

Trading section

Develop systems and procedures in a Centre to link with European agencies to import small items of equipment and materials (including packaging) that are not available in the country. Establish similar links to import publications and other information for sale to SMEs and local institutions. Profits from sales are to be used to fund the administration of the Centre and, if sufficient, may be used to provide bursaries for training or technical support to poorer entrepreneurs.

Training and consultancy section

Develop a pool of skilled management trainers and advisers, drawn from government institutions and the private sector, who will be available for training programmes and consultancy services. Provide 'Training of Trainers' and 'Training of Consultants' courses and back-up to ensure that trainers and consultants operate to a high professional standard.

Work with trainers to develop locally designed and managed training programmes that are suitable to meet the needs of food processing SMEs in technical aspects (product development, improved processing, quality assurance, hygienic processing, etc.) and management aspects (financial management, business planning, record keeping, market research, etc.). Similar procedures are used to train trainers to work with small engineering workshop owners on the design and manufacture of hygienically designed and safe food processing equipment. Develop the capacity to identify the need for new training activities and develop additional training modules.

Train consultants to advise on the operation of individual food processing enterprises or on the supply and repair of equipment by engineering workshops.

Market intelligence and information section

Establish systems and procedures to collect and analyse market information from around the country, by links to other institutions and the private sector. Make information available in the form of confidential reports on a fee-paying basis. Undertake commissioned market research for individual clients or groups. Develop links with graphic designers, artists and printers to improve packaging design and promotional materials.

Through networking with other national and international organizations, identify the requirements of SMEs for information, and develop a range of appropriate information materials and methods for disseminating them.

Finance

Establish links to existing credit providers in each country. It is not proposed to establish any new credit provision, but to work with existing commercial and development credit agencies.

Provide initial capital finance and management support to create a sustainable Centre. It is envisaged that funding would be arranged on a diminishing schedule over 3–5 years, with an increasing proportion of the operating costs being met by a Centre over the life of the project.

REFERENCES

- Adam, S. 1998. Application of a guideline for curricular work and the development of a curriculum concept for food processing in the informal sector in Tanzania. Dar es Salaam, Tanzania: VETA, GTZ Office (unpublished report).
- Anon. 1991. Small-scale crop processing: opportunities and benefits. *Spore* 35: 1-4.
- Baud, I.S.A. and De Bruijne, G.A. (eds) 1992. *Gender, small-scale industry and development policy*. London, UK: IT Publications.
- Boliden Contech. 1998. *Database of micro-enterprise financing/servicing institutions*. Dar es Salaam, Tanzania: Creative Development Services.
- Bridier, B. 1994. L'artisanat alimentaire: une place et un fonctionnement spécifique. In: *Women and food processing in sub-Saharan Africa*. c/o NRI, Chatham, UK: European Consortium for Agricultural Research in the Tropics (ECART).
- Calcapietro, C.M. 1999. *Towards a policy for small and medium enterprises in Tanzania*. Vienna, Austria: UNIDO.
- Classens, S. 1993. Women's economic groups and co-operatives in Dodoma, Tanzania. PhD thesis, Wageningen, The Netherlands.
- CTA/FAKT. 2000. *Strategies for strengthening small-scale food processing in Eastern and Southern Africa*. Proceedings of a workshop organized by CTA, DSE, NARO and FAKT, Entebbe, Uganda, November 1998. Wageningen, The Netherlands: CTA.
- ELCT/FAKT. 1996. Analysis of the experience with group-managed enterprises in Tanzania. Dodoma, Tanzania/Stuttgart, Germany: Evangelical Lutheran Church of Tanzania/Fördergesellschaft für angepaßte Techniken in der Dritten Welt.
- FAKT. 1993. *Small-scale oilseed processing in Tanzania. An evaluation of the current situation and suggestions for future developments*. Stuttgart, Germany: Fördergesellschaft für angepaßte Techniken in der Dritten Welt.
- FAKT/PWDS. 1998. Workshop on community-based enterprise promotion for sustainable livelihood of the poor. Trivandrum, India/Stuttgart, Germany: PWDS/Fördergesellschaft für angepaßte Techniken in der Dritten Welt.
- GTZ. 1997. *Management von Dienstleistungen bei der Vermarktung und Verarbeitung landwirtschaftlicher Produkte*. Eschborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit.
- Giinter, D. 1997. *Gender-orientation in the post-harvest sector*. Eschborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).
- Hannan-Andersson, C. 1996. Swedish International Development Authority's support to women's small-scale enterprises in Tanzania. In: Dignard, L. and Havet, J. (eds). *Women in micro- and small-scale enterprise development*. London, UK: IT Publications.

