

United Republic of Tanzania

ASSESSMENT OF THE SITUATION AND DEVELOPMENT PROSPECTS FOR THE CASHEW NUT SECTOR

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INTRODUCTION

The project “Trade expansion in Cashew Nuts from Africa” funded by the ITC Global Trust Fund and co-financed by the Common Fund for Commodities (CFC), is aiming to establish a strong regional network and a structure best adapted to support the strategic export development objectives for the cashew nut sector in each of the participating countries. The activities of the project address market development issues and provide the basis for regional networking, in order to ensure the sustainable development of the cashew nut sectors and to increase their share in the world market.

The countries participating in the project, enumerated by order of their importance as exporters of cashew nuts, are: the U.R Tanzania, Mozambique, Guinea Bissau, Côte d’Ivoire, Nigeria, Benin, Kenya, Senegal and Madagascar.

The ultimate beneficiaries of the project are the cashew nut smallholders and the small- and medium-scale processors and exporters of the product. The project is expected to impact on the expansion of the direct export trade in raw and processed cashew nut from Africa towards both developed and developing markets. This would be a direct result of the efficient networking of traders, of increased market transparency and of the co-ordinated export development efforts in the region.

A high-level African meeting of producers and exporters of cashew nuts will be organized in Cotonou, Benin, in July 2002, in the framework of this project. The meeting will review the current situation of the sector in the participating countries, on the basis of country reports prepared by national experts, with a view to conclude on future development activities, as well as on priority technical co-operation activities to be undertaken in co-operation with the International Trade Centre/UNCTAD/WTO (ITC), the Common Fund for Commodities (CFC) and other international donors in the field of cashew nut market and product development.

The country reports are published in the present volume in the original drafting language, i.e. English or French. Translations in the other language may be considered at a later stage, depending on the availability of additional project funds

Note

Unless otherwise specified, all references to dollars are to United States dollars and all references to tons are to metric tones.

The following abbreviations are used:

CBT:	Cashew nut Board of Tanzania
CIDEF:	Cashew Industry development Fund
CU:	Cooperative Unions
DCs:	District Councils
FA:	Farmer Association
FM:	Factory Management
Fs:	Farmers
MAFS:	Ministry of Agriculture and Food Security
MCM:	Ministry of Cooperatives and marketing
MF:	Ministry of Finance
MIT:	Ministry of Industries and Trade
MRALG:	Ministry of Regional Administration and Local Government
NARI:	Naliendele Agricultural Research Institute
n.a	not available
PA:	Processing Associations
PID:	Private Input Distributors/suppliers
PSRC:	Parastatal Sector Reform Commission
RS:	Regional Secretariat
TPRI:	Tropical Pesticide Research Institute

Chapter I: CASHEW NUT SECTOR: STRUCTURE, ORGANIZATION AND DEVELOPMENT STRATEGY

1.1 Structure and organization of cultivation

Cashew nut is the main cash crop of Southern Tanzania and is also grown, to a lesser extent, in other regions, particularly along the coast (Annex 1). Smallholders, estimated at 280,000 households, on some 400,000 hectares in mono or mixed-crop production systems predominantly grow cashew nut (Shomari, 1990; Topper *et al.*, 1998). The average smallholder cashew farmer occupies about one to two hectares of cashew trees, sometimes intercropped with food crops, mainly cassava, grain staples and legumes. Large-scale private plantations occupy about 2,000 hectares in Lindi and Mtwara regions. Most of the cashew was planted in the 1950s and 1960s, with a marked decline in planting since mid 1970s. However, new plantings started again in early nineties and by late nineties, more and more people do plant cashew (Topper *et al.*, 1998). Today even some non-cashew growing areas (such as Singida, Mbarali and Suluti in Songea) have started planting of cashew especially with effect from 2001. Some non-traditional cashew growing regions such as Dodoma, Kigoma and Musoma are planning for cashew planting in the due course (Cashew Research Report, 2001/2002).

Cashew nut trees are grown in the first instance for their kernels, which when roasted have a pleasant taste and flavor. The kernels are often one of the ingredients in various kinds of dishes. They are also used for confectionary purposes and in the preparation of many sweets (Ohler, 1979).

The cashew tree is an evergreen perennial. When growing under favorable conditions the stem is erect, the canopy is symmetrical, mostly umbrella shaped. The tree may grow up to as much as 15 m. Cashew is very modest in its soil requirements and can adopt itself to varying soil conditions without impairing productivity. It can grow on poor or stony soils likely due to its extensive root development. The best soils for cashew are deep, friable, well-drained, sandy loam soils without a hardpan (Ohler, 1997).

In older plantations, trees were established from unselected seed. But in recent developments, farmers used polyclonal seeds or seeds from selected clones (AC4, AC10, AZA2, AZA17 and AC28). Grafting is the most recent propagation technique used. The Agricultural Research Institute (ARI) based at Naliende, Mtwara, Tanzania (Anonymous, 1994), provides both seeds as well as grafted materials.

Cashew is normally sown or planted in the rainy season. Sowing of cashew in-situ with or without planting holes has been the main method of establishing smallholdings and large plantations. Recently use of planting pots in the nursery, especially for grafted materials has been a common practice before planting in the field at 12 x 12 m spacing (Anonymous, 1994).

There is a strong negative correlation between soil depth and the need for weeding, and between the age of the tree and the need for weeding. Even under very favourable conditions of the soil and climate, a cashew seedling developing between the natural vegetation would grow and develop much faster if weeding would be practiced in the initial stages (Ohler, 1979). During the first three years of growth, ring weeding should be practiced. At first, the diameter of this ring can be about one and a half metres, extending gradually to

three metres in the third year. Weed growth beyond the clean-weeded rings can be kept low by slashing or by disc harrowing. Slashing is a very unsatisfactory method of weeding. The effect is of very short duration. Hoeing, cutting the weeds-off the ground is much more effective and weeds will need much more time to recover.

The age at which a cashew tree starts flowering is influenced by the growing conditions and likely genetic factors. Although trees growing under favorable conditions may produce their first crop worth harvesting at the age of three years, the production of flowers and a few fruits usually takes place in the second year of growth. The inflorescence is a panicle and it may be conical, pyramidal or irregular in shape (Rao and Hassan 1957).

The kidney shaped nut is the true fruit of the cashew tree. It is attached to the apple, the juicy swollen pedicel, which is about five to ten times as heavy as the nut when ripe. The nut is a true nut with a single seed. The size of the apple can vary as much as that of the nut, and its shape varies even more. Cashew apples can be almost round, but also elongated and scarcely resembling an apple at all (Ohler, 1979).

Harvesting

Cashew harvesting consists of reaping the nuts that have dropped to the ground after maturity. The apples are detached from the nuts and kept in case of use in the secondary processing. To trace the nuts easily, the surface under the tree has to be free from weeds. The nuts are collected in gunny bags or baskets. In the beginning of harvesting season, nut fall is scanty. The peak is reached gradually and after that the production decreases slowly. Harvesting is therefore a time consuming and labour-intensive job. However, it is not heavy labour, as women and children can participate as well.

Drying the nuts immediately after harvesting is essential to preserve their quality. Sun drying of cashew nuts can be done on specially prepared drying floors. But where no such floors are available, mats made of bamboo or other similar materials can be used (Ohler, 1979).

Grading

Cashew nut inspection service was available with effect from 1952 with an intention of offering fair average quality certificates to exporters based on cutting tests (Mutter and Bigger, 1961). Formal grading of cashew nuts was not introduced until 1996/5/6, it was carried out when the cooperative societies delivered the nuts to the National Agricultural Products Board warehouses and was aimed at meeting the quality requirements of buyers rather than improving nut quality (Topper *et al.*, 1998). Northwood and Kayumbo, (1970), reported that in 1968/9 farmers were required to grade their nuts at the farm level and a two-tier price system was introduced which recognized two grades of nuts at the buying posts. Two grades of cashew nuts are distinguished in Tanzania: "Standard " and "Under grade". Standard nuts are defined as those containing no more than 0.25 % by weight of foreign matter and no more than 13% by weight of void, damaged, immature or previous season's nuts. Moisture content should not exceed 13%. Under grade nuts are those not meeting these requirements (Northwood and Kayumbo, 1970; Martin *et al.*, 1997). It is estimated that standard nuts comprised about 80% of the national production (Ohler, 1979).

