CASHEW INDUSTRY IN KERALA
PROBLEMS AND POTENTIALS

THESIS

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By

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Certified that the thesis **" CASHEW INDUSTRY IN KERALA PROBLEMS AND POTENTIALS"** is the record of bonafide research carried out by Shri. K.A.Retheesh, under my guidance. The thesis is worth submitting for the degree of Doctor of Philosophy in Social Sciences.

Kochi
28.04.2005

D. Rajasenan
(Supervising Guide)

Declaration

DECLARATION

I declare that the thesis entitled **"CASHEW INDUATRY IN KERALA PROBLEMS AND POTENTIALS"** is the record of bonafide research carried out by me under the supervision of Dr.D.Rajasenan, Professor (Applied Economics), School of Applied Economics, Cochin University of Science and Technology. I further declare that this has not previously formed the basis of the award of any degree, diploma, associateship, fellowship or other similar title of recognition.

Kochi
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K.A.RETHEESH.

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INTRODUCTION

India is the largest producer and processor of cashew in the world. The export value of cashew is about Rupees 2600 crore during 2004-05. Kerala is the main processing and exporting center of cashew. In Kerala most of the cashew processing factories are located in Kollam district. The industry provides livelihood for about 6-7 lakhs of employees and farmers, the cashew industry has national importance. In Kollam district alone there are more than 2.5 lakhs employees directly involved in the industry, which comes about 10 per cent of the population of the district, out of which 95 per cent are women workers. It is a fact that any amount received by a woman worker will be utilized directly for the benefit of the family and hence the link relating to family welfare is quite clear. Even though the Government of Kerala has incorporated the Kerala State Cashew Development Corporation (KSCDC) and Kerala State Cashew Workers Apex Industrial Co-operative Society (CAPEX) to develop the Cashew industry, the cashew industry and ancillary industries did not grow as per the expectation. In this context, an attempt has been made to analyze the problems and potential of the industry so as to make the industry viable and sustainable for the perpetual employment and

income generation as well as the overall development of the Kollam district.

History

Cashew, the scientific name, the Portuguese first brought Anacardium Occidentale to India in 15th century. This was planted as a windbreaker and to prevent soil erosion. Not much is known about how and when the cashew became a commercial item. The commercial processing of cashew nut was started in Mangalore by setting up a factory there in mid 1920s. Simultaneously it started in Kollam also by Roc Victoria, a Srilankan national, migrated to Kollam in mid 1920s and started processing cashew on a commercial scale. Swaminathan from Madras joined him as his manager–cum–accountant and later became a prominent cashew processor. It was W.T. Anderson from General Food Corporation USA who had set up an office in Kollam called 'India Nut Company' across the old airport of Kollam at Asramam and Started sending cashew kernels to USA. The company was a merchant exporter (Shahal Hassan, 2001). A flourishing cottage industry began to spring up in and around Kollam town. The cashew nut were fried in pan and kernels extracted, blanched and graded into sizes and sold to the company and the

company in turn packed these things in wooden tea chests lined with news papers and shipped to USA.

Metal tins had replaced tea chests in the late 1920's. The tin containers were later vaccumized-using hand operated vaccum pumps and sealed. The tins were then packed in wooden cases and strapped before shipment. The introduction of vita pack machines, vaccumizing first and then infusing with carbon dioxide was introduced in the late 1950s. Export of cashew kernels began to grow and many tiny processors supplying cashew kernels to "India Nut Company" began to branch out and became exporters on their own new pattern of business and further began to evolve consisting of exporter, broker/agent, importer/buyer and end user.

The export of cashew kernels increased from 45 tonnes in 1923 to 1350 tonnes by 1939.There was a steady growth of the trade after the Second World War. It is to be noted that the export earnings from India during the year 1959 was mere Rs. 8.00 crores and during the year 1999 export increased to the peak level of Rs. 2500.00 crores, in 2003 it was reduced to Rs. 2006.40 crore and in this financial year 2004 – 2005 it is Rs. 2600 crores.

CASHEW INDUSTRY IN INDIA

Kerala is the main cashew processing State in India with almost hundred per cent concentrations in Kollam District. As the industry began to grow, the number of processing units increased and the importers began to take speculative position on the commodity. The pioneering efforts taken by some industrialists in Kollam had helped to bring up the Indian cashew industry into global monopoly. In the 1960s the Government of Kerala had brought the Land Reforms Act; Cashew was taken away from the plantation status while Rubber, Tea, Coffee and Cardamom were given the plantation status. Before the act came into force, existing cashew plantations were converted into rubber plantations. Since Kerala had a monopoly of the cashew crop, the Land Reforms Act and similar acts in other states simultaneously affected the indigenous production of cashew nuts.

The scarcity of raw nuts and unfavorable fluctuation in the market, created cut throat competition among the processors in achieving more export.

According to the Directorate of cashew and coçoa we need about 10 lakh MT of raw nuts for processing and the production is only 4 lakh MT giving rise to a deficit of 6 lakh tonnes, which is met

through imports. Now Brazil, Vietnam etc has started processing in a big way leading to lot of problems for exporters in the market with respect to raw cashew procurement from abroad as well as finding the export market.

Review of Literature

Sadasivan (1994), opines that the inferior quality of the planting material, absents of an efficient single agency to look after production, marketing, pricing, and processing of cashew, land ceiling laws etc are some of the factors which hinder the development of cashew in India. The cashew production can be increased through extending more land under cashew cultivation and increasing the productivity of the existing plants through better crop management.

Gopinathan (1994), while analyzing the economic processing of the cashew, cashew processors employs different criteria like the maximum recovery of exportable higher grades, least possible cost, degree of acceptability with regard to labour, regulatory bodies of importing countries on consumers and value addition by products etc to judge the efficiency of cashew nut processing system.

Nair (1995), explains the importance of quality management in marketing of kernels. In the growing environment of health

awareness, the developing countries have put forth regulations related to the kind of packaging materials and avoiding use of toxic carcinogenic chemicals in storage, preservation etc. Necessarily the exporters are to be equipped themselves to meet the mandatory quality requirements of the importing countries.

Rajmohan (1994), analyses the marketability of kernels and other products. Two decade ago, India enjoyed a virtual monopoly in cashew kernels in the international market supplying about 95 per cent of the world demand. The entry of Brazil, Kenya, Tanzania, Mozambique and Vietnam in the international market, has posed serious threat to Indian market. To retain our monopoly we have to seek generic promotion of Indian cashew. While analyzing this, he has also shown the immense scope for producing fermented and non-fermented products from cashew apple.

Abdul Salam (1995), describes the high yielding varieties of cashew after examining all the features of cashew like apple colour, nut weight, and kernel weight, shelling percentage, yield per tree, source of planting material, recommended regions for cultivation etc. The high yielding varieties usually available are Anakkayam-1, Madakkathara-1, Madakkathara-2, K-22-1, Kanaka, Dhana, H-3-17, Priyanka, Vrindhachalam, H-1597, etc.

In the report of 41st Annul general meeting of the cashew export council of India has requested Government of Kerala not to re-introduce the monopoly procurement of raw cashew nut in Kerala, as it would disrupt the smooth working of cashew processing units, generate wide spread difficulties to the farmers and traders, and adversely affect the export earnings of the nation (Cashew bulletin, 1996).

Kumar et. al., (1997), explain that application of 500:125:125:g NPK/plant/year seems to be optimum from economical point of view. Cashew requires regular fertilizer application for obtaining optimum vegetative growth and desirable floral characters which are directly or indirectly influencing the yield.

Prabhu (1997), opines that value added export and the diversification of market are the two areas, where the cashew exporters need to give attention. Now most of the exports are in bulk packs and very small proportion is sold in consumer packs. Hence he argues for new packaging technology for export in the form of consumer packs.

Sharma (1998), explains the importance of Hazard Analysis Critical Control Point (HACCP) system in cashew industry and goes to the extend of saying that it is a valuable contribution to total quality

management for greater acceptance of our product in the foreign market.

Gray (1998), scientifically proves that cashew nut is deliciously healthy. He compares a variety of nuts to fatty foods of animal origin. Although both are relatively fatty, particularly the nut, the type of fat in each group is very different.

Shahal Hassan (1998), in his speech argues that the industry requires more than 8 lakh MT cashew for processing but we are producing maximum of 4 lakh MT maximum. In this situation it is a must to promote cashew plantations. The cashew export promotion council requested the government to give plantation status to cashew with a view to increase the internal cashew production.

Malayala Manorama Daily (1998), as an editorial comment explains the necessity for the formation of a Cashew Board in the form of Rubber Board. This is essential because cashew is a crop, which helps to earn maximum foreign exchange with minimum expenses. We are producing only less than half of our capacity to process and export. In this context large-scale plantation of cashew is needed to produce more. But due to land ceiling act, only limited area is possible for cultivation. So a Cashew Board under central government is needed to solve all these issues.

Abdul Salam (1998), opines that agronomically cashew can be called as *CROP PLOUGH* because the high penetrating ability of its root system to break the hard pans that occur in the sub soil. This ability makes the plant unique to inflict a ploughing effect to the soil by way of loosening the hard soil. The rooting path allows percolation of rainwater to the deeper layers and encourages microbial activity in the rhizoplanes.

Mathias Knappe (1999), shows that economic growth has considerable impact on poverty alleviation. Export lead growth has been accepted as the logical path for economic development by most of the developing countries. The bulk of the rural population is trapped in subsistence agriculture. Organised production for export, including small scale non farming activities, at the rural level can contribute much more to increase employment and income. The International Trade Centre has introduced the scheme of Export Production Villages aiming at facilitating direct business cooperation between the exporter and EPV cooperatives.

Korbech Ruby and Olesen (1999), explain the trade promotion programmes of the International Trade Centre for the expansion of exports of the developing countries. This covers the following six core services- product and market development, development of trade

services, trade information, human resource development, management of international purchasing and supplies and assessment and needs and programme design. According to him, product and market development is the most important among them.

Rajanbabu (1999), criticises the policy of the government relating to cashew industry. In his opinion, the increase in minimum wages is neither helping the employees nor the industry but it helps to improve the 'KUDIVARAPPU', the unauthorized processing of cashew in small sheds with low wages and without giving statutory benefits to the employees. The same employees in organized sector are working in unorganized sector for getting employment where the wages are very low in addition to the leakage of the tax revenue. Hence it is high time to frame appropriate laws, which are industry friendly then only the industry, its workers and the government will be benefited.

Jacob (1999), describes the importance of organic farming of cashew. Farmer's conscious about ecology and environment have developed agricultural methods and process, which are ecologically sound and sustainable. Organic farming system is based on dynamic interaction between the soil, plants, animals, humans, ecosystem and

environment. The system is directed towards enhancing natural life cycles and relies on locally available natural resources.

Majeed (2000), explains the history of cashew workers in Kerala by highlighting the gradual development of cashew workers from an unorganized sector to an organized sector. The top trade union leaders in Kerala came to the limelight by organizing the cashew workers. Now more than 2 lakh employees are directly involved in cashew industry.

Viswanathan (2000), opines that even though Kerala is in number one position in cashew production, we are not fully utilizing the potential of the industry by utilizing the by- products properly. We have to choose Goa as our role model. They are manufacturing different products from cashew, such as apple juice, chutney, liquor, etc.

Bharathan (2000), reports that the Kernel price in the international market is not increasing in proportion to the increasing expenses in cashew processing including wages. The only remedy is to increase the internal production of raw cashew as import of raw nut for processing will change the cost effectiveness of the industry. However, there is a change in the attitude of the Government by taking steps to improve raw nut production and thereby reducing the

problem of the availability of raw nuts. The year 1999-2000 recorded the highest export earnings (Rs 2500.00 crores).

Mathur Ravi (2000), observes that the effective management of business is facilitated by electronic commerce, technology and global standards including packaging. Technologies, such as bar coding and Electronic Data Interchange (EDI) supports the automation of information system and communication process between trading partners.

Balasubramanian (2001), describes the cashew production scenario by explaining the production trend of cashew. In 1976-77 the production was 4,30,000 MT under an area of 3,76,000 ha with a productivity of 200 Kg per ha which has gone up to 5,20,000 MT under 7,00,000 ha and productivity of 900 Kg per ha in 1999-2000.

Isharani Chethan (2001), expresses his views regarding the impact of E-commerce system in cashew trading. Since cashew trading is an international business, use of internet will reduce the communication cost. Another point is that this will help for a better management of information because of the huge amount of information's available on the net, traders can make a more informed decision. Online trading is also possible.

Kuruvila Mohan et.al., (2001), argue that the changing role of packaging has been triggered by the increase in competition in the global market. Packaging today has become the most potential marketing tool, rightly called the fifth 'P' of the marketing Mix after Product, Price, Promotion and Place. Thus, they explain the importance of packaging to differentiate your product in the global market.

Anthony (2001), describes about the market of cashew nut shell liquid. He explains the vastness of the cashew nut shell liquid market by asking where it is used? Why it is used? What is the future for end use of cashew nut shell liquid? and what is important to major cashew nut shell liquid buyers?

Shahal Hassan (2001), systematically depicts the evolution of Indian cashew industry right from the form of a cottage industry in 1920 to the present form of a large scale processing and exporting industry contributing Rs 2500.00 crores of foreign exchange earning.

Manuel (2001), assesses that nut are among the most fascinating food item available to mankind *inter alia* its nutritional value. The health promoting substances in nuts guard one from cancer, heart disease, blood pressure and number of degenerative ailments linked to ageing. He explains about how cashew nut is good

for the health of heart, blood pressure, cold and flu, how nut reduces weight, protection from cancer, how it upkeeps kidney, etc.

Balasubramanian (2001), by conducting a detailed study of more than 1063 factories functioning in different states of India explains about the various aspects of processing, manpower involved etc. He identifies certain problems like procuring quality raw nut, increasing the shelf life of raw cashew nuts, increasing white kernel recovery, scorching of kernels in Borma drier, maximizing whole kernel recovery in peeling process etc.