- Jackson, G. (ed.) 1996, *Farmer strategies for market orientation*. Wageningen, The Netherlands: CTA.
- Mchomvu, H. and Gedi, L. 2000. Experiences with support strategies for women entrepreneurs in food processing in Tanzania. *International workshop on strategies for strengthening small-scale food processing enterprises in Eastern and Southern Africa*, Entebbe, Uganda, November 1998. Integrated Training Programme for Women Entrepreneurship Development in Tanzania. Dar-es-Salaam, Tanzania/Vienna, Austria: Small Industries Development Organisation (SIDO)/United Nations Industrial Development Organisation (UNIDO).
- Parker, R.L., Riopelle, R. and Stell, W.F. 1995. *Small enterprises adjusting to liberalization in fine African countries*. World Bank Discussion Paper No. 271. Washington, DC, USA: World Bank.
- Richter, J., Basler, A. and Franzen, H. (eds) 1996. *Small-scale food processing contributing to food security*. Feldafing, Germany: Deutsche Stiftung für Internationale Entwicklung (DSE).
- Stringfellow, R., Coulter, J., Hussain, A., Lucey, T. and McKone, C. 1997. Improving the access of smallholders to agricultural services in sub-Saharan Africa. *Small Enterprise Development* 8: 35–41.
- Teszler, R. 1992. Small-scale industry's contribution to economic development. In: Baud, I.S.A. and Bruijne, G.A. (eds). *Gender, small-scale industry and development policy*. London, UK: IT Publications.
- Waweru, J. 1995. Milk processing for value-added production: In: *Farmer strategies for market orientation in ACP agriculture*. Wageningen, The Netherlands: CTA.
- World Bank. 1989. *Sub-Saharan Africa: from crisis to sustainable growth. A long-term perspective study*. Washington, DC, USA: International Bank for Reconstruction and Development/ World Bank.

ACRONYMS

ApT	Appropriate Technology (Uganda)
BUDS	Business Uganda Development Scheme
CRDB	Co-operative and Rural Development Bank (Tanzania)
ELCT	Evangelical Lutheran Church of Tanzania
EU	European Union
FAKT	Fordergesellschaft für angepaßte Techniken in der Dritten Welt
FINCA	Foundation for International Community Assistance
FIT	Farm Implements and Tools Programme
FY	financial year
GDP	gross domestic product
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)
ILO	International Labour Organisation
MEDA	Mennonite Economic Development Associates (Tanzania)
MFI	micro-finance institution
MSEPU	Micro- and Small Enterprise Policy Unit (Uganda)
MTAC	Management Training and Advisory Centre (Uganda)
NARO	National Agricultural Research Organisation (Uganda)
NIGP	National Income Generation Program (Tanzania)
NGO	non-governmental organization
NMB	National Micro-finance Bank (Tanzania)
NORAD	Norwegian International Development Agency
OED	Austrian Development Agency
PRESTO	Private Enterprise Support, Training & Organisational Development Project (Uganda)
R&D	research and development
SEDA	Small Enterprise Development Agency
SEDCO	Small Enterprise Development Organisation
SIDA	Swedish International Development Agency
SIDP	Sustainable Industrial Development Policy (Tanzania)
SIDO	Small Industries Development Organisation (Tanzania)
SME	small- or medium-scale enterprise
SUA	Sokoine University of Agriculture
TAFOPA	Tanzania Food Processors' Association
UHT	ultra-high temperature
UK	United Kingdom
UMA	Uganda Manufacturers' Association
UNIDO	United Nations Industrial Development Organization
UOSPA	Uganda Oilseed Processors' Association
USAID	United States Agency for International Development