Marketing

Up to 1962, the procurement and marketing of cashew was carried out by individual private merchants acting as middlemen between producers and Indian buyers. Prices varied widely from place to place, season-to-season and even within the same season (Ellis, 1980). In 1960 onwards there was a large increase in the number of co-operatives and farmer's associations representing cashew producers. In 1962 the Southern Region Cashew nut Board (SRCB) was set up and this took over marketing the whole crop. The SRCB sold nuts to exporters at auctions and producers were paid according to the price at the last auction. This resulted in a greater uniformity of prices to producers. The SRCB was replaced in 1963 by the Southern Agricultural Products Board and then by the National Agricultural Products Board (NAPB) in 1964; by then, procurement was entirely undertaken by Primary Cooperative Societies who sold to Regional Co-operative Unions. This system lasted until 1974 when, with the establishment of crop authorities, the Cashew nut Authority of Tanzania (CATA) took over the role of NAPB. CATA was given a wide ranging of responsibility for developing the industry by promoting the activities of growers, stimulating processing, regulating and controlling marketing and exporting and advising the government on the industry (Topper *et al.*, 1998). In spite of these powers, production underwent a catastrophic decline. The co-operative societies were disbanded in 1976, from which time farmers sold their crop to the village, which acted as an agent for CATA (Bennet *et al.*, 1979). In 1985, the Tanzania Cashew nut Marketing Board (TCMB) was formed to replace CATA and procurement of nuts was again channeled through Regional Co-operative Unions (RCU) and village primary societies. TCMB bought the nuts from the RCU at a predetermined annual Into-Store price, arrived at after negotiations between the board and each of the RCUs (Marketing Development Bureau, 1992). In 1993, the functions of TCMB were taken over by the Cashew nut Board of Tanzania (CBT) (Topper *et al.*, 1998).

For most of the 1970s and 1980s the procurement and marketing system was unsatisfactory and the frequent delays in collecting nuts from villages and making payments to farmers were major disincentive to growers (Ellis, 1980). The many inefficiencies in the system resulted in the RCUs accumulating large debts. However, the 1990s have seen increasing liberalization of marketing—licensing of private buyers was started for 1991/2 crop and the Government relinquished its control on pricing for the 1992/3 crop. The benefits for farmers of liberalization have been very marked and, as a proportion of the export price, farmers received a higher price for their cashew in 1993/4 than they had ever received before. Unfortunately, in 1996/97, farmers were paid less than they have been over the past few years due to the high level of taxes imposed by District authorities and export levies.

Marketing performance

The producer price is a function of many considerations and influences, the most important of which are production cost structure, the international cashew supply and demand dynamics, the domestic market situations, the effectiveness of regulation mechanism and the tax structure on the agricultural sector. It can be noted in Table 1 that the average producer price of cashew nut increased substantially in 1994/95 after the agricultural marketing system was liberalized. The price continued to improve steadily and reached a record level of Tshs 600/= (US\$ 0.67) per kg (SG) in 1999/2000. However, the producer price fell drastically in the following marketing season (2000/01 due to decline in the world market prices of kernels caused by over supply of cashew nuts (Katinila *et al.*, 2001).

Table 1. Raw cashew nuts: production, average producer prices and export prices, 1990/91 to 2000/2001

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
Production (‘000 tons)	29.8	41.2	39.3	46.6	63.4	81.7	63.0	99.9	106.4	121.2	122.3
Producer price (Tsh/kg)	110	137	140	177	300	325	315	300	440	600	250
Export price (\$/t)	n.a	n.a	n.a	n.a	n.a	850	750	850	900	1,055	600

Source: Cashew nut Board of Tanzania (CBT)

Primary and secondary processing

Most of the cashew nut crop is sold for export. Over 95% of the cashew nuts produced in Tanzania are exported in raw form to India and a small proportion goes to small-scale backyard processors. This dates back to early 1960’s and 1970’s when Tanzania did not have any local processing factories. Unfortunately, to a large extent, this situation is taking place even today when there are 12 large-scale cashew nut processing factories in the country (Cashew nut Board of Tanzania, 2001).

Currently there are two medium scale cashew nut processors. Mohamed Enterprises processes about 1,500 tons of raw nuts while Premier Cashew Industries process 4,000 tons annually. Processed kernels are exported to United Kingdom, South Africa, South Korea, Pakistan and Kenya (Cashew Board of Tanzania, 2001).

Only a small part of national production is consumed locally after processing by traditional methods. Wider local use is made, however, of cashew apples, which are eaten fresh or used to produce a local beer (ulaka) or a spirit (nipa). Nevertheless, most apples are unused but measures are underway to make cashew juice and other secondary products such as jams, chutney, pickles, vinegar and candy (Chijinga, 2001).

1.2 Development strategy

Following exportation of cashews in raw form for more than ten years, the Government has recently declared a national policy to encourage local processing of cashew nuts and to discourage exports of raw nuts. The National Development vision 2025 envisages modernizing the Agricultural Sector. It is envisaged that by 2025 the economy will have transformed from a low productivity agricultural economy to semi-industrialized economy led by modernized and highly integrated and buttressed by supportive industrial and service activities in the rural and urban areas (Cashew nut Board of Tanzania, 2001). Annex III presents a five-year sector development strategies (2001/02 to 2005/06) and respective responsible stakeholder for implementation. In respect of the cashew nut industry the government has decided to revamp the industry and rehabilitate all cashew nut processing factories so that Tanzania can once again export processed cashew nuts. The Government, through the Parastatal Sector Reform Commission (PSRC) has advertised the factories for sale to private investors. In order to fully utilize the capacity of processing factories,

production of raw cashew nuts has to be increased and be sustained. Further measures are currently taken to ensure that nuts produced in the country are of high quality. This will be achieved through educating farmers on proper cashew handling procedures and assisting them in cashew grading.

By not processing our product, we qualify only for one market (raw nuts) instead of distinguished markets for raw nuts, kernels, cashew nut shell liquid (CNSL) and cashew powder found in several other countries (Cashew Board of Tanzania).

- ❑ The government through CBT has already rehabilitated two factories namely Masasi and Kibaha processing factories and leased to private investors. Negotiations are underway with other investors who are going to rehabilitate and lease Likombe, Lindi and Newala I factories.
- ❑ The presidential Parastatal Sector Reform Commission has already advertised the sale of the remaining factories and currently is carrying out pre-qualification review of the bidders.
- ❑ CBT has proposed to the government to raise the current 3% levy charged on exportation of raw nuts to 10% as a disincentive to exportation of raw nuts and charge 1% levy on exportation of kernels. This is open for further review in order to encourage exportation of kernels. However, this will depend upon levels of future production.

In conclusion, CBT recommends the following as further development strategies:

1. Export levy on kernels be exempted to local processors for a period of 2 years, thereafter levy be imposed on a rate to be agreed upon by all stakeholders.
2. Export levy on raw cashew nuts be increased from the current 3% to 10% to serve as a disincentive to exporters of raw cashew nuts.
3. Cess be collected at the port of exit and thereafter be distributed to relevant district councils. This procedure will prevent evasion of cess payments.
4. CBT be allowed to establish the Local Processors Stabilization Fund from part of revenue to be collected from the recommended new export levy on raw cashew nuts.

On the other hand, Cashew nut Association of Tanzania (CAT)¹ has also presented their views in terms of cashew nut sector development with regard to short, medium and long term strategies, which includes the following:

- That licenses for buying cashew nuts should be issued from only one stop center
- The government to step-up security during the buying season in order to avoid banditry.
- Farmers should be trained on proper harvesting and storage of the produce
- Levy (cess) should be charged to already bought and collected cashew nuts.

Payment of levy before purchase will definitely set aside the small-scale traders and businessmen. In addition to that, primary societies never refund the amount of cashew for what has not been bought.

¹ Cashew nut Association of Tanzania, P O Box 75585, Dar es Salaam, Tanzania.

- Cess should be paid in accordance to agreed laws and regulations, that is 5% of farm gate price, so that farmers will be able to get a better pay and should not be exploited.
- In order to promote processing in the country, the government should remove all types of taxes for all processing machinery, equipments and spares.
- CBT should not tax the 1% levy for processed kernels.
- The Government should make a thorough study on how best to utilize the present large industries and allow privatisation. At the same time promotion of medium and small scale processing should be encouraged and enabled.

Chapter 2: SECTOR PERFORMANCE

2.1 Cashew nut production

Evolution of national output and perspectives

Generally cashew gained economic importance in Tanzania just after Second World War when 7,000 tones of raw nuts were exported to India (Northwood and Kayumbo, 1970). Ten years later cashew production increased by three folds and in 1960 about 42,000 tones of raw nuts were exported (Annex IV). Since then production continued to increase and reached a maximum of 145,000 tones in 1973/74 season. The main reasons underlying this increase in production was probably due to increase in acreage, improved husbandry and good producer price.

Unexpectedly from 1974/75-season production trend reversed and there was a continuous and drastic decline in cashew production falling to as low as 16,400 tones in 1986/87 (Annex IV). The decline in cashew production was consistent in all cashew-growing areas in the country and resulted in a large loss of revenue for growers, processors and the government. From 1987/88 the production began to increase again and reached about 41,238 tons in 1991/92 to 121,207 tons in 1999/2000. Production reached 122,283 tons in 2000/2001 (Annex IV).