Mamatha et. al., (2002), reveal the trend in area, production, productivity and export of cashew in India. The study reveals that the growth rate in area, production and productivity are positive and shows increasing trend in the states of Karnataka, Tamilnadu, West Bengal and Andhra pradesh where as in states like Goa, Kerala, Orissa production had decelerated. The export of Cashew kernels and import of raw nut was also increased over the years.

Negi (2002), describes the recent growing recognition of the importance of cashew kernels in global consumerism. India has been the premier supplier of cashew kernels since the commercial sector began in the early quarter of the 20th century. Ever since the processing has taken place, this small-scale sector has been utilizing

the raw nut available indigenously and from some parts of the African countries. Not much scientific orientation towards the development of quality forms, post harvest management, upgradation of processing system and qualitation parameter that has taken place in the sector. The national horticultural board formed with the mandate for upgrading these aspects and the Indian horticulture sector has several programmes oriented in this direction. Technology development and transfer, development of commercial horticulture through production and post harvest management, development of storage facilities are some of the programmes with adequate financial support available from NHB.

Balasubramanyam and Singh (2002), indicate that even though economic exploitation started in mid sixties of the twentieth century when the department of the forest and private farmers took up its large scale cultivation, but the government support for scientific streamlining of plantation effectively started only from the beginning of 90s. The total area under cashew in India is around 7.2 lakh hectors giving a production of 4.5-lakh metric ton. The 5.2 lakhs hectares came up in the pre 90 periods being inferior genetic stock and hence not providing a substantial productivity. Nearly 50 percent of these areas are rendered senile due to over age. The

present average productivity is anything between 700 to 900 kg/hectare having a productivity range of 10 to 15 /tree or 2-3 MT/ha. The Indian industrial set up has more than 1000 processing units demanding 1 million MT and increase in production can be made by replanting the senile areas with such clones and adoption of scientific production technologies in combination alone can help, for new area are of near exhaustion.

Giridharaprabhu (2002), depicts that the country faces challenges from other producing and exporting country where the raw nuts are all processed in modern automated hygienic factories reducing the labour force. We still depend on manual conversion of raw nuts into cashew kernels after securing ISO 9000 and introduction of Hazard Analysis and Critical Control Points (HACCP) in processing, importing countries are indicating additional quality parameters and test besides established standards of quality commensurate to their respective food laws and regulation and hence it has to adopt HACCP in near future if not immediately.

Sivaraman (2002), explains the importance of organic farming and the holistic approach for maintaining overall health of individuals including farmers, soil microbe animal system and broadly the nature. Of late, there is a growing shift towards organic food items as

a result of greater awareness of health and healthy environment. This has lead to the growth of organic farming around 15 per cent. Given this scenario, India, which enjoys a premier position in the world cashew trade, has the potential to take up organic farming in cashew to boost our exports.

Dordi and Narayanan (2002), explain the changes happened in the packaging system. Traditionally cashew kernels were packed in 18 ltr capacity tinplate containers, which were vacuumised and flushed with carbon-di-oxide gas and recently specific problems have surfaced with respect to health, hygiene, and statutory requirements in importing countries. It was in this context that an in-depth study of the existing package system and material was undertaken in order to bring in possible improvements.

Vaidehi (2002), explains the wastage of *cashew apple* except in the state of Goa. Considering the cultural and economic scenario in India, the application of proper technology to use cashew apple on commercial basis will regenerate considerable employment for the needy rural masses besides to enhance economic benefit to cashew farmers

Nair (2002), discusses the quality requirements of the product. Criteria involved in grading cashew kernels are style, colour,

appearance and size. Permutation and combination of these parameters given rise to more than thirty commercial grades of cashew kernels. Other parameters considered in commercial practices are freedom from defects such as extraneous matter, insect infestation, mould, rancidity and moisture. Tolerance allowed for these defects along with the packaging and labeling requirements are detailed. The various physical, chemical and biological hazards associated with the processing are discussed and practical means of avoiding these hazards to ensure the safety of the product are suggested.

Sasi Varma (2002), describes the importance of nutritional values of cashew nuts. The recent dietary guidelines all over the world recommended a reduction in the intake of meat and meat products and liberal increase in consumption of fruits and nuts. Like meat and eggs, nuts are abundant in proteins, the body building material essential for growth and maintenance of tissues. Nuts are also concentrated source of energy, since they contain liberal amount of fat. As all other tree nuts, cashews are excellent dietary supplements in the human diet. Protein is present in abundance and that too of a good quality. Cashew nut provides a rich blend of minerals and many water soluble vitamins. The fat content in cashew

nut makes it an energy rich food and fatty acid profile is ideal for human consumption.

Sharma (2002), explains about the credit support given by National Bank for Agriculture and Rural Development (NABARD). In his view cashew has gained significant economic and social importance in India. Cashew is a crop with unlimited potential and rightly termed as "GOLDMINE OF WASTE LAND". He has identified one of the important constraints in expanding credit support to this area is the lack of co-ordination amongst state government, corporate sectors and agencies like research centers, cashew development board and banks. In conclusion he opines that what ever be the constraints it is necessary to initiate action towards promotion of this sector keeping in view of economic importance and the huge employment potential.

Excerpts form the theme paper, 'the business of marketing', (2002), starts with the famous quotation of *Peter Drucker* "The sole purpose of business is the creation of a customer at a profit". It discusses the various aspects of marketing in an international aspect, which is most suitable for cashew industry.

Abdul Salam and Jayalekshmy (2002), describe the infrastructure requirement of a cashew apple processing unit and the

technology for the production of cashew apple syrup to seek generic promotion of Indian cashew and to introduce value added cashew products.

Raman Divya et.al., (2002), analyse the processing qualities of cashew nut in relation to flowering phase of varieties. Corresponding to the phase of flowering in cashew, the phase of harvest can be divided into three early, mid and late. The mid crop recorded the highest nut and kernel weight. While shelling percentage obtained was the highest in the nuts of early harvest. The late season crop recorded the highest white wholes recovery and the minimum kernel prices. The nuts of early and mid harvest were superior in terms of nutritive value of the kernels.

Balasubramanian (2002), suggests a method for quality indexing for cashew nut processing. Cashew is the only commodity having 26 different grades varying in prices. The major criteria used in grading are colour and wholesomeness. Normally the whole kernel outturn at packaging is considered to be the quality indicator to assess the processing efficiency. There is no yardstick to measure qualitative efficiency or absolute indicator to arrive at results. The quality index he suggested is calculated by summing up values

obtained by multiplying different grade proportion and corresponding standard price

Usha and Prakasam (2002), in their study about the sensation potential of cashew nut shell liquid (CNSL) have not identified any case of allergic dermatitis among the cashew workers of Kollam.

Balachandran (2003), opines that the attitude of the trade unions is the reason for the failure of the CAPEX in giving continuous employment to its workers.

Cashew Bulletin (2003), highlights the requirements for exports, such as protection from breakage, moisture, pilferage's etc. It also explains about the complaints lodged against the Indian exporters by overseas buyers.

Sampal Pankaj (2004), explains the world cashew market scenario issues. Cashew Industry has gone through various changes, ups and downs. Brazil and Vietnam are competitors to India in the world market. To compete in the international market, internal production of raw nut should be increased.

In the price analysis of cashew kernel the FOB price of Indian cashew kernel has been rising from February 2004 after languishing for 3 years in the narrow trade range. In April 1999 the cashew

kernels were traded at record high levels of USD 3.20/lb and from Dec 1999 onwards price began to fall and the downward trend continued till April 2001. However the price rise has been drastic and is continuing (commodity India.com 2004).

Lindberg Anna (2004), explains how forces beyond the economic sphere affect the lives of poor workers, and especially how a shift in hegemonic gender discourse and ideology has been decisive in the ongoing struggle against capitalism affects the socio-economic conditions of cashew workers.

Cashew bulletin (2005), explains the need for change in the traditional approaches to compete in the today's business reality.

Nazneen Kanji (2004), gives a comparative relation between cashew processing Industries in Mozambique and India in relation to policy and interventions, which may be necessary to encourage the business.

Literature review shows that there are multi farious problems in the cashew industry. The most important is inadequate supply of raw nut required for the industry for providing employment to the workers for about 250 days. This has adversely affected the socio-economics of the workers in general and women workers in

particular. Moreover, the various welfare policies and other measures taken by the Government have not helped the cashew workers for ameliorating their pathetic condition. Hence a socio-economic study by incorporating the workers, processors and trade unions have been attempted to iron out the exact problem haunting the workers and the industry in general.

OBJECTIVES

The main objectives of the study are to:

1. To understand the nature and changes in the cashew industry
2. To study the reasons for the sickness in cashew industry
3. Evaluate the socio-economic condition of the cashew workers.
4. To identify the reasons for migration of the industry to other states.
5. To identify the reason for the failure of Cashew Development Corporation and the Cashew Workers Apex Industrial Cooperative Society Ltd (CAPEX).

6. To study the possibilities of rehabilitation of the cashew industry in Kerala.

HYPOTHESES

Hypotheses evolved for the study are:

1. The Living standard of cashew workers depends upon total number of working days available in a year.

2. Workers attitude and government policies are not the reasons for the migration of the Industry to other states.

3. CAPEX and KSCDC have no major role to play in promoting the Industry.

4. Improvement in industrial potential is not dependent on the internal production of raw nut.

SCOPE

The use of Agri-processing industries, particularly for employment generation and foreign exchange earnings is of considerable importance. In this case, cashew plays a predominant role not only to enhance the above-mentioned factors but also to uplift the welfare and well being of the poor people of the society.

Moreover, the importance of the industry is much more relevant for the regional development of Kollam district, as 95 per cent of the cashew processing is concentrated in this district alone with Rs.2600 crores of foreign exchange by giving employment of about 6-7 lakh people both directly and indirectly.

METHODOLOGY

The study is exploratory in character and hence designed as an empirical one based on the survey method. A number of issues relating to the main aspects of the study are discussed in detail with the experts, researchers and other eminent persons connected in the field, in order to get an insight into the subject prior to the collection of data. The information obtained through these has been useful in formulating a framework for the study.

Source of Data

The data for the study are collected from both primary and secondary sources. The primary data have been collected by adopting an interview method from 486 employees of the selected units with the help of a structured interview schedule.

Questionnaire

A questionnaire was designed to cover all objectives given above. Samples of 32 workers are selected from 4 factories and a pretest and protocol analysis was conducted. All aspects are tested, including the question content, wording, sequence, form and layout. Protocol analysis was done with group of 14 workers from 2 factories. The final form of questionnaire is given in appendix.

Population

Population consist of all cashew nut workers in Kerala for objective 2, and all Cashew nut workers, trade union leaders and factory owners for objectives 3 and 4.

The cashew industry mainly concentrates in Kollam district. Out of 683 factories in Kerala 552 are in Kollam and of the 256996 workers 225146 are working in these factories. Cashew nut workers in Kerala have similar problems irrespective of their geographical location and thus this study mainly concentrates in Kollam district.

Sampling Procedure and Sample Size

This study mainly concentrates in Kollam district as 95 per cent of cashew nut produced in Kerala are processed here.

Multi Stage random sampling procedure is adopted in this study

Sample Design

A three stage simple random sampling method has been used for selecting the units and respondents.

Stage 1: The factories in Kollam are classified into 3 groups of which about 10 Per cent of each group are randomly selected for further analysis.

Stage 2. From the selected factories 20 shelling, 18 peeling and 8 grading units are randomly selected.

Stage 3. There were about 9680 workers in the selected units. Five percent of these workers are randomly selected using computer generated random numbers.

Stratified proportional random sampling method is adopted in selecting company owners. There are about 552 (518 Pvt. & 34 Govt.) factories in Kollam district. Managing Directors of CAPEX and that of KSCDC are included in sample representing government factories. Private factories are classified into 3 **Strata** based on their size.

Multistage proportional sampling method is adopted to select trade union leaders. Main trade unions are CITU, INTUC, AITUC and UTUC.

Socio- economic condition of cashew workers, an empirical analysis:

Kerala is well known for its progressive policy, high social indicators, and comparatively high women's status. Processes of modernization, however, have had an ambiguous impact on women in Kerala. Female cashew workers, who number something between 200,000 and 400,000, form the majority of the factory workers in the state. Most of them have been organized into trade unions since the 1940's or 50's. They are literate and throughout their history they have been very militant. Today, males make up no more than 5 per cent of the total work force in cashew factories, and it is they who do all the roasting. Of the 95 per cent of cashew factory employees who are women, 40 per cent are involved in shelling, and 55 per cent in peeling and grading. Males mainly carry out a few incidental jobs, such as drying cashews, carrying sacks, packing tins, and loading trucks.

Reliability

Reliability comes to the forefront when variables developed from summated scales are used as predictor components in objective models. Since summated scales are an assembly of interrelated items designed to measure underlying constructs, it is very important to know whether the same set of items would elicit the same responses if the same questions are recast and re-administered to the same respondents. Variables derived from test instruments are declared to be reliable only when they provide stable and reliable responses over a repeated administration of the test.

Stress Degree of correspondence between the distances among points implied by MDS map and the matrix input by the user is measured (inversely) by a *stress* function. The stress below 0.05 is considered as very good

R^2 This Value measure the percentage of variation explained the multidimensional model. A value above 0.95 is considered to be very good.

Socio Economic Profile of Cashew Workers

CHAPTER-2

SOCIO ECONOMIC PROFILE OF CASHEW WORKERS

Introduction

Kerala is a small state with very high achievements in social development. The state is also having a good position in social infrastructure, transport and communication. Kerala's physical quality of life is not only better than the rest of the India, but also closer to that in the west. It has the highest life expectancy (70 years), the lowest infant mortality rate (17 per 1000), birth rate is 18 per 1000 and per capita GNP is Rs 4,200. Its per capita income is one-seventieth of the United States. It is a state that shows no gender bias and has fifty-eight women more for every 1000 men.