Tanzania government has been taking various measures to revive the cashew nut industry since 1987/88 marketing season. This involved establishment of Cashew nut Production Improvement Pilot project (CPIPP) in 1987 to 1989. Previous to that, two other programs, namely the Cashew nut Improvement Programme (CIP – 1990 to 1996) and the Cashew nut Research Programme (CRP) were implemented with support from cashew levies². However, liberalization of cashew marketing has contributed significantly in improving the industry through fair market pricing.

Shoo (1998) reported that there are several achievements made over a period of 6 years of the CIP Programme as summarized in the Project Completion Report (MOAC, 1996):

- ❑ More than one million improved cashew planting materials (1.2 millions), were delivered with a survival rate of over 70% was achieved, meeting the demand by 82%.
- ❑ More than nine (9.2) millions of neglected cashew trees were reclaimed
- ❑ Twenty percent of the total cashew trees were protected from powdery mildew attack by some 24% of all cashew-growing farmers.

² 1% of the fob price is channelled to Research

- ❑ Production and working capital loans for farmers and traders were implemented through a local bank during the first 3 years of the Programme
- ❑ Farm gate price rose to about 65% of the export price.
- ❑ Cashew research is now fully dependent on funding derived from a cashew nut export levy.
- ❑ Establishment of Regional Input Funds (RIFs), which uses a minimal levy on each kilogram of cashew nuts sold, has enabled smooth and timely availability of inputs for each region- although there were several management and organizational problems.

Types of cashew cultivated

The Agricultural Research Institute at Naliendele in Tanzania is one of the few places in the world where cashew is given precedence (Martin *et al.*, 1997; Topper *et al.*, 1998). Until now, cashew breeding at Naliendele has been limited to a selection Programme, trying to find what is best from local material and foreign introductions. It is likely that all local materials have a narrow genetic base, originating from comparatively few seed brought to the region within the last 500 years. The most recent foreign introductions have been restricted to small numbers of seed from a small number of locations (Harries *et al.*, 1998).

For commercial production in modern agriculture, the cultivators of fruit and nut crops are propagated asexually. Such clonal propagation allows faithful reproduction of the superior genotype (Mehlenbacher, 1995). Yet, many cashew-growing areas in Tanzania still depend on seedling material and polyclonal seed gardens have been established for that reason. In Tanzania, cashew is highly heterozygous within the limitations of the narrow genetic base. Merely collecting phenotypically attractive plants will not necessarily avoid inbreeding. As is the case with naturally cross-pollinated crops, inbreeding can be expected to result in decline in vigour and fertility. It has yet to be shown whether the poor performance of much local material can be attributed to inbreeding depression or whether polyclonal seed will avoid inbreeding depression and prove superior to seed that is already available. Some of the genotypes present at Agricultural Research Institute Naliendele, and available to farmers are listed in Annex V.

At Naliendele Agricultural Research Institute, a breeding Programme to generate new cashew clones started in 1996 and is expected to continue for the foreseeable future. Controlled cross-pollinations are planned and executed annually and are made using standard seed parents in a crossing garden where 101 selected clones are available. The pollen parents are individual trees, from both Tanzania and overseas accessions, selected from the trials and planted at Naliendele. The crosses aim to combine complementary qualities from parents with contrasting characteristics, taking care to prevent inbreeding depression by avoiding parents with a common ancestry. The seed produced is germinated and grafted onto mature seedling rootstock to appraise, in one or two years, hypersensitivity to powdery mildew, bud vigour and kernel quality tests are performed against the test grafts. A selection–rejection ratio of 1:20 was proposed for this stage. The selected plants are multiplied by budding or grafting for growing in progeny row trials within existing planted areas at Naliendele. The plants are appraised over three consecutive crop years for growth and vegetative habit, *Helopeltis* tolerance, powdery mildew resistance, with and without chemical control, yield in terms of nut weight, number and quality as percent kernel out-turn (Harries, *et al.*, 1998).

Following a pre-assignment appraisal of the cashew-breeding Programme in 1993, five objectives for a crossing Programme were proposed (Harries, H.C., 1993).

These were:

- ❑ To make test crosses between polyclonal seed parents for evaluation
- ❑ To generate new populations from crosses between local and introduced germplasm for further selection.
- ❑ To see if pollination mechanisms hinder, or enhance, polyclonal seed production
- ❑ To improve pollination techniques
- ❑ To study cashew genetics

The top priority is now given into generation of new populations for further selection.

Harries et al (1998) presented a stepwise Breeding Programme Cycle, of which all steps in the Programme are repeated annually. It is essential that farmers should be able to choose from a range of tested materials, those clones/genotypes that are most suited to their growing conditions and preferences. The release of new materials becomes the first priority of ARI Naliendele. Through breeding section, in cooperation with the other research sections and production units, farmers, cashew nut buyers and processors, ARI Naliendele can serve the national cashew industry.

Main factors influencing production and harvesting performance

Since the 1960s the cashew industry has experienced similar changes in fortunes to those affecting other cash crops in Tanzania over the same period – healthy export industries were stifled by low producer prices and inefficient centralized marketing organizations working under monopolistic conditions. In addition, cashew had the added disadvantage of a serious disease problem establishing itself over the same period. This has been balanced, however, by the persistence of attractive export prices so that with appropriate internal adjustments the industry has been able to reestablish itself. The last few years have seen very encouraging increases in production but for this to continue, inputs (chemicals and machines for disease control and improved planting materials) will need to remain readily available. An effective marketing system needs to remain in operation and the farm-gate price of raw nuts must continue to be attractive. It is also imperative that taxation be restrained and kept to a reasonable level (Topper *et al.*, 1998)

Among other factors that influence production and harvesting performance of cashew nut sector includes:

- ❑ Implementation of a comprehensive cashew research Programme covering breeding, pathology, crop protection, agronomy, vegetative propagation and socio-economics and farming systems.
- ❑ Improving the availability of better planting materials from CDCs, farmers training and establishment of village based nurseries operated by farmers
- ❑ Implementation of a comprehensive extension approach, complementing the national extension service that was particularly aimed at cashew nut production promotion
- ❑ Market liberalization of the cashew industry, whereby inputs, crop and processing business were privatized with minimum interference from the government

Future development of cashew industry in Tanzania will depend upon:

- Proper management of the Regional Input Funds
- Widespread adoption of Integrated Cashew Management package (Martin *et al.*, 1997)
- Development of small to medium scale cashew processing technology
- Smooth funding of cashew research by the industry itself while scaling down other cashew levies not directly contributing to the development of the industry.
- Strengthening of Research-Extension-Farmer –Trade –linkages by instituting a cashew Management unit that will be charged with responsibility of studying and evaluating all aspects of the industry and advise the government on the necessary steps to be taken.
- Availability of capital and production loans from banks and the development of savings and Credit Co-operatives (SACCOs) among cashew farmers (Shoo, 1998).

Labour

The average size of cashew households varies with farming system zone from 3.3 to 7.1 persons, but only between 2.0 and 3.7 of these contribute to farm labour. Although farmers can increase their labour through traditional labour exchange arrangements, these are usually only short-term. A shortage of cash limits the use of hired labour to 18-37% of households. Adult males carry out most cashew activities and particularly the heavy work of rehabilitation; adult females contribute significantly to weeding; harvesting is frequently a family activity. A shortage of labour has probably been one of the most important factors limiting the rehabilitation of abandoned farms, particularly those that were abandoned for many years (Martin *et al.*, 1997).

2.2 Processing

Evolution of the national output and perspectives

Ever since the start of the industry, most cashew exports have been raw nuts, which have been shipped to India where there is plentiful, cheap manual processing capacity. From India, kernels are then sold on the world market; USA and European countries import most. The volume of raw nuts exported from Tanzania has followed closely the trend in national production (Table 2 and Annex IV).

Domestic processing of nuts for export started in Tanzania in 1950, with a small-scale plant in Mtwara. However this failed because of labour supply problems (Mutter and Bigger, 1962). Mechanized processing began again in 1965 when a new factory was built in Dar es Salaam and this was followed in 1970 with another one built in Mtwara. During the 1970s, annual processed kernel exports amounted to about 4,000 tons per annum. In 1974 loans from the World Bank and Bank of Sicily were obtained to finance 7 more factories at Lindi, Mtama, Mtwara, Nachingwea, Masasi, Newala and Dar es Salaam. Later additional factories were built with the same financing in Mtwara, Newala, Kibaha and Tunduru. Twelve factories were fully established for the 1982/3 season and this gave a total processing capacity of 112,000 tons. Unfortunately, by this time cashew production had dropped to 48,000 tons instead of increasing to 200,000 tons which was anticipated in 1974 (Topper *et al.*, 1998; Kikoka *et al.*, 1998).

Throughout the 1980s most of the factories remained out of operation, due to erratic supplies of nuts and raw materials and the export of kernels averaged only about 2,100 tons

per annum; as a by-product, small quantities of cashew nut shell liquid were also produced and exported. With the revival of the industry in the 1990s, there is renewed interest in processing and arrangements are being made for leasing several of the processing factories to private companies (Kikoka *et al.*, 1998).

Table 2: Raw cashew nuts: exports to India, 1989/90 to 2000/2001

Year	Production (mt)	Exports (90% mt)	Export price (F.o.b,US\$/mt)	Total value of exports (US\$)
1989/90	17,059	16,200	750	12,150,000
1990/91	29,846	28,300	850	24,055,000
1991/92	41,238	39,000	800	31,200,000
1992/93	39,323	37,350	600	22,410,000
1993/94	46,603	44,200	750	33,150,000
1994/95	63,403	60,200	800	48,160,000
1995/96	81,729	74,200	850	63,070,000
1996/97	63,034	60,000	750	45,000,000
1997/98	99,916	95,000	800	76,000,000
1998/99	106,442	101,000	900	90,900,000
1999/2000	120,000	119,136	1,039	123,782,304
2000/2001	122,283	121,379	708	96,913,812

Source: Cashew Board of Tanzania.

Kikoka *et al.*, (1998) reported that there was a small margin (about \$40 per tone) in favour of selling kernels. There is a great necessity to develop policy instruments to encourage small to medium scale cashew nut processing locally. The Indian manual processing technology should be initiated but modified to suit Tanzanian condition. Medium scale cashew processing technology involving centrifugal decortications should be tried on pilot basis.

Tanzania is gradually moving towards more processing of cashew nuts locally. The social-economic benefits to the country are too important to be ignored, and provided value added to the products can be sustained, possibly with the assistance of alternative processing technology like small scale hand technology and medium scale of centrifugal decortications type, then the business community will follow this route (Kikoka *et al.*, 1998).

Currently, there are two medium scale cashew nut processors. Mohamed Enterprises processes about 1,500 tons of raw nuts, while Premier Cashew Industries (established 1998) process 4,000 tons annually. Both factories are based in Dar es Salaam. Annex VI presents a list of small-scale processors scattered throughout the country (Cashew nut Board of Tanzania, 2001). It is estimated that 1% of nut produced in the country is processed by small-scale processors. There are several advantages of small scale processing: Realization of

higher kernel out-turn percent of about 86 as compared to 55 percent in large scale factories; Low investment cost (manpower, training and machineries) and finally, income distribution particularly to women (Katinila *et al.*, 2001).

In this respect, besides roasting skills and technology, the packing of processed nuts is a vital link in the small scale processing. Other constraints of small scale processing are lack of capital, storage and low quality of finished goods. Katinila *et al.*, (2001), suggested for the following areas of improvement:

- i. Research on appropriate technology for roasting and shelling of nuts,
- ii. Institutionalisation of quality control on kernels,
- iii. Assistance in packing technology
- iv. Assistance in marketing research, and
- v. Establishment of network of small-scale processors.

Apart from the government assistance, small-scale processors have been supported by various organizations like Equal Opportunity for All Trust Fund (EOTF), NGOs and respective District Councils. The Government promotion had involved setting incentives for local processors and investors in the cashew nut industry sector. Incentives include remission of export taxes, reduction in District Council levies and support in rural infrastructure (Katinila *et al.*, 2001).

In the wake of sustainable processing endeavour in the country, mechanisms are in place to ensure continuing expansion of the Tanzania cashew nut production, and it is anticipated that the production will continue to grow higher. Modern marketing principles have to be applied including branding of products from Tanzania including cashew nuts.

The market liberalization benefits and free market environment is already resulting in increased business confidence, including international investment, and this will lead to dynamic changes in cashew industry in Tanzania and elsewhere.

Tanzania business community has to face the challenges of international markets. This includes performing market research and adding value to the products and branding them in order to meet consumer market requirements (Kikoka, *et al.*, 1998).

Types of processed products commercialised

There are a number of products from cashew which if all were processed and utilized efficiently; they may increase farmers income and eventually alleviate poverty in Tanzania. Unfortunately, processed kernels are the main commercial product exported from Tanzania (Annex VII). Cashew nut Shell Liquid (CNSL) was another export product from Tanzania during early 1990s when processing was taking place in the country.

Kernels are exported in specific grades such as whole white kernels, whole scorched kernels, whole dessert kernels and white pieces (Cashew Board of Tanzania, 2001). Measures are underway to conduct secondary processing, which will lead into commercialising of more products such as apple juice, pickles jam etc.

Main factors influencing the national processing performance

Some of the factors influencing the national processing performance are:

- ❑ Low comparative advantage in processing (technology and labour)
- ❑ Low nut production below factory requirement
- ❑ Low effective demand (difficult in market penetration), and
- ❑ Expensive technology and labour

The government is addressing the situation by encouraging local nut processing and selling or leasing out the existing factories to private traders. Other incentives to encourage local processing includes removal of 1% cess to cashew nut destined for local processing; provision of 2 years tax holiday for the acquired factories and some relief on export taxes of kernels are under consideration (Katinila *et al.*, 2001).

It has also been found out that most of local processing initiatives are affected by lack of capital, storage and low quality of finished goods. The government is currently taking strong measures to tackle the problem.

2.3 Export

Export performance

Tanzania exports most of this crop in raw form and loses massive revenue since the largest “profit margins” are found in processing and marketing areas (Annex VII). Farmers earn income only during the short season (October –January) and have few alternative sources of income during the rest of the year. During 1980s and 1990s Tanzania exports of raw cashew nut to India rose steadily to about 100,000 tons to feed the expanded processing capacity estimated to be 500,000 tons per annum (Cashew Board of Tanzania, 2001).

Tanzania and Mozambique have been major suppliers of cashew nut to India. Other African suppliers include Guinea Bissau, Ivory Coast, Nigeria and Benin (former Dahomey). Tanzania has been supplying about 41% by value of total Indian imports followed by Mozambique supplying about 12%.

According to the CBT report on the Status of Cashew nut Industry in Tanzania, presented to the 2001 Cashew Conference in Kibaha, Tanzania, exports from East Africa to India has been increasing as other traditional exporters such as Vietnam and Indonesia, imposed restrictions in the form of taxes on exports to India. The restrictions have been imposed in order to promote their domestic processing industry. For example Vietnam and Indonesia imposed taxes by 20% and 30% respectively. Guinea Bissau and Ivory Coast have also imposed some degree of protection to their local processing sector at the rate of 20% on export price of about US \$ 260 per ton of raw nut exported. In Tanzania, export prices (f.o.b.) for raw cashew nuts have been fluctuating over the last 11 years between 1989 and 2000 as depicted in Table 2. However, Tanzania has also imposed an export tariff of 3% on the f.o.b. value, this is neither for the purpose of promoting nor protecting local processing but as a source of revenue to the Cashew Board of Tanzania (CBT), Cashew nut Industry Development Fund (CIDEF) and research activities.

Apart from the deliberate efforts to increase the national cashew nut production, the country is now looking forward to have most of the crop produced processed within the country.

Organization and co-ordination of the sector and their incidence on the export performance

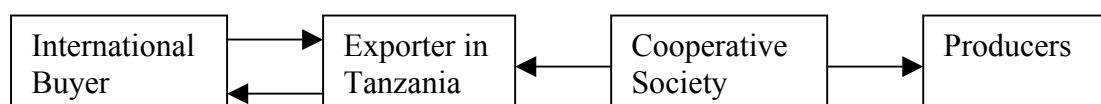
Generally, the marketing of cashew nut in Tanzania is regulated by CBT, which is the Government body. At the moment, CBT has formulated rules and regulation pertaining to the marketing of the crop. According to CBT, two key aspects of the regulations require the producer and the buyer to do the following:

- ❑ The producers to collect the nuts, grade and sell them in two grades (Standard and Under Grade) at designated buying centres.
- ❑ The buyers to register themselves with the Board. They have to obtain a buying license worth Tshs 60,000/= (US\$ 66.7) per district.

Cashew nut is currently marketed under a multi-channel system. A marketing channel is the path the produce takes as it moves from the producer to the final customer. Usually, it constitutes a set of interdependent organizations involved in the process of making the produce or service available for use. According to a study undertaken by Consultant from the University of Dar es Salaam in February – March 2001 on the “Verification of Cashew nut Statistics of the 2000/2001 harvest”, there prevailed three types of channel structures namely, the corporate, the extended and over-extended channels. These channels are briefly described below according to Katinila *et al.*, 2001.