The Society and Economy

Cashew workers are typical cross section of Kerala economy. India is a rich country with vast resources, abundant manpower, mineral wealth but people are poor. In spite of the fact that India won political freedom in 1947 it is yet to achieve economic freedom. The industry and society are closely related. The development of the industry helps the development of the society. The increase in the income will naturally uplift the society.

In cashew industry 90 per cent are women workers. Increase in the income of women workers will help to develop each household in the society. Naturally it reflects in the development of the society. As per the records, 1,48,000 cashew workers are registered with Kerala State Cashew Workers Welfare Fund Board. According to the high level committee constituted by Government of Kerala in 1997 to study and give directions to solve the problems faced by the cashew industry. In its report states that "social upliftment of cashew workers is possible only by increasing the income of these groups, at the same time efficiency and productivity also should be increased". An integrated development approach and research Programme is essential to make the industry a profitable one, leading to better income of employees and cashew farmers (Govt. of Kerala, 1998).

History of the Indian Cashew Workers

The Indian cashew workers are concentrated in Kollam district. The history of cashew workers starts in 1920's. In early stage it was purely an unorganized sector. In 1930's Kollam based factories began to process cashew in a big way. Then workers started coming from neighboring districts and there was a shift from agricultural labour to cashew factory work. The working hours were about 14 hours/day. The workers are treated in an inhuman way and child labour was

also there. In 1939 the workers started reacting against the attitude of the factory owners and they started a strike in the factory of Thangal Kunju Musaliar in 1939 and it was the first organized strike in the cashew industry. There was only one Employee's Organization at that time, the Quilon Factory Workers Union. But the employees were not satisfied and the union was not able to handle the problems faced by the workers. In 1940 the employers registered a trade union on behalf of the employees, Akhila Thiruvithamcore Kasuvandi Thozhilali Union. But the employees were able to take over the control of the union leadership and it started to work as an organized union. In 1942 political- cum- trade union leader Sri M.N. Govindan Nair took over the leadership of Akhila Thiruvithamcore Kasuvandi Thozhilali Union and started 'strike' in an organized manner. Due to the strike the wages in the industry is uniformed and it is fixed as shown in table no. 2.1

Table No. 2.1 Minimum wages in 1942 for cashew workers

Sl.no.	**Name of posts**	**Wages**
1.	Roaster (for roasting one bag cashew)	14 Chakram
2	"Borma"(per person per day)	32 Chakram
3.	Mesthari (supervisor)	32 Chakram

4.	Tinker	32 Chakram
5.	Shelling (per pound kernels)	2.5 Chakram
6.	Peeling	2 Chakram
7.	Grading (per person per day)	21Chakram

Source: Cashew Export Promotion Council of India, (2002)

* One Rupee is 28 Chakram

During this period, a lot of new factories started in places like Chathannoor, Parippally, Kallambalam, Kottarakkara, Kadampanad, Mylom, Enathu, Bharanikkavu etc. The cashew workers at this period were not included in the labour Laws and Factories Act and there were no maternity benefits for women workers. The Industrial Dispute Act or Workmen Compensation Act was not applicable to these workers. In 1945 cashew industry brought under Factories Act. Mean time the workers started thinking about Bonus. They went for a strike for getting bonus and hence it was accepted in Principle. In 1948 state congress got power but the government did not supported the cashew workers.

In 1949 another trade union under the leadership of T.K.Divakaran, N.Sreekantan Nair in the name of Quilon Cashew Nut Factory Workers Union started working. In 1950 January 2nd,

Government has banned the Akhila Thiruvithamcore Kasuvandi Thozhilali Union and the factory owners closed down the factories indefinitely. In 1951 the ministry headed by Sri C. Kesavan took the following decisions.

1. A committee will be constituted to fix the minimum wages
2. Law relating to maternity wages enhancement will be mended in assembly
3. One leave salary for 20 attendances will be given
4. The bonus dispute for the period 1950-51 will send for adjudication.
5. 4 per cent bonus advance will be given.

In 1957 the communist party came into power. During this period the trade unions AITUC, UTUC, INTUC, started strike for bonus and succeeded in getting a bonus of 5.25 per cent. By various struggles by Cashew workers in 1962 September helped cashew workers also included in Employees Provident Fund Act and in Employee's State Insurance benefits. In 1964 the communist party divided into two and accordingly the cashew workers center came into existence. In 1967 the factory owners started processing cashew in some unorganized manner to evade from the labour laws known as

Kudivarappu. In 1969 government has banned the Kudivarappu and in 1969 November, the new government headed by C. Achuthamenon initiated the entry of government in cashew business by forming Kerala State Cashew Development Corporation. During this period the public sector began to grow. In 1975 the Government took decision on minimum wages by increasing the minimum wages to double of the existing wage rate. This was as follows: -

Table 2.2 Minimum wages in 1975

Sl.no.	**Name of posts**	**Wages**
1	Shelling (per kg kernels)	Rs 0.76
2.	Peeling	Rs 0.94
3.	Shelling (pieces)	Rs 0.64
4.	Kattal	Rs1.26

Source Statistical Report of CEPC, (2002)

Table 2.3 Minimum Time Rate

A Daily wages

Sl.no.	**Name of Posts**	**Wages**
1.	Grader	Rs 4.75
2.	Tin filler	Rs 4.75
3.	Mycadu	Rs. 4.75

4.	Kettu thiriyal	Rs. 4.75
5.	Mycadu (general)	Rs. 6.50
6.	Stensiling worker	Rs. 7.15
7.	Bag carrier	Rs. 7.15
8.	Fireman	Rs. 8.70
9.	Soaking and sybering worker	Rs. 6.50
10.	Oil expellers	Rs. 10.85
11.	Carpenter	Rs. 10.85
12.	Black smith	Rs 10.85
13.	Lap checker	Rs 4.75

B Monthly Wages

1.	Roaster	Rs. 185
2.	Oil bath roaster	Rs. 185
3.	Borma worker	Rs. 185
4.	Tinker	Rs. 185
5.	Packer	Rs. 185
6.	Scrubber	Rs. 185
7.	Kernel Checker	Rs. 140

Source : CEPC Reports, (2002)

This is based on the consumer price index of 800 in Kollam published by Bureau of economics and statistics Government of Kerala. Over and above this for all workers for every point of increase CPI above 800 there will be an increase of 2 paise per increase of one point of CPI. In the case of monthly wages there will be an increase of 52 paise for an increase of 5-point increase of CPI above 800. Without much resistance the employers accepted the norms and this was actually the advantage of the entry of the public sector in the field.

In 1976 the Government declared the monopoly procurement policy of cashew. The period from 1970-77 was the golden period of cashew workers. The annual conference of Kerala cashew central council at Kollam through a memorandum on 7th August 1977 requested the Government to take steps to improve cashew plantations. Soon, the situation turned unfavourable and the workers went for strike. To overcome the prevailing problem in the sector the Government formed the CAPEX in 1983. From 1985-1994 CAPEX acquired about 10 factories. At that time the existing bonus prevailing in the industry was 20 per cent but CAPEX gave only 8.33 per cent and workers accepted this. Subsequently, the Government had withdrawn the monopoly procurement policy. In 1986 the co–ordination of Kerala Kasuvanti Thozhilali Kendra Council (AITUC),

Kerala Cashew Centre (CITU), Kerala Cashew Nut Factory Workers Union etc., started agitation against the policy of the Government. The Government was not willing to accept the proposals of the trade unions.

Subsequent to the formation of the communist ministry in1987 March 26th the Government took over 36 cashew factories from the private owners and gave to KSCDC to run the factories. Government constituted a committee to study the minimum wages in 15-2-1990.In 1991 the new minimum wages policy come into existence. This was as follows:

Table 2.4 Minimum wages

Sl.No.	Name of posts	Wages
1.	Shelling (per kg kernels)	Rs 2.55
2.	Peeling	Rs 3.22

Source Statistical Report of CEPC, (2002)

Table No.2.5 Minimum Time Rate

A Daily wages

Sl.no	**Name of posts**	**Wages**
1.	Grader	Rs. 18.27
2.	Tin filler	Rs. 19.27

3.	Mycad	Rs. 19.27
4.	Kettu thiriyal	Rs 19.27
5.	Mycadu (general)	Rs 22.02
6.	Soaking and sybering worker	Rs 22.02

Source Statistical Report of CEPC, (2002)

In addition DA will be given along with wages as per the consumer price index of 2500 in Kollam published by Bureau of Economics and Statistics, Government of Kerala. Over and above this, for all workers for every point of increase CPI above 2500 there will be increase of 0.5 paise per increase of one point of CPI.

Even though in 1979 the Kerala assembly passed the bill 'Cashew Workers Welfare Fund', the president of India approved only it in 1984 but it took another four years for its implementation. It was known as "Kerala Cashew Workers Relief And Welfare Scheme". The constitution of the board consists of one executive in state along with some inspectors. The capital for this scheme comes from 3 sources:

1. Government
2. Employers and
3. Employees

The Benefits to Employees are:

1. Pension to cashew workers
2. Scholarship to the children of cashew workers from pre degree Level
3. Funds for the marriage of female children etc.

The economic reforms started by Central Government affected badly to the cashew sector also. In 1993 cashew workers again started strike. The Cashew Development Corporation closed its factories and as a result about 27000 workers and 2000 staff became unemployed. The Government was trying to give back the 36 factories acquired by Cashew Development Corporation to the old private owners; because of these difficulties KSCDC was not in a position to give bonus to the workers. This led to another strike demanding bonus. In November 1994, Government had agreed to give bonus of Rs.1005 and two-leave encashment. But again KSCDC went into problems and in 1995 KSCDC could be able to give 13 days working for its workers, which is the lowest in the history of the KSCDC's working.

Subsequently a trade union leader from the cashew sector P. Rajendran took charge as Chairman of KSCDC because of his sincere

efforts and initiative it was succeeded in giving maximum employment to workers. The number of working days during the five-year period (1996-2004) was as follows:

Table No. 2.6 Working Days in KSCDC from 1996-2004

Year	Working Days
1996-97	38
1997-98	85
1998-99	105
1999-00	140
2000-01	200
2001-02	44
2002-03	0
2003-04	18
2004-05	42

Source KSCDC, (2004)

Soon the Government constituted a high level committee with 17 members and P.Rajendran as Convenor to study the problems in cashew sector.

Representatives from various segments like MLA, factory owners, and trade union leaders were members of the committee. The interim report of the committee gave the following recommendations (Government of Kerala, 1997)

1. Since 50 per cent of the cashew trees are more than thirty years old, the replanting is recommended with high yielding variety plants within next two years in a stage. By this activity in the existing area of cashew plantation production can be increased to two lakhs MT with in 5 years.

2. With in next five years an additional 3 lakhs acres should be planted with cashew to produce 3 lakhs MT cashew nuts; out of which 1 lakhs acres should be in public owner ship and two lakhs in private property by attracting and helping individual farmers. The public plantation can be done in stages of 20,000 acres in each year for five years.

3. In the model of Rubber Board, replantation and plantation with sufficient subsidy and loan should be implemented. For this financial assistance sought from NABARD, NCDC Central Food Ministry (refinance Scheme) the state can also subsides the activity this should be a soft loan considering of the importance of the industry having high employment potential, being in food processing propagating cash crop cultivation and earning foreign exchange.

4. An integrated program should be formulated to plant one lakh acre land within five years using agencies like

agriculture & forest departments, public sector undertaking self governing institutions etc. The monitoring of this should be done by a committee formed from members from various departments like industries, revenue, agricultural, forest, finance science and technology etc. an executive committee should be formed by technical members from various departments.

5. A detailed study may be conducted to exempt cashew plantation from land ceiling Act. This is to attract private participation easily.

Processing Sector

It is high time to moderate the cashew processing methods, which has been existing for last six decades without pre-empting the skills of the employees. An expert committee should be formed to study the modernization of the processing industry with a view to attract more employees to the field. For example, cutting methods are to be developed so as to improve health, environment, cleanliness, etc in processing and modernizing the packaging operations to suit the customer requirements. For that the following recommendations are made.

1. Seek technical help from Central Food Industry Research Institute (CFTRI) Mysore and Defence Research Lab in improving the methods of cashew processing.

2. Seek technical help from agencies like NCDC; Central Food Processing Department etc. for developing value added cashew products.

3. Modernization of ovens using energy saving devices with assistance of energy management agency. Quality should be assured as per the requirement of the customers.

4. Infrastructure facilities should be improved for storing, packaging etc.

Marketing

The fluctuation in the currency is affecting cashew in international market. We have to find out solutions to protect cashew from fluctuations of currency. This is to ensure maximum price to the farmers and maximum wages to the employees and desirable profit to the industry. Value addition and proper promotion is necessary for that. A fair trade practice should also be formulated.

Internal market should be developed in par with the export market. Nearly 20 per cent of population in India can afford to

purchase cashew for their consumption. So sufficient campaign should be done to make them purchase cashew nuts.

To cope with fluctuation in the price suitable strategy should be formulated at the appropriate time after discussing the issue in various forums and meetings. To meet the contingencies "A Cashew Industry Protection Fund" should be formed. The purchase tax should be reduced from 7.7 per cent to 5 per cent. Half of that ie.2.5 percent should be contributed to the fund. For the effective utilization of the fund a committee should be formed with representatives from peoples, leaders, industry representatives, trade union leaders and financial experts etc.

Research and Development Center

With participation of Central and State Governments, representatives of the industries, a research and development center should immediately be set up for the modernization, development, diversification, marketing etc of cashew industry. In this emphasis should be given to development of high yielding varieties of planting materials, efficient storing of raw nuts, new technology in processing, introducing value added products with cashew etc.

Labour Protection

For the social upliftment of cashew workers proper laws should be formulated, service rules should be improved. The activities of labour welfare fund board should be improved to see that the employees are benefited by the labour laws; Retirement benefits should be disbursed in time.