(i) The corporate channel

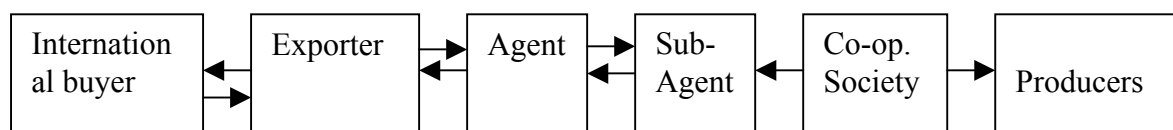
Technically, a corporate channel means that the intermediaries are either integrated into the corporate structure of the exporter or at least administered by the exporter. Hence, it is a form of a no-intermediary channel. Invariably, where this channel structure prevails there is only the exporter between the international buyer and producer. Typically, the exporter gets in touch with the producers through a Primary Cooperative Society, which serves as a non-trader intermediary. The results of the study referred to above indicate that there was only one exporter – OLAM (Tanzania) Limited, which operated under a corporate channel in 2000/01 marketing season. In addition, they showed that the exporter OLAM (Tanzania) limited, consistently offered better prices to producers than the rest of the dealers and was a clear market leader. The corporate channel is portrayed as follows:



(ii) Extended trade channel

The extended trade channel consists of at least four members: the international buyer, the exporter, the agent and the sub-agent. Also, between the sub-agent and the producers,

there is in most cases the Primary Cooperative Society, serving as a non-trader intermediary. These relations are portrayed below:

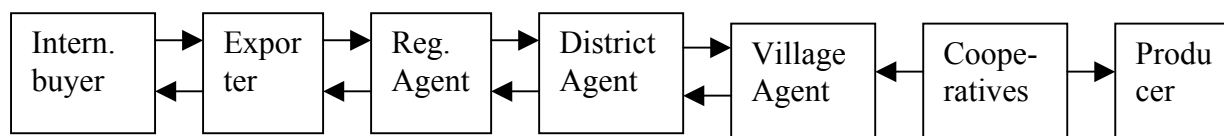


The major disadvantage of this kind of a channel structure is that benefits are only shared by middlemen. Thus, this kind of channel structure offers a strong motive for the better-placed channel members to cheat the channel members who rely on them on price, which the dealers are willing to offer. Consequently, the flow of market information is severely hampered. In this arrangement, the producers are on the receiving end.

(iii) Over-extended channel

One of the characteristic features of the supply-demand link which emerged following the liberalization of the cashew nut market and the resultant market situation thereof, is the existence of an over-extended trade channel.

In its more extended form the distribution channel can consist well beyond four members: the International buyer, the Exporter, the Regional Agent, the Regional Sub-Agent, the District Sub-Agent and the Village Sub-Agent. Also the Primary Cooperative serves as an intermediary between the producers and the village subagents. These relations are portrayed below:



It has been learnt from these marketing channels that producers of cashew nuts have very weak organizations in the form of cooperatives. Therefore, the cashew nut farmers do not have strong collective organs to promote their interests during the selling of their cashew nuts, they do lack the bargaining power when they negotiate with traders. In order to strengthen Farmers' Organizations, the Government has established the Ministry of Cooperatives and Marketing to promote and support farmer's organizations (Katinila *et al.*, 2001).

(iv) Quality of exports

Cashew quality is of utmost importance as the product directly enters the retail market. High quality is of primary concern to importers, and one of the major criteria for success in the world market. Currently, the common trade practice is to utilize the US cashew grading system, due to the strong influence that demand from the United States has on the world prices. India and Brazil have worked hard to ensure high quality of the processed kernels, and India was the first country to use quality control for improvement of

performance. Quality control is administered by the Cashew Export Promotion Council (CEPC) India. Cashew producers and Exporters in India and Brazil introduced food quality standards in the late 1980s to ensure product safety and guarantee quality. Currently, cashew exporters must comply with ISO 6477, a standard introduced in 1988 in order to unite the major export classifications and provide a single classification scheme for global quality control (Gebremedhin, 2001).

In Tanzania, Cooperatives served as original buyers in most cases and delivered the nuts to the Cashew board warehouses in Mtwara. Farmers were required to grade their nuts at farm level before selling to the cooperatives. Discoloured, pitted, shriveled nuts were not to be mixed with good nuts. Since 1976, after the abolition of cooperative unions, CATA has been purchasing the nuts directly from the village societies. By then, CATA also took care of export (Northwood and Kayumbo, 1970).

The Cashew nut Board of Tanzania in collaboration with SGS Company Limited is basically doing nut quality analysis. Main tests conducted for nut quality analysis before issue of certificates includes nut counts, percentage defective, moisture content and Percent out-turn obtained through cutting test (Cashew nut Board of Tanzania).

Pests and diseases play an important role in determining nut quality since they can cause premature nut fall, incomplete nut filling and damage to the nut. Now that marketing has been liberalized, buyers can be more selective about the nuts they purchase and this is reflected in the higher price they are prepared to pay for clean nuts and for those from the inland parts of Tanzania – Tunduru, Nachingwea, and parts of Masasi-, which are reputed to have higher percentage out-turn and lower moisture content. (Martin *et al.*,1997). Most Indian buyers conduct cutting tests to samples of nuts before they can buy the product at the buying posts or collection centers. In this regard, Tanzania has no established laboratories for quality control aspects as most tests are carried out using simple portable tools such as moisture analysers, weighing scales etc. Measures are underway to establish a quality control laboratory at the Agricultural Research Institute, Naliendele, Mtwara.

Chapter 3: CONSTRAINTS TO EXPORT DEVELOPMENT

3.1 Production and harvesting

(i) Diseases and pests

Devastating effects of Powdery Mildew Disease (PMD) is a major constraint in cashew nut production in the country. The disease may cause a yield loss ranging between 70 to 100% depending upon phytosanitary measures taken (Sijaona and Shomari, 1987). Other diseases, which appears to be a great threat to the industry, includes Anthracnose (*Colletotrichum spp*), Dieback (*Phomopsis spp*) and wilt problem.

On the other hand, damage from sucking pests such as *Helopeltis spp*, Coconut bugs (*Pseudotheraptus wayi*), Stem borers (*Mecocorynus spp*) and Mealy bug (*Pseudococcus spp*) is equally important. These main pests affects both yield and quality and they are likely to increase in importance when mildew is controlled.

Preventative and control measures of both biological and chemical nature are known to majority of farmers, actual application is challenged by a number of factors including economical.

(ii) Inadequate use of farm inputs

In most instances the use of agrochemicals for prevention and/or control of diseases and pests has become inevitable. However, there has been limited use due to unavailability of agro-chemicals in the respective sites on account of untimely distribution or unaffordable prices. The existing distribution system is generally weak characterized by lack of funds, unreliable suppliers, weak and poor infrastructure in the rural areas.

(iii) Awareness on research packages

There is inadequate coverage in dissemination of research findings due to inadequate extension services, weak extension system, and inadequate coordination in the extension services, poor infrastructure and inadequate transport facilities. Notwithstanding the efforts in research, there have been some problems in implementation due to inadequate staff and funds. With respect to technology, research activities still operate at narrow genetic base.

(iv) Motivation of farmers

The farmers' environment of operation in the cashew industry (production) is not attractive enough to stimulate increase in production. Marketing of raw cashew nuts has been inconsistent, and the producer price is very low and completely blind on the rising operational costs and cost of living. To a large extent most farmers cannot breakthrough and their economic base is generally very weak.

(v) Inadequate mechanization

Like in many other crops, traditional farming is still predominant in cashew production. Hand hoe and machetes are the most dependable tools allowing very limited coverage.

(vi) Farmers' knowledge

Most farmers have limited knowledge not only on technical issues related to cashew growing and processing but also in farm business management. The use of indicative prices to determine producer prices and cost-benefit analysis are unknown to majority of them.

Most of the cashew nut trees are not well attended and in some cases fire out-breaks which have been very common, have a negative effect on production.

3.2 Processing

Cashew nut processing sector is faced by a number of problems:

(i) Decline of raw nuts output

From 1975 onwards, due to various production constraints stated above, production of raw nuts countrywide declined substantially. The unavailability of raw nuts was exacerbated by changes in policy in 1984 where the mandate to buy raw nuts was transferred from Tanzania Cashew nut Marketing Board to Co-operative Unions. The system allowed export of raw nuts while there was inadequate supply to feed the existed local processing factories.

(ii) Quality of kernels

In Tanzania, the products coming out of hand processing technology have not been able to be sold in the international market. The unhygienic environment, poor handling and lack of the art in processing have resulted to inferior quality that cannot compete in the international market. Packaging has also been a contributing factor to inferior quality.

(iii) Perception of processing technology

Hand processing technology has been urged to be affordable both financially and technically. In other countries like India, it has been proved that kernels from hand processing can also fetch good prices in the international market. Despite these achievements and advantages the hand processing technology is yet to pick-up adequately in Tanzania. Measures should be taken to promote the process in this country.

(iv) Uneconomic operations

The establishment of most processing factories was not business but rather service oriented focus. Most of them operated at very high costs while the gains were very minimal. For instance, there was over-employment and unnecessary permanent employment, which increased the running costs.

With this trend, most factories failed to repay respective loans, which with time, swelled due to high interest rate. It is a fact that processing needs heavy investment both in installation and running the factory. One of the serious problems facing this sector is an acute shortage of funds to re-open and run the factories. Other operation factors include that it is expensive to operate and there is generally lack of reliable water and power supply.

(v) High interest rates

High interest rates charged by financial institutions on loans and overdrafts are said to be one of the major factors affecting processing in Tanzania. More people had been induced to export raw nuts as against processing so as to have quick recovery of their money to enable them repay their loans before interest accumulates. In view of this case, it is advised that the Government should take a deliberate move to facilitate financial support to assist the would be investors in processing by giving them soft loans.

3.3 Export Marketing

The salient factors affecting export marketing of cashew nuts in the country includes:

(i) Few marketing channels

Currently the only product, which is marketed internationally, is the raw nut, and the only major market is available in India. This monopoly has given power to buyers to determine buying price leaving very small or no room for bargaining. It is felt that farmers are pushed to very low margins in the raw nuts market. By not processing, our product is qualifying for only one market, which has proved to be a problem. Local processing could open up a wider and heterogeneous market. However, in the mean time, the government is exploring other export markets of raw nuts.

(ii) Weak Farmer Organizations

Co-operative Unions and farmers primary societies have failed to handle marketing activities. Most of them are weak in terms of qualified and committed personnel and lack purchasing power. Generally the environment is not very supportive to the existence of Co-operative Unions. The policy has kept on changing while financial support has always been minimal or lacking. Therefore, the cashew nut farmers do not have strong collective organs to promote their interests during the selling of their cashew nuts, they lack bargaining power when they negotiate with traders.

(iii) Lack of information

Currently, there is no effective marketing information system in cashew industry. The importance of marketing information to traders and farmers in particular cannot be over-emphasized. Since Tanzania plays a dominant position in the global cashew nut production, it requires an effective marketing information system that is able to monitor and analyze global production and market trends and relay such information to cashew stakeholders. Most stakeholders lack these important information/knowledge of industry.

3.4 Production and trade policies

(i) Multiplicity of taxes and levies on cashew farmers

The cashew nut industry is highly taxed in Tanzania. The taxes include central and local taxes. Katinila *et al.*, 2001 reported that during 2000/01 marketing season taxes charged on the cashew industry were as follows:

- ❑ A district cess of Tshs 100/= per kg of raw nuts paid by traders,
- ❑ CBT levy of 3% of the fob value of export paid by exporters,
- ❑ Buying license charge of Tshs 60,000/= paid by traders for each district of operation

These taxes affect greatly the level of producer prices received by farmers, as they constitute a very high percentage to the farmers' gross margin (Katinila *et al.*, 2001).

(ii) Processing policy

All along, cashew processing has initially been under state owned parastatal at times monopolizing the market of raw nuts. Except for hand/manual processing which served for a small portion of domestic market; semi-mechanized and mechanical large scale processing plants were closed since 1980s. Attempts to re-open some of the existing mechanized factories and establish some new medium scale processing plants are now operational. Masasi, and Kibaha factories have started operation; two medium scale factories (Premier

and Mohamed Enterprises) are now operational. Equal Opportunity for All Trust Fund, have been allowed to install their machinery in the former MCC and Tanita factories, and processing will likely start from the coming harvesting season. The lack of clear policy to protect processing investors against raw nut traders leads to poor performance in this sub-sector.

Other policy issues limiting production and trade includes:

- i. Land tenure, as a policy issue tends to deter people investing on land.
- ii. Structural adjustment Programme and its effects
- iii. Liberalization (This encouraged exporters to benefit from lucrative prices)
- iv. Lack of enabling environment

Chapter 4: IDENTIFICATION OF TECHNICAL ASSISTANCE PROJECTS AND ACTIVITIES AIMING AT SECTOR AND EXPORT DEVELOPMENT

4.1 Production and harvesting

There are a large number of constraints, which negatively affect production and harvesting. Some of them which can be addressed, includes the following:

(i) Diseases and pests

Devastating effects of Powdery Mildew disease (PMD) is a major constraint to production. It is thus recommended that the following activities/projects should be taken into consideration under the Research Programme:

- Evaluate and develop the potential of biological control of PMD (self perpetuating)
- Undertake a study to assess the existence (or not) of different PMD strains
- Improve understanding of the epidemiology of PMD both on a macro scale (regionally) to determine factors promoting PMD and locally on a smaller scale to determine what might affect PMD severity

The breeding/selection Programme obviously will also be taking this into account. Research efforts of looking for varieties tolerant to mildew are intensified as tremendous effort and cash is expended in addressing the disease. Projects in this regard may include;

- Germplasm improvement,
- Evaluation of planting material multiplication techniques
- Disseminate improved planting materials to farmers

Damage from major sucking pests and mealy bug plays a major role in affecting both yield and quality and are likely to increase in importance when PMD is controlled. It is recommended that biological control strategies for the major insect pests to be developed and enhanced, as well as improving understanding of the ecology of these insect pests.

(ii) Lack of good planting material

The availability of good planting material is the foundation of any good production system both now and overcome future problems. It is recommended that efforts should be

taken to undertake regional evaluation of clonal material both introduced and local material. Changes in past and predicted market trends should be taken into account.

Project Status: the Cashew nut Improvement Project initially implemented these activities and projects under this sub-chapter. In this project, the element of research was conducted at the Agricultural Research Institute, Naliendele, Mtwara, funded by the former British Overseas Development Agency (ODA) now called Development For International Development (DFID).

Other Project /activity areas:

In the Five Year Development Plan (strategy) 2001/02 – 2005/06, the Cashew nut Board of Tanzania, has presented planned projects and activity outlines together with respective responsible stakeholders on implementation (see Annex III). Some of the projects and activities are mentioned herein:

- ✓ Transfer of technologies to farming community.

Measures should be taken to improve technology transfer to farmers by employing and training of more extension staff, establishment of village demonstration plots and provide incentives to extension staff including transport facility.

- ✓ Farmer knowledge

There is a great need of improving farmer knowledge on technical issues related to cashew growing and processing together with farm business management. It is recommended that Special training for farmers should be conducted in accordance to their requirements.

- ✓ Farmer groups/societies

Develop strategies to encourage formation and strengthening Primary Societies pertaining to saving and Credit Cooperative Societies – SACCOs so as to increase the purchasing power of the farmers to enable them procure inputs in time. To re-establish cooperative training sessions for farmers and as well as staff members of the Cooperative societies.

- ✓ Input distribution

District level input trust funds should rectify and improve the prevailing system of input distribution so as to make sure the trust funds operates with maximum efficiency. Input trust funds should directly import their inputs to enable farmers get them at a better price. Traders interested in buying nuts should be encouraged to assist in provision of inputs for credit.

- ✓ Rural infrastructure

Efforts should be taken to convince major stakeholders (processors, traders, exporters, district councils etc) to contribute for rural infrastructure with regard to maintenance of the rural road network.

4.2 Processing

The undisputed benefits of processing within country are quite clear. There is a lot of potential for value addition in our country, which should be enhanced.

- ✓ To institute the policy of safeguarding our processing factories by stepping up raw nut export tax as local processing expands in the country.
- ✓ To promote small scale processing by offering training and capital assistance to individuals or to different groups. Similarly, to promote medium scale processing aimed at production of high quality products of international standards.
- ✓ To continue leasing or selling of all the present processing factories to private investors so that they can be commercially managed.
- ✓ The government to institute good environment for investment including exemption of import duty for processing machinery and spares parts.
- ✓ Develop symbiotic business partnerships between large and small factories, conduct feasibility studies and start with pilot projects.
- ✓ Promote secondary processing in the country with regard to production of beverages (juice, wine, gin); food (dried fruit, jams, chutneys, livestock feed) and the CSNL (paints, building materials, brake lining). Previous studies should be reviewed and techno-feasibility study of by-products and market evaluation to be conducted.

4.3 Export marketing

(i) Marketing and price information

Market and price information can and should influence many aspects of production, processing and marketing, therefore, up to date intelligence on this issue is of crucial importance. It is therefore recommended that a research should be conducted on historical trends in the market in order to predict future long-term trends of prices and demand for different grades. The study should be extended to other possible areas of interest – study the link between income growth in USA / EU with increasing demand for cashew and the potential for speciality products.

In the longer term, it would be beneficial if all the players in the cashew sub-sector could take responsibility for cashew promotion both at home and abroad. It is recommended that export education should be improved on the ground and promotion on the basis of market information – marketing channels – supply chain management – speciality products.

(ii) Kernel quality programme

The quality of kernels has a direct and significant influence on price and hence profitability, it is therefore important to have clear and standardized systems in place, which are harmonized with international standards. It is recommended that a Standard system of grades, quality standards, etc should be implemented, which are in line with international systems (Indian, E.U. ISO, Codex Alimentarius)

- (iii) To strengthen District councils together with farmer groups to properly manage the execution of the procedures laid down upon buying of cashew

nuts. This should involve educating farmers on policies of free market system as well as quality control aspects (grading).