The cashew special officer should be empowered to take action against the employers who denied labour benefits.

Cashew Directorate

The high level committee also recommended that Government should form a cashew directorate under Industries Department to study and advice Government on various problems of the cashew industry in time, to formulate plans for the development of the industry and to co-ordinate central and state governments activities relating to the industry.

Again with effect from 1-1-1999 a minimum wages notification had been issued. As per the notification, Government has fixed the wages as follows.

Table No.2.7 Minimum wages in 1999 for cashew workers

Sl.No.	Name of posts	Wages
1.	Shelling (per kg Kernels)	Rs. 8.11
2.	Peeling	Rs. 10.32

Source Statistical Report of CEPC, (2001)

Table No. 2.8 Minimum Time Rate

Daily wages

Sl.no.	Name of posts	Wages
1.	Grader	Rs. 58.75
2.	Tin filler	Rs. 59.75
3.	Mycadu	Rs. 59.75
4.	Kettu thiriyal	Rs. 59.75
5.	Mycadu (general)	Rs. 68.75
6.	Soaking and sizing worker	Rs. 68.75
7.	Stenciller	Rs. 68.75
8.	Head load workers	Rs. 73.75
9.	Carpenter	Rs. 78.75
10.	Black smith	Rs. 78.75
11.	Lap checker	Rs. 59.75

Source Statistical Report of CEPC (2001)

And DA will be given along with wages. This is based on the consumer price index of 7000 in Kollam published by Bureau of economics and statistics, (Government of Kerala, 1999). Over and above this, for all workers for every 5-point of increase CPI above 7000 there will be an increase of 3 paise in salary.

Another important announcement by the then minister for labour was that instead of minimum wages a fare wage system would be introduced. Lot of deliberations was taken place during the LDF government period but no final solution to solve the problems of cashew workers had arrived.

Again in 2001 May, the new government under the leadership of Sri A.K.Antony came into power and then onwards the cashew kernel prices came down as low as US$ 1.76 crores per pound of W 320 grade. This gave rise to multifarious problems to the industry including the KSCDC, which resulted in heavy loss to the industry as a whole. To overcome the problems of the KSCDC, Government took over the financial liability of Rs. 107.00 crores and as a result of these KSCDC was also extended all source of financial assistance by the Banks.

But the industry witnessed a reverse trend from May 2004 onwards showing an upward trend in kernel prices. This had gone

up to US$ 2.55 cent per pound for W320 grades. Because of all, the industry, both Government organizations of KSCDC and CAPEX and the various Private factories are in a turn around of positive growth trajectory. This positive trend in the sector had also helped CAPEX to give employment to the workers for 137 days; this had been the highest days of operation of the factories for the last 9 years. However, the KSCDC factories were not in a position to give employment to the workers as stipulated, where as it could give employment to the workers for 17 days in 2004.

Conclusion

From the above it is clear that cashew workers are an important cross section of the population of Kollam, about 10 per cent of the population are cashew workers out of which 90 per cent are women workers. In family level about 10 lakh people directly depends on this industry for their livelihood. Any plan for the development of the industry would also help to develop the employment potential, as it is basically labour intensive industry, which has got its own linkage for the economic and social development of the district. This also shows that the industry is slowly coming out of the low sluggish and sickness state to a state of improvement and growth path.

COMPARISON WITH OTHER TRADITIONAL INDUSTRIES

A comparison of cashew industry with other traditional resource based industries has been made so as to highlight the relative position of the cashew workers. This is done with respect to coir and handloom industry, the two prominent resources based industries in the district.

COIR

The coir worker

"A coir worker can be easily identified by her appearance: her clothes, body and hair as soaked with the stinking black juice of retted husk that splashes around during beating, her hands callous from wielding the kottuvadi (mallet) and from the hard fibre rubbing along the fingers and if she is a lifetime spinner, her feet curved outwards as a result of the endless walking towards the back on spinning" (Nieuwenhuys, 1990)

Coir yarn workers are drawn from among the most dis-empowered social groups, mostly of 'low' and 'out' castes and to a much lesser extent men of 'out' castes. Majority of them are women workers. Despite extensive trade unionization the wages in the industry are very low; lower than even in agriculture. Statutory

minimum wages are not paid even in the Co-operative segment of the industry.

COIR INDUSTRY IN KERALA

Coir Industry is one of the major traditional industries in Kerala, consisting of three major sub sectors, namely fibre extraction sector, spinning sector and weaving sector. The industry employs 3.6 lakhs workers and nearly 76 per cent of them are women. Coir industry in Kerala is dominated by co-operative sector. Even after a number of initiatives taken by Government for the betterment of the sector, the coir industry is still a sick traditional industry struggling for its survival in the field of competition with products made out of other natural as well as synthetic fibre both in domestic and international markets. Hence incentives for private investments, better utilization of coir pith, focus on coir geo-textiles and identification of markets are considered as the major thrust areas in the 10th Plan. Among the 23 varieties of coir yarn produced, Anjengo Yarn is the finest Yarn produced in Kerala

STRUCTURE OF COIR INDUSTRY

Table 2.9 Coir Yarn Commodity Chain: Production Nodes and Labour

Node	**Node-I Production of fibre**		**Node-II Production of Yarn**
Operation	Sub-operation I Retting	Sub-operation II Defibring	Spinning
Process of conversion	Raw husk > Retted husk	Retted husk > Coir fibre	Coir fibre> Coir yarn
Gender composition of workers	Both men and women, but mostly men	Only women	Only women
Caste composition of workers	'Out' castes and 'low' castes	'Low' castes	'Low' castes

Source: Fieldwork

Yarn producers, manufactures/producers, public sector companies, exporters, deposit holders, workers and co-operative societies are the major players in Kerala Industry.

HANDLOOM INDUSTRY IN KERALA

Traditional Handloom products of Kerala are extremely popular for its distinct blend of elegance, simplicity and excellence in design. This sector employs about 1.75 lakhs of people. Handloom Industry in the State is concentrated in Thiruvananthapuram, Kannur, Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod districts.

The Industry is dominated by the cooperative sector with 86 percent of the looms followed by the entrepreneurial sector. The Cooperative sector consists of factory type and cottage type societies. As on March 2003, there were 758 primary handloom weavers' cooperative societies consisting of 155-factory type and 603 cottage type societies. The corresponding figure by the end of March 2002 was135 and 620 respectively. The factory type societies increased in number where as the cottage type decreased.

PROMOTION OF HANDLOOM

Procurement and marketing of handloom fabrics in the State are being undertaken by two State level Organisations viz. Hantex and Hanveev. Hantex is the apex organization of handloom cooperatives. Main activities of Hantex include distribution of

required inputs to member societies, procurement and processing of goods produced by the member societies. The number of primary societies registered under Hantex remained steady at 450 during 2002-03 as in the previous year. The value of yarn purchased and distributed during 2002-03 decreased by 57 per cent and 55 per cent respectively compared to the previous year. The value of cloth produced decreased by Rs.5.98 crores registering a decline of 53 per cent over the previous year.

Kerala State Handloom Development Corporation (Hanveev), which started functioning in 1968, is another agency to accelerate the development of handloom industry in the State. The total income of the Corporation through sales of products decreased from Rs.16.88 crores in 2001-02 to Rs.9.90 crores in 2002-03. The Corporation incurred a net loss of 448.64 lakhs in 2002-03 compared to the loss of 207.17 lakhs during the previous year.

Power loom is a dominant player in the weaving sector and it contributes more than 60 per cent of total textile production. There were 3900 power looms in the State during 2002-03 of which 1481 were in the co-operative sector. Three more power loom co-operative societies were added during the year 2002-03 making the total number of societies 33. While the production of cloth by power loom

societies marked a slight increase of 14.41 lakh meters during the year 2002-03 from 98.15 meters during the previous year.

COMPARISON BETWEEN CASHEW AND OTHER TRADITIONAL INDUSTRIES IN KERALA

Cashew sector in relation to coir and handloom is a fully organized sector giving all kinds of statutory benefits to the workers, as it is a factory -based sector. But in the coir sector it is only partly organized as the most of the initial work process are carried out as family related work. The handloom sector is having a specific sectoral status; its work progress is concentrated in various pockets of the state. The export earnings from cashew is far ahead of the export earnings from coir and handloom products.

Table no. 2.10 Structures of the three resource based industries in Kerala

	Cashew	**Coir**	**Handloom**
No. of workers	2.5 lakhs	3.6 lakhs	1.75 lakhs
Export Earnings	Rs.20147.70 (million)	Rs.3527.058 (Million)	Rs 15(million)
Sector	Organized	Partly Organized	Regionally organized
Wage structure	Better, Minimum wages are fixed	Minimum wages are fixed but Poor in unorganized sector better in organized	Minimum wages are fixed Better in Organized sector

Statutory benefits	ESI, PF, Welfare Fund	Welfare Fund, ESI, PF for organized sector, no benefits for unorganized sector	Welfare fund, ESI, PF for organized sector, no benefits for unorganized sector

SOURCE: Economic review, Govt of Kerala

Table no. 2.10 shows that the position of the Cashew workers is better than that of other traditional industries in respect of export earnings, minimum wages and statutory benefits. The table no. 2.10 also shows that coir workers (3.6 lakhs) are most in comparison to cashew (2.5 lakhs) and handloom (1.75 lakhs) while comparing these three, it is so obvious that cashew is concentrated in Kollam alone and hence regional concentration is more in cashew than in any other sectors. But the striking nature of table no. 2.10 is that statutory benefits are given to cashew workers whether they belong to organized are unorganized. But this facility is extended to coir and handloom workers for the organized sector. This shows that majority of the workers working in a family basis are deprived of their statutory benefits.

The Commercial Processing of Cashew

CHAPTER 3

THE COMMERCIAL PROCESSING OF CASHEW

The commercial aspect of the industry consists of

1. Procurement of raw nut
2. Processing
3. Marketing

Procurement

Until 1970 each processor procured his raw nut supply from both imported and local. In 1970 Government of India established the cashew corporation of India as sole importer of raw nuts. Distribution to processors is based on the export performance in the year preceding CCI establishment. Until 1976, local nuts in all state were procured by processor's agents through a series of middlemen. Farmers either sold directly to traders or pre- harvest contractors. Raw nut prices were set by processors based on forward New York kernel prices and hence risen steeply from about Rs 2.5/kg in 1975 to Rs 6/kg in 1978. This type of marketing appears to work smoothly, and continues in all state except Kerala. The government of Kerala

became concerned by large outflow of nuts to neighbouring states where rates and processing cost are lower. To ensure Kerala nuts are processed in Kerala as well as to ensure that growers receive a fare price Government of Kerala introduced in 1976,state monopoly procurement of raw nuts. Since the nuts have been purchased by the Kerala State Co-operative Marketing Federation, which employed marketing co-operatives and primary co-operatives as buying agents.

Distribution to processors is based on the CCI model according to previous year factory performance. Initially the operation was reasonably successful. However, in 1978 GoK set too high a procurement price for raw nuts based on a temporary kernel price peak. The high price benefited the growers and encouraged the new planting but caused financial loss to GoK and problems in processing industry. Consequently in 1979 GoK used a lower procurement price with the result that a considerable portion of the crop by passed the state purchasing organization. In 1982 GoK withdrew the monopoly procurement policy. In 1987 GoK again implemented monopoly procurement policy that lasted up to 1991.The new GoK formed by UDF again withdrew the monopoly procurement policy. IN 1996 LDF government came into power but they couldn't implement monopoly procurement because of the difference of opinion within the

government. The cashew growers are against the monopoly procurement but the Kollam based trade unions argued for monopoly procurement. The experience shows that the monopoly procurement policy neither helped the growers nor the employees.

The cashew is mainly imported from Argentina, Australia, Bahrain, Burkina Faso, Gambia, Ghana, Guinea Guinee, Bissau, Indonesia, Iran, Iverycost, Kenya, Mozambique, Myanmar, Nigeria, Senegal, Singapore, Srilanka, Thailand, Tanzania, Togo, United Arab Emirates, and United Kingdom. We are importing at an average of about 2.5 lakhs metric tonne of cashew per year to India (see table 3.1). Now each processor is importing directly from the above countries or through agents. If we are able to produce the nut within the country we can save foreign exchange to the tune of 250 crores of US dollar.

Table 3.1 Imports of Raw Cashew Nuts Into India

Year	Qty (M.T)	Growth %(+/-)	Value (Rs.Crs)	Growth %(+/ -)	Value US$mln	Growth
1991-92	106080	28.00	266.66	99.00	109	45
1992-93	134985	27	376.33	41	142	30
1993-94	191322	41.74	482.70	28.27	154	8.454

1994-95	228109	19.23	690.94	43.14	220	42.86
1995-96	222819	-2.32	760.08	10.01	2227	3.18
1996-97	212866	-4.47	687.60	-9.54	194.09	-14.50
1997- 98	247181	16.12	769.60	11.93	207.08	6.69
1998-99	241161	-244	958.03	24.48	227.91	10.06
1999-00	253577	5.15	1186.20	23.82	272.17	19.42
2000-01	249318	-1.68	960.84	-19	210.36	-22.71
2001-02	355556	42.61	950.01	-1.11	198.33	-5.72
2002-03	400659	12.69	1236.57	30.16	256.59	29.40
2003-04	452398	12.91	1400.93	13.29	304.95	18.85

Source: statistical report of Cashew Export promotion Council, (2004)

PROCESSING

Processing of cashew refers to the conversion of cashew nuts in shell to its blanched kernel form. In factories nuts are roasted and cracked. Then kernels are separated from shells, peeled, dried and graded, finally packed into tins containing 25 pounds of kernels. Capital investment is small and all operations are manual Cashew nut processing covers all the stages from drying of raw cashew nuts

to the packing of processed kernels. We shall divide the entire process into 8 stages (see figure 3.1).

1. Drying of Raw cashew nuts

Drying seeks to reduce the moisture content to facilitate storage without rapid deterioration. Moisture loss at this stage ranges between three to ten percentages depending on the time of harvest. Storage in well-ventilated warehouses is also prerequisite for good yield.

2. Roasting/Steaming

Roasting or steaming is employed to facilitate the removal of the shell in the subsequent process

a) Roasting

Roasting could be done in two ways:

(i) Drum Roasting. This is one of the oldest and most widely used methods. The raw nuts are passed through a heated drum where it catches fire. The whole process takes about two minutes. About 8 to 10 bags of 80kg/bag can be roasted in one

hour. This is one of the cheapest available methods, though shell oil recovery is not possible.

(ii) Oil (plant) Roasting. In this method dried nuts conditioned with water are passed through a hot oil bath (cashew nut shell liquid) by conveyer buckets. Shell oil can be recovered at this point and also later by crushing the shell. However this method involves higher initial investment. Moreover, unless the raw nuts are of good quality and well dried the colour of the processed kernel would be poor. This method is generally not being used now.

b) Steaming

Steaming is an alternative to roasting. Well-dried raw nuts are steam cooked at about 120 to 140 lbs./square inch pressure. About six bags can be cooked in an hour. Shell oil can be extracted in the later stages by crushing.

3. Removal of the shell

a) Shelling

Roasted (drum or oil roasted) nuts are shelled by workers using wooden mallets

b) Cutting

Steamed nuts are cut by workers with blades mounted on wooden tables. At this point a comparison of roasting/shelling and steaming /cutting is warranted. The later scores as far as pollution control is concerned and is more productive when the nuts are of fairly large size and well dried. Shell oil recovery is also possible. However it involves higher initial investment, higher maintenance cost, extra drying of the raw nuts and is counter productive when these nuts are small in size. Hence the cheaper and more convenient drum roasting/shelling combination is most widely used.

4. Drying and cooling of shelled kernels

The shelled kernels are dried in "borma"(oven) at 80 to 90 degrees centigrade. The process takes about six to twelve hours depending on the kernels and type of borma used. The old methods such as 8 feet, 12 feet and the "thattu" Borma used direct applications of heat generated using cashew shell as fuel. The "blower borma" in which hot air is blown into the chamber where the kernels are kept and the electric borma are recent arrivals. Though the older methods cause greater scorching, they are still widely used because of the higher investments and maintenance cost associated with the

recent innovation. Bormas, which use combination of old and new methods can also be found in industry. Drying makes the kernel harder, the moisture level being 5 to 6 per cent. The kernels are later cooled using humidifiers.

Drying and cooling facilitates the removal of testa (skin) in the peeling process. Proper drying and cooling is necessary to maintain the white colour of the kernels and to reduce excessive breakage in the subsequent process.

5. Peeling

The testa is peeled off and initial grading as wholes and broken and by colour is done. The peeling worker has to be experienced and skilled if breakage is to be kept to a minimum.

6. Grading

The kernels undergo a final grading by hand and or sieve (mesh). The Cashew Export Promotion Council specifications are adopted for export grades. Standard specification for Indian cashew kernels for export has been laid down by the Government of India under the export (quality control and inspection) act 1963. The act

prescribes 33 different grades of cashew kernels. Only 26 grades are commercially available and exported. Broadly they are:

CASHEW GRADES

WHOLES	SCORCHED WHOLES	DESSERT
WHOLE	SW	SSW
W180	SW180	DW
W210	SW210	
W240	SW240	
W320	SW320	
W450	SW450	
W500	SW500	

BROKENS

WHITE PIECES	SCORCHED PIECES	DESSERT
PIECES		
B	SB	SPS
S	SS	DP
LWP	SP	
SWP	SSP	
BB		

7. Filling

The graded kernels are filled in 25-pound thin containers after vaccumizing and infusing CO_2 to prevent infestation.

8. Packing

Two 25-pound tins are packed in corrugated box and strapped. The whole process takes about six days from roasting/steaming to packaging and is highly labour intensive. Now modern packaging systems are adopting in the industry.

QUALITY CONTROL CONCEPTS IN CASHEW NUTS PROCEEESING INDUSTRY

The price and marketability of any commodity especially an export commodity like cashew kernel rests on fulcrum of quality certainly the changing the quality criteria have strong reflections on the entire industry Thus to be precise, to stay in any market not only the marketer but also the producer has to adopt the norms of time regarding quality. Here comes the relevance of Hazard Analysis Critical Control Point System (HACCP) the most modern armament of the total quality management. This approach being preventive rather than curative.

Cashew kernel being an income elastic product, quality plays a vital role in getting a higher price. A quality product system from good quality control regime backed up by appropriate quality assurance mechanism. In the case of cashew kernel the quality norms begin right from the selection of cultivators through farming, harvesting to the final processing stage. A processor having a captive plantation can apply all these norms. But for a processor, who procures raw nut from terminal markets or imports from other countries, the quality control begins at a different stage i.e. from procurement only.

HACCP

The Hazard Analysis Critical Control Point approach consists of seven steps comprising of

(a) Conducting a hazard analysis to identify the hazard, assessing their severity and the risk they pose.

(b) Identification of critical control points required preventing or controlling significant hazards

(c) Establishment of preventive and control measures

(d) Monitoring of each critical points

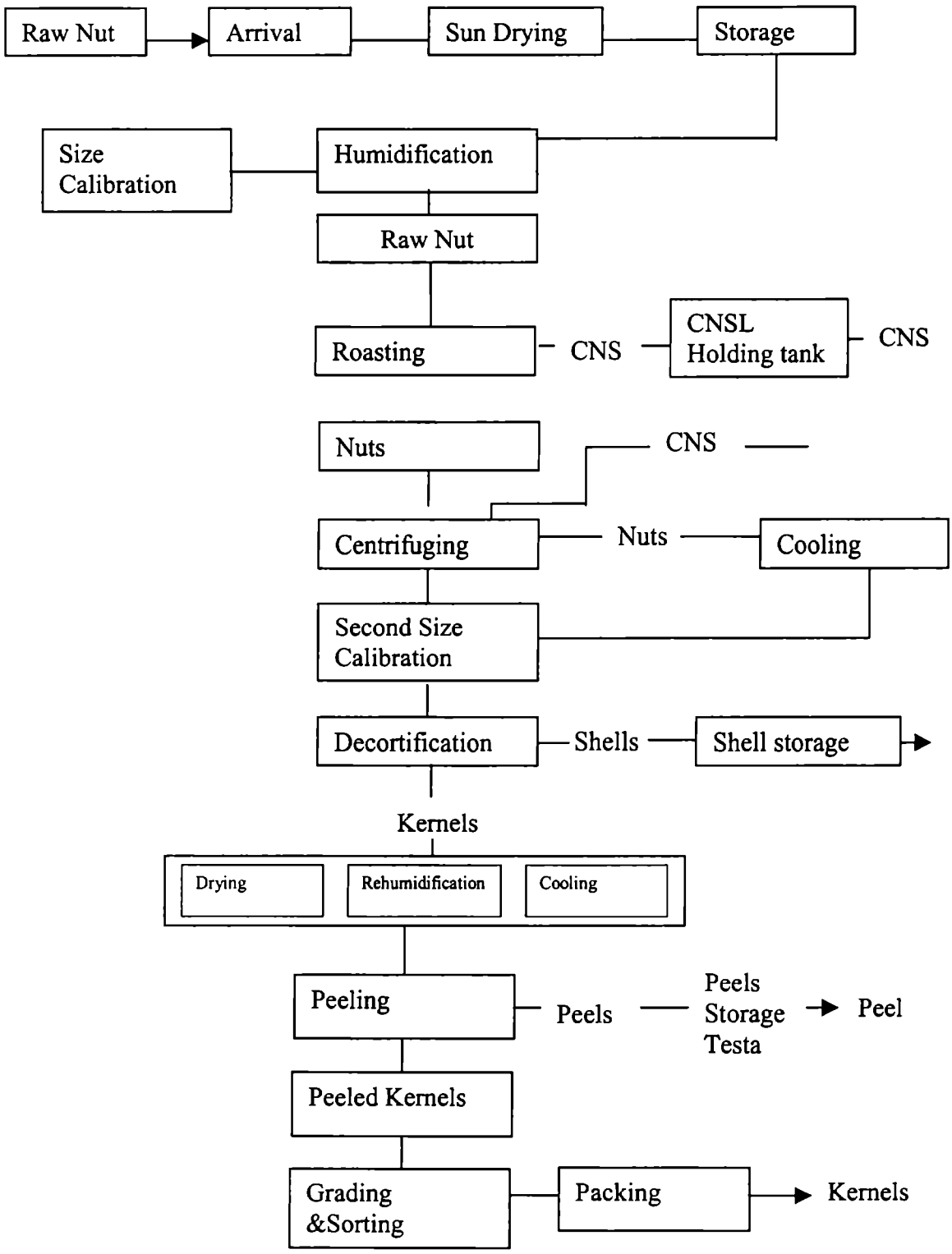
(e) Implementation of appropriate and immediate corrective action whenever criteria are not met

(f) Establishing a verification procedure to see that overall HACCP system is working

(g) The formulation of a proper record keeping system of the whole HACCP system

The profit in any trade is the difference between the selling price of the product – (raw material cost + processing cost). In the above chapter we have discussed the procurement methods and the processing of raw nuts. To survive the industry there should be adequate profit from the industry. So to get cheap raw material the internal production of raw nut should be increased considerably. Quality improvement right from the plantation level is needed to get a higher price. So certainly there is a positive relation between procurement price, production of raw nut and development of the industry. The cost of establishment and maintenance of Cashew Plantation is given in table 3.2. (Page No. 75)

Figure 3.1 cashew processing production flow



Pricing

Indian Raw nut Price projections

Since 85 per cent of Indian production is exported, world market price would determine local raw nut prices. Other factors are the kernel mix, farm gate to wholesaler expenses and value of by-product. The only by-product of importance is Cashew Nut Shell Liquid. There is a trade off for Cashew Nut Shell Liquid because when Cashew Nut Shell Liquid is recovered from the raw cashew nut it will affect the quality of the cashew kernel and also a reduction in the price of Kernel. At present, the breakeven price of CNSL is about US$ 500 per tonne. Prices of CNSL are above US$ 1,000 per tonne at present, after years of being between US$ 150 and US$ 300 per tonne. Since little information is available on CNSL market and prices, which might again decline below breakeven level, and since only some factories have CNSL extracting equipment, by-product recovery has not been assumed in raw nut price calculation.

There is considerable variation in processing costs between private and public sector and, because of different wage rates, among states. Similarly, there are variations in processing quality among factories and different states. Main differences are between Kerala

where both wage rates and quality of processing are high and in other states where wage rates and quality of processing are low. Since public sector processors have been steadily expanding their share of exports, their costs etc. have been considered for calculating raw nut price for Kerala. Quality advantages are more than offset by high processing costs, and raw nut prices in Kerala are, and will continue to be lower than in other states.

Global shortage lifts cashew kernel prices

There was a global shortage of raw cashew nuts during the year 1998 coupled with increased demand has pushed up the price of cashew kernels in the international market and it would have been much higher hadn't there been undercutting by exporters.

The unit value per Kg of cashew kernels stood at Rs 200.78 in August 1998 compared to Rs. 184.58 during the corresponding month previous year. However, the price would have gone up further had there not been an inter-exporter competition in the exporting countries as well as competition between the exporting countries. In the view of the executive and secretary, Cashew Export Promotion Council of India "There was an estimated short supply of 1.5 lakh tonnes of raw nuts during the season leading to a drop in the global

kernel availability to around 1.25 lakh tonnes compared to last year's 1.6 lakh tonnes. The raw nut supply was expected to drop from 10 lakh tonnes to around 8.5 lakh tonnes as the production in all the cashew- growing countries in the world was expected to witness a decline"

The production in India had declined to 3.6 lakh tonnes during the 1998 season from 4.3 lakh tonnes in the previous season. Production in Brazil was also down by 10 to 15 per cent to an estimated 1.5 lakh tonnes from 1.85 lakh tonnes. Besides, the production in Vietnam is expected to fall to below one lakh tonnes compared to 1.5 lakh tonnes. In Tanzania, 20,000 tonnes of raw nuts were damaged due to heavy rains.

Besides, Vietnam started importing raw nuts for processing and exports, while Mozambique and Kenya were improving their processing facilities. The shortage had pushed up the prices of raw nuts. The Indian cashew industry had imported 26,000 tonnes of raw nuts during August as against 7,500 tonnes last year. The price of this raw material had increased to Rs.37.68 per Kg compared to Rs. 32.55 per Kg in August 1997. This increase in the raw material had also reflected in the international price.

All Time Record in Cashew Exports

Cashew exports during 1999-2000 have reached an all time high recording phenomenal growth in terms of quantity and value both in rupee and dollar terms (see table 3.4)

As per estimates of Cashew Export Promotion Council of India, the total exports during 1999-2000 stood at 95,000 tonnes worth Rs 2,500 crores (US$ 570 millions). The unit value was Rs. 266 per Kg. During 1998-99, 75,026 tonnes worth Rs. 1,609.88 crores ($380.26 millions) were exported at the unit value of Rs. 214.58 per Kg.

Thus there had been an increase of 27 per cent in terms of quantity. In terms of value, the increase was 56 per cent in rupee and 51 per cent in dollar. The rise in unit value was 24 per cent.

No other agricultural commodity exported from the country has achieved such a phenomenal growth especially in terms of dollar.

A shortage in availability of cashew kernels in the international market and the consequent rise in prices had led to diversion of cashew from the domestic market to meet the export requirements. Apart from this, the Indian cashew had successfully penetrated into

the non-traditional markets in Eastern Europe, Far East and the Gulf.

Besides, its usage was promoted in manufacturing convenient food items in several countries. Today "It is used not only in snack foods but also in other food preparations"

Through strategic marketing, by popularizing its advantage over other tree nuts, Indian cashew could find inroads in all the world markets. The consumption in traditional markets could also be raised substantially through advanced marketing technologies. There had been of late a shift in consumer preference towards Indian cashew.