- (iv) To conduct research on alternative foreign markets other than India especially during this transition period of changing attitudes to local processing.

4.4 Strategies and national policies favouring the development of the sector

Taxes and levies

One of the major constraints in the marketing system is the multiplicity of taxes and levies on cashew farmers. These taxes greatly affect the level of producer prices received by farmers, as they constitute a very high percentage to the farmers' gross margin. In order to address this problem the government has set up an inter-ministerial committee to study and recommend ways to rationalize all taxes and levies charged on agricultural sector. It is expected that, the number and levels of taxes and levies will be reduced in the near future.

Poverty alleviation strategy

One of the major issues requiring attention is the issue of poverty. It is recommended that socio-economic studies should be conducted to target on poverty alleviation. Necessary information should be gathered and acted upon to ensure that the project will have a definite poverty focus and the impact easily assessed at the end of the project period.

Market liberalization

The benefits of the market liberalization and free market environment is already resulting in increased business confidence, including international investment and this will lead to dynamic changes in the cashew industry in Tanzania and the world over. Therefore, the government should struggle to see to it that the policy is maintained and sustained.

It is recommended that a study should be carried out to set up a project in order to monitor the way the market forces operate.

4.5 Sector organization and regional cooperation

- Knowledge/Technology/Information transfer

This theme is crucial aspect for any modern industry. This is because it affects all stakeholders from farmers, extension workers, researchers, processors and policy makers. The following are recommended for regional cooperation:

- Develop a website with market and trade information and provide training to trainers on getting that information out to the farmers through appropriate media (e.g. Radio based, TV, pamphlets etc). Other information as well could be placed on the website.
- Hold regional meetings and establish an information network to exchange experiences, market, technical and processing information with other countries.

- ❑ Produce training/information materials to extension staff including leaflets, videos and films for the whole region, so as to avoid duplication of efforts.
- ❑ Devise methods for collective negotiations to improve dialogue between stakeholders.
- ❑ Implement regional code of practice for processing of cashew nuts in line with international standards and certification systems.
- ❑ Implement regional standards for nut and kernels

4.6 Export quality improvement and assurance

Develop regional farmer and processing associations. It is recommended that measures should be taken to develop strategies to encourage formation of farmers' groups. This is a priority for the following reasons:

- Improved marketing of raw nuts (bargaining power, better price, bulking)
- Potential processing activities
- Convenient and efficient points of entry for extension
- Credit availability/accessibility
- Improved input supply and price
- Assurance of good quality exports products.

ANNEX I

CASHEW GROWING AREAS



A=ARI Naliendele B=Newala, C=Nachingwea, D=Tunduru

ANNEX II**MAIN STAKEHOLDERS IN THE CASHEW NUT SECTOR**

The Principal Secretary
Ministry of Agriculture and Food
Security
 Kilimo I House- Temeke,
 P O Box 9192,
Dar Es Salaam.

The Principal Secretary
Ministry of Cooperatives and
Marketing
 P O Box
Dar es Salaam.

The Principal Secretary

Ministry of industry and Trade
 Lumumba Street,
 P O Box 9503,
Dae es Salaam.

Director General
Board of External Trade (BET)
 Kilwa Road, P O Box 5402,
Dar es Salaam.

Principal Secretary
Ministry of Regional Administration
and Local Government
 P O Box 923,
Dodoma.

The Director General
Cashew Board of Tanzania,
 P O Box 533,
Mtwara

The Zonal Director
Southern Zone
Agricultural Research Institute
 P O Box 509,
Mtwara.

Cashew Management Unit
 P O Box 6226
Dar es Salaam.

Olam (T) ltd
 P.O. Box 71062
Dar es Salaam
 Telephone: 2864912/2864931.
 Email: Otf @ Africaonline.co.tz

Ste Bps (Cote D Ivore)
 P.O. Box 1060
Mtwara.
 Telephone: (255)232333331
 Fax: (255) 232333331

Dashwood Corporation
 P.O.Box 11789
Dar es Salaam.
 Telephone: 022-2122941-2122943
 Fax: 022-2122945

Afrisian Ginning
 P.O.Box 19964 DSM
 Telephone: 255-22-2138781
 Email: afrisian @ cats-net.com

Euro Impex ltd
 P.O.Box 4075
Dr es Salaam.
 Telephone: 00255-812-781653
 Fax: 051-139620

Abbasi Exports ltd
 P.O.Box 70
Mtwara.
 Telephone: 0593373
 Fax: 0593129

Sanaa Exports ltd
 P.O.Box 119
Dar es Salaam.
 Telephone: 288-741-236665

Premier Cashew Industries Ltd,
 P O Box 816,
Dar es Salaam.

Onash Exports ltd

P.O.Box 11567

Dar es Salaam

Telephone: 25-22-2127882/ 2120321

Email: Onash tz @ yahoo.com

Kanyakumari Trading

P.O.Box 4075

Dar es Salaam.

Telephone: 0255 22 2123142-2119471

Afro Asian Agro Prod

P.O.Box 816

Mtwara

Telephone: 333616

Email: afroasian@intafrika.com

Export Trading co.ltd

P.O.Box 10295

Dar es Salaam:

P.O.Box 869 Mtwara

Telephone: 33588/2333302/2333172

Email: etc @ export trading tz.com

Alpha Exports

P.O.Box 570

Mtwara

Telephone: (255-23) 2333162

Fax: (255-23) 2333907

H.S. Impex ltd

P.O.Box 483

Mtwara.

Tropical Commodities

P.O.Box 19681

Dar es Salaam.

Telephone: 25957/46952

Fax: 46156/25957

Asia Commodities

P.O.Box 4075

Dar es Salaam.

Telephone: (255) 222123142

Fax: (255) 222119471

Oceanic Trading co

P.O.Box 157 Mtwara

Telephone: 255-23 2333162,

Fax: 255-23-2333907

Mohamed Enterprises ltd

P.O.Box 20660, Dar es Salaam.

Telephone: 118931-114376-112756

Fax: 113183-112694

Cubix Limited

P.O.Box 319

Mtwara

Telephone: 255-23-2334051

Fax: 255-23-2334051

Swanlinks int.

P.O.Box 8067

Dar es Salaam

Telephone: 051-183688

Email: jeizan@swanlink com

Uniafrico ltd

P.O.Box 8197

Dar es Salaam

Telephone: 118681/119441

Email:uniafrico@cats-netcom

cable: uniafrico

Executive secretary

Cashewnut Industry Development Fund
(CIDEF)

P O Box 77432

Dar es Salaam

OTHER STAKEHOLDERS:

- Farmers
- District Councils
- Regional Secretariats
- Private Distributors of inputs

ANNEX III

FIVE-YEAR CASHEW NUT SECTOR DEVELOPMENT PLAN (2002-2006)

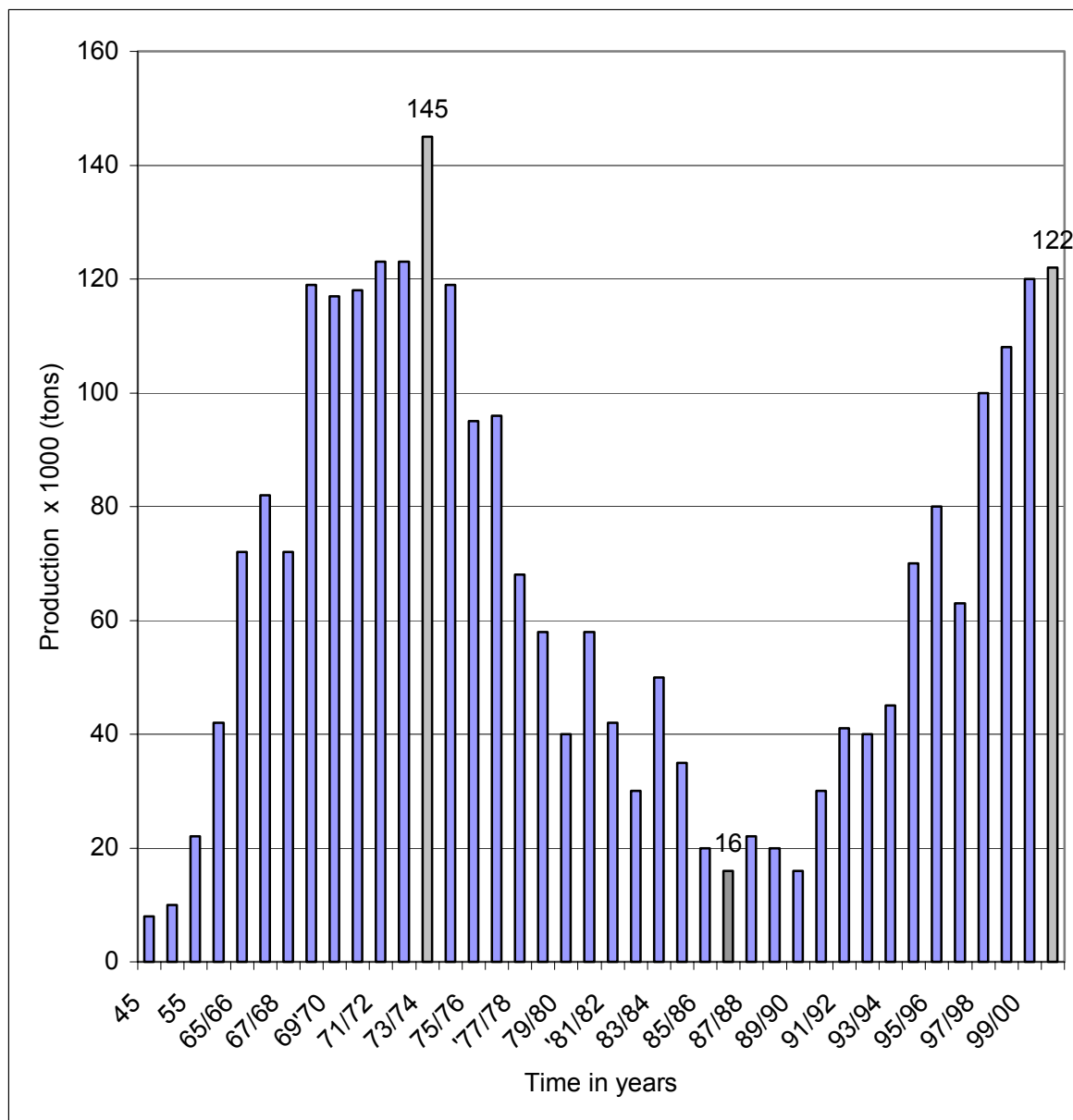
Identification of projects/activities with respective responsible stakeholders