During the last fiscal year 1998-99 1,99,000 tonnes of raw nuts were imported at a total value of Rs. 930 crores ($215 millions) as against 1,80,686 tones worth Rs. 693.17 crores ($163.73 millions). The unit value in 1999-2000 was Rs. 47 per Kg compared to Rs. 38.36 per Kg the previous year.

The above scenario clearly depicts how the cashew industry influences our economy.

Table 3.2 Cost Of Establishment And Maintenance (Rs) Of Cashew Plantation

Year	1	2	3	4	5	6	7	8	9	10	Total
Land Clearing	800										800
Pit making	800										800
Grafts, Transportation	1760	176	0	0	0	0	0	0	0	0	1936
Plantingstakin gmulching	400	40									440
Weeding	560	560	560	560	560	560	560	560	560	560	5600
Manu ring	800	1200	1600	1600	1600	1600	1600	1600	1600	1600	14800
Plant protection	320	640	960	1280	1600	1600	1600	1600	1600	1600	12800
Yield kg/tree	0	0	0	1.5	3	5	7	10	12	12	50.5
Harvesting	0	0	0	360	720	1200	1680	2400	2880	2880	12120
Total cost	6240	2616	3120	3800	4480	4960	5440	6160	6640	6640	50096
Cost per tree	78	32.7	39	47.5	56	62	68	77	83	83	626.2
Gross income				5400	10800	18000	25200	36000	43200	43200	181800
Net income	6240	-2616	3120	1600	6320	13040	19760	29840	36560	36560	131704
Cost of pdn /Kg of nut	0	0	0	32	19	12	10	8	7	7	12
Gross income /tree	0	0	0	68	135	225	315	450	540	540	2273

Source Cashew Exports Promotion Council of India, (2004)

Table 3.3 Exports of Cashew nut Shell Liquids From India

1991-92	4542	-20.00	4.02	-28.00	1.64	-47.00
1992-93	4258	-6.00	3.81	-5.00	1.44	-12.00
1993-94	3625	-14.87	2.90	-23.88	1.00	-30.56
1994-95	3807	5.02	2.44	-15.86	1.00	0.00
1995-96	760	-80.04	1.45	-40.57	0.43	-57.00
1996-97	1735	128.29	2.77	91.03	0.78	81.84
1997-98	4446	156.25	7.17	158.84	1.93	146.74
1998-99	1912	-57.00	4.21	-41.28	1.00	-48.09
1999-00	1930	0.94	3.74	-11.16	0.86	-14.32
2000-01	2246	16.37	3.89	4.01	0.85	-0.76
2001-02	4178	86.02	5.93	52.44	1.24	45.34
2002-03	7215	72.69	9.26	56.16	1.92	55.24
2003-04	6926	-4.01	7.03	-24.08	1.53	-20.37

Source Cashew Exports Promotion Council of India, (2004)

Table 3.4 Exports Of Cashew Kernels From India

Year	Qty (M.T)	Growth %(+/-)	Value (Rs.CRS	Growth %(+/-)	Value US$mln	Growth %(+/-)
1991-92	47738	-4	669.09	51	273	11
1992-93	53436	12	745.49	11.00	282	3
1993-94	69884	30.78	1046.02	40.31	333	18.09
1994-95	77000	10.18	1246.28	19.14	397	19.22
1995-96	70334	-8.6	1240.50	-0.46	371	-6.55
1996-97	68663	-2.38	1285.50	3.63	363	-2.19
1997-98	76593	11.55	1396.10	8.60	376	3.52
1998-99	77076	0.63	1630.08	16.76	388	3.23
1999-00	96805	25.60	2569.50	57.63	590	52.04
2000-01	89155	-7.90	2049.60	-20.23	449	-23.89
2001-02	97550	9.42	1776.70	-13.31	371	-17.36
2002-03	104137	6.04	1933.02	8.07	401.11	7.44
2003-04	100828	-3.18	1804.43	-6.65	392.78	-2.08

Source Cashew Exports Promotion Council of India, (2004)

MARKETING

India is the largest producer, processor and exporter of cashew kernels in the world. Our cashew kernels are exported to more than 60 countries of the world mainly to USA, Netherlands, UK. Germany, Australia and UAE. About 65 per cent of the world export of cashew kernel is from India. USA is the largest importer of cashew kernels in the world. Over 60 per cent of the cashew imports in to USA are from India, and over 40 per cent of India's export are to USA. Large quantities of Indian cashews are also re exported from the Netherlands to European countries and USA after making value addition by the Netherlands.

Until the early 1970s, India had a near monopoly in the export of cashew kernels to world markets, although India was by no means the only producer of raw cashew nuts, India has been traditionally deficient in production of raw nuts and depends, to a large measure, on imports from the East African countries and lately from countries in South East Asia.

In the matter of export of cashew kernels, Brazil has the second position. At present, cashew kernels are mainly used as a snack food in the roasted and salted form. The broken cashew kernels are

mainly used in confectionery, bakery and chocolate industries. In India, cashew is used in a variety of food items. Many cashew recipes have been developed and they are gaining popularity among chefs and housewives all over the world.

Cashew is a unique combination of fat, proteins, carbohydrates, minerals and vitamins. High percentage of fat content in food items is considered to be not good for health. However, there is good fat and bad fat content in food materials. The fat which cashew contains is definitely good fat. Even though cashew contains 47 per cent of fat, 82 per cent of this fat is unsaturated fatty acids. The unsaturated fat content of cashew not only eliminates the possibility of the increase of cholesterol in the blood, but also balances or reduces the cholesterol level. Cashew also contains 21 per cent of proteins and 22 per cent of carbohydrates and a right combination of amino acids, minerals and vitamins, and therefore, nutritionally they stand at par with milk, eggs and meat.

As cashew has a very low content of carbohydrate, almost as low as 1 per cent of soluble sugar, the consumer of cashew is privileged to get a sweet taste without having to worry about excess calories. Cashew nuts do not add to obesity and help to control diabetes.

Even though cashews have lot of health advantages this information has not been brought to the knowledge of the consuming public and no worthwhile programme of promotion has so far been undertaken by any country or company to increase the consumption of cashews worldwide. Now people are taking efforts to develop internal market also.

Till about a decade and half ago, India enjoyed a virtual monopoly in the international markets. More than 95 per cent of the cashew kernels consumer worldwide was supplied by India. It was not only processing the entire raw cashew nuts produced in India but also was importing most of the cashew crop from East African countries like Tanzania, Kenya and Mozambique as well.

Brazil entered the market in the later years of 1970's and over a few years they became a major competitor for us. The factors, which helped them to achieve this status, were:

-Most of the processors are large-scale farmers of cashew. This helps them to have a captive cultivation.

-Even though their production method, which is machine, oriented produces more brokens, the low raw seed prices ensured price competitiveness.

-Proximity to the American markets.

This competition from Brazil necessitates that Indian cashew nuts needs to be promoted generically. An effort towards this has been undertaken by the Cashew Export Promotion Council of India by way of participation in trade fairs and by the publishing of brochures etc. But this effort will have to be intensified if more headway is to be made.

Recently the major roasters and salters of cashew nuts in the U.S have decided to undertake promotion for cashew nuts among the consumers. But here the problem is that it is cashews as whole, and not Indian cashews, which are being promoted. If we have to reap the benefits of the promotion, we have to be strategically poised to have an edge over Brazil.

Recently other cashew producing countries like Kenya, Tanzania, Mozambique, Vietnam and Indonesia have started processing of their own. But since they have not yet mastered the art and since the production efficiencies have not been achieved, they continue to be small players. It is found that China has also started cashew processing. With the reputation they have In economic

activities, they may soon become a major competitor in the input as well as in the output market.

Suggestion for improvement:

Generic promotion of Indian cashews have to be undertaken with more vigor in the existing markets, especially in USA and Europe, Where the market growth is very little and is more or less saturated.

New markets apart from the traditional markets will have to be identified and nurtured. Israel, S. Korea, Russia and even South Africa are very potential examples.

- Value added products would have to be concentrated upon.

Value added products

So far we were dwelling upon cashew kernels packed in bulk, which forms the traditional exports from India. But the future of this trade mainly lies in value added products category. This value added products can be in the following forms:

Roasted and salted cashew nuts

Honey coated cashews

Cashews roasted with special flavours-gralic, cheese etc.

Ready to eat food products like cashew-porridges, breakfast cereals, puddings etc.

The need of the hour is to stress on marketing these products. Since we control the production of the cashew nut, it is only logical that we extend the brand names that we have built over the years, to these value added foodstuff.

This effort entails a marketing effort, which needs a lot of help from Governmental agencies like the Market Development Fund. The arena for this marketing war is with established multinationals, and to take market segments away from them will require a Herculean effort. But it is sure with the kind of marketing talent that we have in this country; we will make good head way provided we get the boost from the Government. Here research scientists and food technologists can also help us a great deal. They can develop innovative products, which can be used for special uses thus getting our marketers the upper hand.

Moving in to value added products could also have much other spin off benefits apart from the increased revenue and profitability. The broken grades of cashew, which have less demand abroad, or

fetch a much lower price, can be incorporated in to these products. Building up a brand image, which is Indian, also adds a prestige value for other goods of Indian origin.

Creating world-class marketing materials

Developing message

The first tangible representation of service is promotional material, including business card. Develop a "benefits message" and provide example to support it, such as:

-Adaptations of service to different markets or client groups;

-Specialized applications of service;

-Difficult circumstances under which industry performed well; examples of experience with foreign clients.

Cultural factors

There are over 200 countries in the world and many more subcultures within those countries. Of course, it will not be targeting all countries, but will probably target more than just one or two. Industry wants to develop promotional materials that are as versatile as possible in adapting to different cultures. Some of the factors that

are likely to vary by culture include the meaning of different colours, the types of pictures or images that are appropriate and the interpretation of specific terminology. It will be important to have marketing materials reviewed by someone from the market those who are targeting to make sure that it has addressed cultural sensitivities appropriately.

Business cards: primary marketing tool

The most important marketing tool is business card. It is what others will keep to remember by and, even more importantly, it represents the quality of service to a potential client.

Another factor that will need to think about is the matter of accommodating other languages. One practical approach is to use the back of the card for the language of the market that are targeting. To maintain professional image, we will want to have that side of card properly printed with our logo.

Finally, include a full telephone number with country and city codes, and complete address, since express mail services do not deliver to post box numbers.

The above marketing tools have been included in the form of a check – list and given in table 3.5

Table 3.5 Check List Reviewing Marketing Materials

Marketing tool	Desire impression	Are yours:
Business card	"Excellent quality" -Easy to read In contemporary colors Professionally designed Informative * Consistent for all staff	
Brochures	"World-class" -Offset/ laser printed -Easy to scan -Professionally designed -Informative* -Focused on "benefits"	
Client lists	"Experienced"- -Comprehensive -Up-to-date -Grouped appropriately	
Client testimonials	"Highly recommended" -Representative -From top executives -Included in the brochure	

Media pieces	"Recognized leader" -Quoted in brochure -Reproduced on letter head -Displayed in office -Mailed out	

Source: Cashew bulletin, (2004)

Changing Needs in Packaging of Cashews for Exports

CBI's Packaging manual defines packaging as the "means of providing protection, containment, presentation, identification, information and convenience" to the product or commodity packed. If further states that packing has to be "for the full life of a product during storage, transport, display and use". It also emphasizes, "the end results are achieved economically" and "with consideration for the environment"

This definition is comprehensive and forms the basis to evaluate any new packing system. However, this is a general definition and one has to look into the product-specific, market-specific needs while choosing a packing system or packaging material for cashews.

Cashew packaging: The Traditional Method

The conventional and extensively used packing system is the tins-in-carton system, where two tins of 25 lbs are put in to one carton. While it has some good aspects, it has more disadvantages.

Among the advantages of this system, the most important one is that it is rodent proof. Since the tin container is rigid the product inside is saved from the impact of various external stresses during transit. The rigid tin walls provide extra stacking strength to the cartons.

But the disadvantages are many. First, it requires lot of human labour and time to unpack, which makes unpacking expensive. Tins are not easily disposable. Recycling involves more cumbersome metallurgical processes. Soldering or seaming leaks are not easily detectable in tins. Tins are more unwieldy to handle at different stages. And finally, tin packing is more expensive for the exporter.

The Changing Needs

The tin packing was developed more than half a century ago and has under gone only minor modifications. During this period, in

the cashew buying countries, there have been colossal changes in their socio-economic conditions; industrial growth and wage rates; income-expenditure patterns; health, safety and environmental awareness levels and the like.

The Indian cashew industry is not only an export-oriented industry but also an export-dependent industry. Hence it is important that the Indian cashew industry adopts the necessary changes to match the requirements of the buying countries.

It would be worthwhile to remember at this juncture that India no longer enjoys the monopoly position in the world trade of cashew, which it enjoyed in the pre-seventies. Now there are competitors and the competition is growing which shows that changes are necessary.

The Indian cashew industry has great potential for further growth and value addition. There are two areas where change is critically important. They are quality management and packaging.

Packaging does play an important role in cashew exports. "The product may be excellent, but it will not achieve customer acceptance unless it is well packed"

Product-specific, market-specific considerations have to become the basis for identifying a suitable packaging system for exports of cashew. Cashew is a high value commodity and needs extra care in packing. If proper care is not taken, it becomes prone to fast infestation. Presence of oxygen and moisture accelerates infestation. The moisture level is a critically important factor. As such, the packing material chosen should have good barrier properties against oxygen and moisture.