Projects/Activities	Responsible stakeholders
Production	
Develop appropriate research technologies: <ul style="list-style-type: none"> • Pest and disease control • Germplasm improvement • Planting materials multiplication • Disseminate improved planting materials to farmers 	NARI, MAFS, CIDEF, Fs, DCs, MRALG
Improve knowledge/Technology/Information Transfer: <ul style="list-style-type: none"> • Develop a Website • Establish an information network • Produce training/information materials • Dialogue between stakeholders • Regional standards for nuts and kernels 	NARI, MAFS, MRALG, CBT, MCM, CIDEF, DCs
Improve Farmer Knowledge <ul style="list-style-type: none"> • Special farmer training • Train and employ more Extension staff 	NARI, MAFS, CBT, Fs CIDEF, DCs
Training/Strengthening of Farmer Groups/Societies (SACCOS): <ul style="list-style-type: none"> • Training on cooperatives 	MCM, DCs, CU, Fs,
Establishment of appropriate Input Distribution System: <ul style="list-style-type: none"> • Strengthen Input Trust Funds • Provision of Inputs on Credits • Effective use of inputs 	NARI, MAFS, CBT, PID, MCM, CIDEF, DCs, Fs, CU, RS
Establishment of levy and Tax Committee: <ul style="list-style-type: none"> • Rationalize all taxes and levies on Agric. sector • Reform/remove sulphur import levy 	PRI, MAFS, MCM, MF
Processing	
Develop policies to safeguard processing	MAFS, MCM, CBT, CIDEF, MIT
Promote and Develop Local Processing: <ul style="list-style-type: none"> • Small scale Processing • Medium scale Processing 	CBT, Fs, DCs, MCM, CIDEF, MAFS
Leasing or selling of present factories	CBT, MIT, PSRC,

Institute good environment to Processing Sector: <ul style="list-style-type: none"> Exemption of import duty to machinery and spares for processing 	MAFS, CBT, MF, WCM, CIDEF, PSRC, MIT
Develop symbiotic business partnership between small and large scale factories	CBT, FM, MCM
Promote Secondary Processing: <ul style="list-style-type: none"> Food (Dried fruit, jams, chutney, feeds) Beverages (Juice, wine, gin) CSNL (Paints, building materials, brake lining) 	NARI, MAFS, CBT
I. Marketing	
Strengthen Co-operatives	MCM, CU, DCs, Fs, MAFS
Strengthen District Councils	MRALG, DCs, Fs, MAFS, CIDEF, CBT
Seek alternative foreign markets: <ul style="list-style-type: none"> Marketing information, Export knowledge education 	CBT, MAFS, MCM
Export Quality improvement <ul style="list-style-type: none"> Regional Farmers and Processors' Association 	Fs, MAFS, MCM, PA, FAs

ANNEX IV

CASHEW NUT PRODUCTION TRENDS, 1945 TO 2002 ('000 TONS)



Source: Cashew Board of Tanzania (CBT).

ANNEX V

**CASHEW GENOTYPES AVAILABLE AT ARI NALIENDELE AND DISTRIBUTED
TO CERTAIN FARMING COMMUNITIES**

Cashew Genotype	Country of origin	Cashew genotype	Country of origin
AC1	Sri Lanka	AZA17	Zanzibar
AC4	Sri Lanka	AIN62	India
AC6	Sri Lanka	ATA19	Tanzania (Tanga)
AC10	Sri Lanka	AM6	Malaysia
AC22	Sri Lanka	AT58	Tanzania
AC28	Sri Lanka	BR lines	Brazil
AC43	Sri Lanka	Duckie	Cookie Island
AZA2	Zanzibar	Cookie	Cookie island
Polyclonal seeds *			

*Polyclonal seeds, which are a composite of 22 elite clones from ARI Naliendele, are currently the most available and promising source of seeds for new planting. They are available from six Cashew Development Centres (CDCs) scattered throughout cashew growing areas in the country.

Source: Agricultural Research Institute, Naliendele, Mtwara, Tanzania

ANNEX VI

CASHEW PROCESSING FACTORIES

No.	Factory	Capacity (MT)	Supplier of equipment	Completion date	Closing date
1	Masasi	10,000	Oltremere Italy	March 1981	June 1982
2	Newala I	10,000	Oltremere Italy	None	June 1982
3	Newala II	10,000	Cashco Japan	June 1981	April 1982
4	Likombe	10,000	Cashco Japan	June 1981	March 1985
5	MCC	8,000	Cashco Japan	1968	June 1982
6	Kibaha	10,000	Cashco Japan	October 1980	March 1985
7	Tanita I	12,000	Oltremere Italy	1965	August 1985
8	Tanita II	12,000	Oltremere Italy	1987	June 1982
9	Tunduru	10,000	Oltremere Italy	Not done	-
10	Lindi	10,000	Oltremere Italy	October 1978	June 1982
11	Mtama	5,000	Oltremere Italy	October 1979	June 1982
12	Nachingwea	5,000	Oltremere Italy	February 1981	June 1982

List of Small Scale Processors includes:

- ✓ Tupendane Cashew nut Processing Group – Lindi district
- ✓ Tandahimba Cashew nut Processing Group – Tandahimba district
- ✓ Tumaini cashew nut Processing Group – Masasi district
- ✓ Kitangari Cashew nut Processing Group – Newala district
- ✓ Tunduru Cashew nut Processing Group – Tunduru district
- ✓ Kididimo Cashew nut Processing Group – Mkuranga
- ✓ Chogogwe cashew nut Society – Tanga district
- ✓ Kigamboni Muafaka Group – Dar es Salaam
- ✓ Bagamoyo Cashew nut Processing unit – Bagamoyo district
- ✓ Somanga Cashew nut Processing Group – Kilwa district

Source: Cashew Nut Board of Tanzania (CBT).

ANNEX VII

EXPORTS OF CASHEW KERNELS, 1972 TO 1992

YEAR	TONS	TSHS'000'	AVERAGE PRICE (TSHS/TON)	AVERAGE PRICE, FOB (US\$/TON)
1972	2902	22,440	7,736	1,081
1973	3710	32,724	8,820	1,256
1974	4060	46,736	11,511	1,611
1975	3999	44,115	11,032	1,416
1976	5954	76,227	12,803	2,274
1977	3898	85,301	21,883	1,623
1978	3635	67,904	18,680	2,423
1979	3871	83,107	21,469	2,612
1980	5474	215,009	39,278	4,790
1981	3961	114,923	29,014	3,503
1982	4337	1239,576	28,576	3,004
1983	2301	33,559	33,559	2,865
1984	1694	65,396	65,369	4,217
1985	518	58,338	58,338	3,380
1986	0	-	-	-
1987	0	-	-	-
1988	1014	407,950	402,318	4,254
1989	1711	816,933	477,459	3,109
1990	1412	969,187	686,393	3,486
1991	956	976,453	1,021,394	4,477
1992	1027	1,043,954	1,016,506	3,512

Source: Cashew Board of Tanzania (CBT)

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