The major markets for Indian cashews are the US (45 per cent), Western Europe (33 per cent), Japan (7per cent), Middle East (8 per cent), and Australia (2 per cent). The rest 5 per cent is spread over in more than 50 countries. This shows that 85 per cent of our cashew exports come to just three high incomes, highly quality-conscious, labour-scarce areas. Wage rates in these countries are very high and hence labour is very expensive. These countries have also high degree of mechanization in all activities of life, including material handling. Therefore, a labour saving and an easy-to-unpack packing system will be the ideal choice in these markets.

The governments and the consuming public in these countries are highly concerned about health, safety and environment

considerations. Hence the packing materials used should be safe, eco-friendly, and easily recyclable.

The Kerala analogy of curry leaves is apt for packing. The moment the product reaches the end-user; packaging ceases to be important as it is to be disposed off with out creating any ecological disturbance. There is also a time gap between unpacking and disposal during which period the used packing material has to be dumped somewhere in the minimum space at the minimum cost. Hence the ease for disposal and pre-disposal storage also deserve due consideration.

Cashew consuming markets are located far away from the producing or processing countries. The climatic and the temperature differences, the humidity conditions are too wide to be ignored. Then there are the stresses of various kinds during transit. The packaging should be able to withstand these stresses and be able to protect this high value product from the vagaries of vastly divergent climatic conditions. Then, there is the cost factor.

The above reasons re-affirm the need for change. The suggestion for change has originally come from the buying countries

as Richard Sullivan, President Association of food industries USA suggested.

Individual countries in European Union issued pre-legislation directives on packaging on the need to be eco-friendly and on the disposal of packaging waste including recyclables. Many of the cashew Kernel importers in USA, Europe and Japan have been advising the cashew kernel exporters in India to opt for a flexible packaging system for cashew kernels.

Alternative Packaging System – the essentials

Thus, any alternative packing system should have the following essential qualities. It should be:

1.User friendly, 2. Labour saving, 3. Space saving, 4. Eco-friendly, 5. Easily disposable, 6. Cost effective, and 7. Convenient to all concerned.

Flexi Pouch-in-Carton: The New Generation Packing for Cashews

Though experiments were conducted with different options like flexible carboys (CUBIPACK), etc. the final choice for an alternative packing system for cashews fell on the pouch-in-carton packing

system. This is the most rational choice because; "flexible packing materials are less energy consuming compared to the traditional glass and tin materials. Cost saving both in terms of material and conversion costs contributes to the reduction of transport and storage costs" Further, "Flexible packing is solving some of the most esoteric packaging demands in history".

Flexible packaging has several advantages over the tin packing. They are

1. Has a high barrier property against oxygen and water vapour
2. Food grade & Chemically neutral.
3. Easy to unpack.
4. Easily Recyclable.
5. Easily Disposable.
6. Easily leak detection.
7. Least Infestation.
8. Less Storage Space.

9. Convenient to handle, and

10. Cost Effective.

From the exporters' angle the last is very significant. The average material cost for a 50 pound pack in tins would be over Rs.110 /- as against less than Rs. 50 /- in a flexi pouch. The saving in material cost alone per container would be Rs. 45,000/-

Other savings, in terms of better productivity, easy handling etc. are extra. Thus, flexible pouch-in carton system satisfies most of the packing requirements discussed earlier. However, the system has a few minor problems.

1. Not Rodent Proof: This is a problem that has to be dealt at a different level. Rodent eradication from processing or packaging areas is essentially a part of the production or quality problem. In fact, rodents are not expected to be in processing or packaging areas as they can contaminate the product with their droppings and urine. Hence rodents have to be eliminated completely irrespective of the packing system used.

2. Drop impact/other stresses: Because it is flexible, the drop impact or other Stresses in transit will be directly on the product. However, with the increasing house stuffing of containers the number of handling points will be reduced and this problem will be eventually minimized.

3. Clumping or blocking of kernels: With excess vaccum or moisture levels or due to inadequate gas fusing the kernels get clumped or blocked and refuse to get disintegrated on unpacking. Western India Cashew Company identified this problem early enough and rectified. The problem can be fully solved by proper controls on vaccum pressure, moisture levels, gas mixing and flushing. Wender's Foods, the pioneers in developing and promoting the flexi-pack systems in Indian Cashew industry, is providing intensive training to the users on this.

The Technology for pouch Packing

Compared to the tin packing, pouch is more technology dependent. The materials used for the construction of the pouches, the vaccum sealer and its design, vaccum level in the pack, the ratio of inert gases for flushing, the design and the strength of the cartons

are critically important technological factors in the pouch packing system.

Packing Materials.

A. Pouches

Material selection is very crucial in cashew packing. Maintenance of inert condition in the pack is essential to prevent infestation and microbial growth. Materials like polyethylene (PE) or polypropylene (PP) have excellent properties for packing functions. They have very low MVTR, and form good barrier against water vapour. But they are poor barriers against gases like oxygen, Co_2, and nitrogen.

B. Cartons

The flexi packs being flexible, cartons become an important in the total packing. The paper quality, gram mage (GSM), the fluting direction, compression strength, type of adhesive all these are important factors that affect the quality of packing. A major problem encountered in the early days was the carton 'bulge' which in turn affected the load ability in containers. With the introduction of mould

packing the problem has been completely solved. Today 750 cartons 50 Ibs can be loaded into a 20-ft container.

The Vacuum Sealer

The vacuum sealer, its design, vaccum level in the pack, the ratio of inert gases being flushed in are factors of critical important form the success of flexi pack system. The chamber vaccum-sealing machine provides a modified or controlled atmosphere for packing. The advantage in this is that the pressure level inside and outside the pouch will be the same while vacuuming and no external pressure will be on the kernels. For achieving the desired results, nearly 100 per cent initial vacuum (750) and back flushing of inert gases (CO_2 & nitrogen) to the level of 250 to maintain 33.3 per cent vacuum and 66.7 per cent gas flush would be ideal. While the one-third vaccum will keep the pouch in brick shape and the two-third inert gases, in the ratio of 1:2 of CO_2 and nitrogen will prevent infestation and clumping. This ratio is indicative and the actual levels could be a little more or less, depending on the moisture levels in the kernel. Higher the moisture and CO_2 higher is the chance of clumping; and higher the presence oxygen and moisture higher is the chance for infestation. Higher the vaccum higher is the possibility of clumping. Hence the vaccum level, oxygen and moisture levels are very crucial.

This chapter gives an analysis of the procurement, processing and marketing and the changes that is happening in the industry. It is necessary that the raw materials will be procured at the lowest possible price. For this what is required is not the market intervention by the Government but let allow the market to determine the price for the raw materials. Scientific processing methods using the expertise of skilled labours are highly warranted for reducing the cost of processing and also to retain quality of the products processed. It is also high time to change the marketing strategy of cashew kernel, as we do not have the virtual monopoly in the world market, which we had occupied in the pre 1970's. Now we have competitors like Brazil and Vietnam, hence we have to make use of organize products in eco- friendly packaging materials packed in hygienic conditions based on the culture and taste of the consumers.

Cashew Production, Demand and Supply Gap

CHAPTER 4

CASHEW PRODUCTION, DEMAND AND SUPPLY GAP

Demand projection

According to the Directorate of Cashew & Cocoa Development the export and indigenous demand will need nearly 2.5 lakh tones of cashew kernel by 2006-07, which in turn will need nearly a million tonnes of raw nuts. At present, there are more than 1,100 processing units demanding 1 million tonne of raw nuts. With the present level of production of 4.5 to 5 lakh tonnes and an import of 2 lakh tones, present processing capacities get utilized up to 70 per cent only. The growth of cashew Industry in India takes place at a faster level, getting regionalized to production centers, with a view to utilizing the production coming in every region. The export market is handled by the industrial units of organized sector, which constitute 70 per cent of the total processing units. The production has increased almost 5 times during 3 decade periods, while processing units have increased 3-fold, of which 30 per cent constitute unorganized sector, drawing raw nuts from the proximity of its existence without taking part in the international trade and mostly diverting the finished products into the internal market. The tremendous growth of such

unorganized sector creates a real shortage of raw nuts for organized sector, taking part in export, which has no other alternative except to import. Therefore, import will be a continuing feature, so also the increase in production and in parallel the small scale processing units under unorganized sector. Such growth of cashew Industry takes place at the rate of one unit per every 400 tones of nuts produced. Considering this aspect, when domestic production increases, smaller capacity processing units will also increase in geometric proportion. By 2006-07, such new industries including the present ones will almost demand 2 million tonnes of raw nuts. The world consumption, unless increases from the present level, which is stagnant at 1.50 lakh tones of kernels, and unless kernel importing countries demands more or new area is exploited, any effort to increase the production will only help domestic processing for domestic consumption.

Whether domestic production as a whole goes towards export or partially takes part in export, the processing set up will have to continue for:

1. Continuously engage the labour force in processing and

2. To improve economic status of agrarian sector as an assured income-generating crop.

Cashew therefore will have to remain under the fold of developmental strategies of the Indian agrarian sector. Viewed against the national economy as well efforts for increasing the production should continue at least until the production as a supplementary food item, as can be seen from the increasing trend of the local consumption, there can be no limit upto which the Indian production go up, as India is one of the largest consuming markets. Therefore, administrative support for development in one instance can be limited to the level of reaching 1 million tone of raw nuts for which, all the Programmes started in Eighth plan, continued in ninth plan, can further go in Tenth Plan (2002-2007) with moderations on quantitative approach limited to budgetary resources.

Cashew Production

Global Scenario

Cashew production takes place mainly in central and South American zone, Asia and oceanic zone and African zone. The Asiatic zones include India as the major producer besides China, Indonesia, Malaysia, the Philippines, Thailand, Vietnam, Srilanka and Myanmar.

In African zone, Mozambique, Tanzania and Kenya are major producers, besides minor countries such as Benin, Guinea Bissau, Ivory Coast, Madagascar, Nigeria, Ghana, Senegal and Togo. In the Latin American zone, the primary producer of cashew to the world comprises Brazil, the original inhabitant of cashew where development takes place on a faster speed besides Columbia, Costa Rica, Honduras, Salvador, Guatemala, Panama and Venezuela. The latest production trend of cashew in these regions is given in the following table 4.1

Table 4.1-production trend of cashew (region – wise)

Zone/country	Area ('000 ha)		Raw nuts production ('000 tones)	Productivity (Kg/ ha)
	Total	Productive (appx)		
Asiatic zone				
India	720	625	450	720
China	24	19	15	800
Indonesia	234	187	69	340
Malaysia	7	6	7	1200
Philippines	18	10	6	400
Thailand	62	55	58	1000

Vietnam	250	200	140	700
Srilanka	22	16	5	300
Myanmar				
Sub total	1337	1118	750	670

African zone				
Mozambique	60	60	100	1660
Tanzania	60	60	93	1500
Kenya	51	35	40	1100
Benin	65	50	28	560
Guinea Bissau	95	80	38	480
Ivory Coast	70	56	28	500
Ghana	13	12	8	670
Senegal	10	17	10	280
Madagascar	65	14	7	500
Nigeria	200	200	152	760
Togo	3	3	2	670
Sub total	692	577	506	880

Latin American Zone				
Brazil	1943	1870	560	300

Colombia				
Costa Rica				
Honduras	5	5	1	200
Salvador	5	5	4	800
Guatemala	3	3	4	1300
Panama	3	3	3	1000
Venezuela	15	12	2	160

Sub Total	1974	1898	574	300
Grand Total (Global)	4003	3593	1830	510

Source: Directorate of cashew and cocoa development, (2004)

The total raw nut production in the world is around 1.8 million tones from 4.0 million ha. The productive area is likely to be around 3.6 million ha. The average global productivity is only around 500 kg/ha.

The total and productive areas in Asiatic Zone are 1.34 and 1.12 million ha respectively. Total production in this region is 0.75 million tones with manifested productivity of 670 kg/ha. In African Zone, there is 0.7 million ha as total area and 0.58 million ha as productive area. Total production emanating from this region is 0.51

million tones with productivity of 880 kg/ha. Under Latin American Zone, there is nearly 2 million ha (50 per cent of global area) as total area. Productive areas also are more or less the same. Total production of this region is 0.57 million tones with productivity of 300 kg/ha.

India in Asiatic Zone, Nigeria in African Zone and Brazil in Latin American Zone are largest area holders under cashew, in each of the zones. India has 150 per cent productivity in comparison to the global productivity, while the same in Nigeria is 152 per cent. Inter zonal productivity in global relationship is 1:1:3 in case of Asiatic zone, 1:1:8 in African zone and 1:0:6 in Latin American Zone. Some of the countries having more than 1 tonne /ha of productivity are Malaysia and Thailand In Asiatic Zone, Tanzania and Kenya in African Zone, Guatemala and Panama in Latin American Zone. In this group Malaysia and Philippines are recent emerges for cashew production, gaining the knowledge of advanced technologies from other well – developed countries.

Global trade on cashew

Of the 28 cashews – producing countries, 26 are engaged in production of cashew either for export or for their own consumption

or for both. The commercial activity of these countries is given in table 4.2

Table 4.2 Global Production and trade of cashew (zone wise)

Zone	Production	Trade	Participation	Total	Indigenous Consumption
		Raw nuts For kernel Export	Export of Raw nuts		
Asiatic Zone					
India	450	220 (44%)	-	220 (44%)	230 (56%)
China	15	-	-	-	15 (100%)
Indonesia	69	69	9 (13%)	17 (25%)	26(38%)
Malaysia	7	-	-	-	7 (100%)
Philippines	6	-	-	-	6 (100%)
Thailand	58	-	-	-	58(100%)
Vietnam	140	20(14%)	-	20 (40%)	120 (86%)
Srilanka	5	-	-	-	-
Others	-	-	18 (100%)	18(100%)	-
Total (ex. Singapore)	750	249(33%)	17 (23%)	266 (35%)	484 (65%)

African zone				
Mozambique	100	44 (44%)	56(56%)	100(100%)
Tanzania	93	8 (9%)	70(75%)	78(84%)
Kenya	40	4 (10%)	28(70%)	32(80%)
Benin	28	-	4(14%)	4(14%)
Guinea Bissau	38	19(50%)	19(50%	38(100%)
Ivory coast	28	4(14%)	24(86%)	28(100%)
Ghana	8	2(25%)	6(75%)	8(100%)
Senegal	10	-	3(30%)	3(30%)
Madagascar	7	-	5(70%)	5(70%)
Nigeria	152	8(5%)	12(8%)	20(13%)
Togo	2	-	2(100%)	2(100%)
Total	506	89(18%)	229(45%)	318(63%)

LATIN AMERICAN ZONE				
Brazil	560	93(17%)	-	93(17%
Honduras	1	-	-	-
Salvador	4	-	-	-
Guatemala	4	-	-	-
Panama	3	-	-	-
Venezuela	2	-	-	-
Total	574	93(16%)	-	93(16%)
Grand Total (ex. (Ex.Singapore)	1830	431(24%)	246(13%)	677(37%)

Source: Directorate of cashew and cocoa development, (2004)

Of the total production of 1.83 million tones only 0.430 million tones takes part in kernels exports while 1.40 million tonnes are either traded as raw nuts or processed and consumed within the producing countries themselves. In global trade, only 24 per cent of the total raw nut produced takes part in cashew kernel conversion for export, while 78 per cent takes part as unprocessed raw nuts transaction for export or for processing and consumption within cashew producing countries. In case of unprocessed raw nuts transaction (export of raw nuts) some countries of Asiatic region and majority of African zone are mostly involved. India does not take part in raw nuts export as such. Most of the nuts from other countries are exported to India. Such exports take place from Mozambique, Tanzania, Kenya, Benin, Guinea Bissau, Ivory Coast, Ghana, Senegal, Madagascar, Nigeria and Togo of African zone. Similarly, Indonesia from Asiatic zone also takes part in raw nuts export mainly to India. Some cashews are coming from Singapore of the Asiatic zone; the sources of these are unknown, for Singapore is not a producing country. This has to be considered as an inter transmission process through Singapore ports, where intermediaries collect raw nuts from other sources (perhaps from Africa) and re-export to India.

The Asiatic and African Zone together produce 1.256 million tonnes of raw nuts (68 per cent of the global production) of which 0.338 million tonnes (27per cent) takes part in kernel trade 0.246 million tonnes takes part in raw nut trade and the remaining 0.72 million tonnes (53 per cent) goes for local consumption. The unprocessed raw nuts export amounting to 0.246 million tonnes takes place mainly to India. The other countries of Asiatic Zone such as China, Malaysia. Thailand, Vietnam and Sri Lanka do not take part in export of unprocessed raw nuts to India; but to some extent it takes place to other Asiatic producing countries and consume for internal processing both for export and or local consumption. The Latin American zone remains uninvolved with Asiatic and African zone. Their nuts, they process, they export or they consume exclusive of production trade phenomena of Asia-African zone.

Another interesting phenomena on global aspects of cashew trade is that raw nuts processed for export by Asiatic and African Zone amounting to 0.338 million tones is almost 27 per cent of the total production in these areas and 18 per cent of global production. The contribution of Brazil from Latin American zone for export is also 17 per cent of her production. The consumption by cashew kernel importing countries in the world is 0.097 million tonnes of kernels

0.430 million tonnes in raw nuts equivalency) of which 78 per cent is contributed by Asian and African countries while the rest 22 per cent is provided by Brazil alone. IN other words, while Brazil is able to harness only less than 25 per cent of the needs of kernel importing countries only, but remains on a par with that of Asiatic-African countries.

Cashew consumption by kernel-importing countries

The kernel importing countries get grouped into America, East Europe, West Europe, South East and Far East and Asian Zones. The kernel consumption pattern of these countries for the past 3 decennium is provided in table 4.3.

Table 4.3 Import of cashew kernels by major consuming countries for the past decennium (tonnes)

Zone/country	1971-80 10 years	1981-90 10 years	1991-2000 10 years
AMERICAN ZONE			
USA	402480	422000	577400
Canada	53040	31320	63750
Total	455520	453320	641150

EAST EUROPE			
GDR	35670	31200	89600
USSR	216250	76000	-
Total	251920	107200	89600
WEST EUROPE			
Austria	-	700	-
Belgium	3860	3620	-
France	8990	8400	-
Netherlands	25510	29600	81500
Sweden	1430	60	-
Switzerland	-	1840	-
UK	28910	35340	71240
Total	68700	80100	152740
SOUTH EAST & FAR EAST			
Japan	36460	30000	75290
ASIAN ZONE			
China	-	-	81960
Other Asian Countries	-	-	44640
Total			126600
OCEANIC ZONE			
Australia	28750	26200	59520

New Zealand	-	3700	-
Total	28750	29900	59520
G.TOTAL	841350	700520	1144900
Average /annum	84135	70052	114490

Source: Directorate of cashew and cocoa development, (2001)

It can be seen that the American zone consisting of USA and Canada have all along been major consumer, importing 50 per cent or a little over it, of the total imports by kernel importing countries. Closely followed by this region is East European Sector consuming about 25-30 per cent of the total quantity of cashew kernels imported by consumers. The West European sector has consumed about 12-15 per cent, while South East, Far East Asiatic and Oceanic zone have been totally consuming 5-15 per cent. Within the American zone, USA has maintained 50-60 per cent share of the total global import of cashew kernels. The East European Sector totally imported 30 per cent during 1971-80, 15 per cent during 1981-90 and 8 per cent 1991-2000. The West European sector during 1971-80 consumed 12 per cent, 15 per cent during 1981-90 and 18 per cent during 1991-2000. The South East and Far East, Asiatic and Oceanic zone have been sharing only a negligible quantity of 4 per cent each in 1971-80 and 1981-90, which increased to 18 per cent in 1991-2000. Thus, it can be seen that American zone is the static

market, while the rest have a fluctuating tendency. While there has been a reduction of 23 per cent towards the later part in East European region there has been a steady increase in all the period in West European sector which gives us an indication that these are the markets still exportable for producing and exporting countries. A similar trend is seen in South East and Far East other Asiatic and Oceanic zone where there has been a 14 per cent increase in the decennium just ended which gives better hope for the cashew kernels exporting countries to expand the market.

INDIAN CASHEW TRADE

The commerce for international supply of cashew from India started in the beginning quarter of the 20th century. Cashew nut industry was primarily built up in the early stages depending upon the import of raw nuts from East African Countries.

Table 4.4 Export, Import & Indigenous consumption of Cashew ('000tonnes)

Period	Export (Kernels)	Raw nut Equival-ancy	Import	Total produ-ction (Raw nut) Indigenous Participation In export	Indigen-ous Consu-mption	Total
Pre 60's	32	140	84(60%)	56(56%)	44(44%)	100
1961-70	52	230	155(65%)	75(65%)	43(35%)	118
1971-80	50	227	98(43%)	129(89%)	16(11%)	145
1981-90	36	164	38(28%)	127(52%)	115(48%)	242
1991-00	72	311	208(67%)	100(30%)	251(70%)	351

Source: Directorate of cashew and cocoa development, (2001)

The plantations existed during this period were stray, wild and unscientific, wherefrom the production was the least. Till 60's the Indian production was below 1.00 lakh tonnes, whereas trade consumption was almost 1.4 lakh tonnes (see table 4.4). An import of 84000 tonnes was getting affected to achieve near about 32000 tonnes of cashew kernels, for export. Hardly, 56000 tonnes of raw nuts alone was becoming available from indigenous sources for export. It was on from early 80's Indian production reached the level of 2.0 lakh tonnes. The export from 60's-80's were gradually

increasing and the average annual export was around 52000 tonnes of kernels consuming near about 2.3 lakh tonnes of raw nuts of which 1.26 lakh tonnes were met through import (see table 4.4). The indigenous production participation during this period was only participation during this period was only 106000 tonnes. The Indian production touched the level of 3.00 lakh tonnes in 1990-91. During the period 1981-90 the export was 36000 tonnes on an average per annum consuming 1.64 lakh tonnes of raw nuts (see table 4.4). The average level of import during the decennium 1981-90 was around 38000 tonnes and indigenous participation for export was 127000 tonnes. The export during decennium 1991-2000 was 72000 tonnes of cashew kernels per annum, consuming 311000 tonnes of raw nuts (see table 4.4). The import during this period was 2.08 lakh tonnes per annum and the indigenous participation was 1.00 lakh tone that though the indigenous production has been increasing, the import also simultaneously increased and indigenous participation for export has remained within the range of 50-60 per cent. The internal consumption, which was meager in pre-60's also gradually increased as indigenous production increased from the post 60's and now remains within a range of 40-50 per cent.

Table 4.5 Indian Cashews (Kernels) in International Commerce for Past 3 Decennium (tonnes)

(Annual average for each Decennium)

Zone/Country	1971-80	1981-90	1991-2000
American zone	17908	11279	29830
European zone	25340	17935	25869
West Asian zone	870	1289	4582
South East & Far East Asian Zones	4022	5180	8372
African Zones		Negligible	
Oceanic zone	1653	1842	2325
Others			148
Total	49793	37525	71845
Average value realized By India/annum (Rs.Cr)	98.5	212.1	1213.3
Import of raw nut per Annum ('000 tons)	105	39	176
Value for imports per Annum (Rs.crores)	22.8	49	573
Net export earning per Annum (Rs.crores)	75.7	183	640.3

Source: Directorate of cashew and cocoa development, (2004)

On an average 50000 tonnes per annum during 1971-80, 36000 tonnes during 1981-90 and 72000 tonnes during 1991-2000 has been exported for the consuming zones of America, Europe, West Asia SE and FE Asia and Oceanic zones including smaller level consumers (See table 4.5). The American zones ahs consumed anything between 30 and 40 per cent of the total exports from India during each of the decennium mentioned above. The European zone has consumed between 36 and 50 per cent, the rest above 40 per cent and below are consumed by other zones. While the American and European zones are more or less static market for India, a growing tendency is seen in other zones. A little more vigorous attempt of exploration of these regions can help India to increase her export performance.

Area and Production of Raw Cashew Nut in India

The area and production of raw cashew nut is given in table 4.6. Area wise, Maharashtra, tops the list with 14800 hectares during 2003-04. While Kerala has an area of 1,01,000 hectares during the same period. The maximum total output is also earning from Maharashtra with 1,20,000 MT, while Kerala and Andhra pradesh having 95,000 MT each out of a total production 5,35,000 MT for India.

Table 4.6 Areas and Production of Raw Cashew Nut in India

STATES	99-00		00-01		01-02		02-03		03-04	
	A	P	A	P	A	P	A	P	A	P
Maharastra	121000	125000	121000	98000	143000	103000	143000	115000	148000	120000
An.Pradesh	103000	100000	130000	75000	135000	86000	135000	98000	138000	95000
Kerala	122000	100000	120000	78000	120000	87000	120000	94000	101000	95000
Orissa	84100	40000	90000	59000	110000	59000	110000	55000	124000	71000
Tamilnadu	85000	45000	88000	59000	90000	48000	90000	50000	95000	51000
Karnataka	91000	80000	91000	42000	90000	40000	90000	44000	94000	46000
Goa	54000	30000	55000	25000	55000	30000	55000	31000	55000	32000
W.Bengal	9000	8000	8000	8000	9000	7000	9000	7000	9000	9000
Others	17000	12000	18000	10000	18000	12000	18000	12000	18000	16000
Total	886100	520000	720000	450000	770000	470000	770000	508000	780000	535000

Source: Directorate of cashew and cocoa development, (2004)

Note: Area in hectares and production in MT

Table 4.7 gives the demand projection for the end of the tenth five-year plan. Out of the indigenous production of 5.35 lakh MT, 4.5 lakh MT is available for processing in 1100 processing units in India. This is supplemented with an import of 2.35 lakh MT for the required input of 6.85 lakh MT. We anticipate a growth rate of 7.25 per cent in terms of export and 6 per cent in terms of domestic consumption and hence we have a total growth of 13.25 per cent.

The table 4.7 also shows that we have an average export performance of 0.79 lakh MT, and domestic performance of 0.72 lakh MT which together constitutes 1.51 lakh MT of output. Based on this growth performance, by the end of 2007 AD the export and domestic consumption together will increase to 2.26 lakh MT. For meeting this we need the raw nut to the level of 10 lakh MT. For meeting this we can import raw nut to the maximum of 2 lakh MT because Brazil and Vietnam are following an aggressive import strategy for processing.

Table 4.7 Demand Projections for Tenth Five – Year Plan

No. of processing units	1,100
Consumption of raw nuts	
Indigenous production (lakh tones)	4.50
Imports (lakh tones)	2.35
Total (lakh tones)	6.85
Growth rate per annum	
Exports	7.25%
Domestic	6.00%
Total	13.25%
Average export performance (5 years)	
lakh tonnes (kernels)	0.79

Average domestic consumption (5 years)	
lakh tones (kernels)	0.72
Total (kernels – lakh tones)	1.51
Total requirement by 2007 AD	
For export and domestic consumption	
lakh tones (kernels)	2.26
Total raw nut required (lakh tones)	10.00
Feasibility by 2007 AD	
Domestic production (raw nut)	
(lakh tones)	8.00
Import (lakh tones)	2.00
Total (lakh tones)	10.00

Source: Directorate of cashew and cocoa development, (2004)

Among the African Countries, Mozambique has also taken steps to process cashew in a big way and they once banned the export of raw cashew for the use of internal processing. However, this has been withdrawn later because of their insufficient processing capabilities followed by lack of international demand for their processed nut. This shows that there will be a gap of internal production of raw nut and requirement by about 3 lakh MT based on

the ongoing production trend. Hence, steps are to be taken to improve the internal production to meet the growing international and domestic demand for cashew kernel.

This would help the sector in two ways. If internal production is increased to the required level of 8 lakh MT, the cost of raw nut procured for the industry will be less secondly it will also increase the income of the farm sector followed by farm sector employment and over all growth of the agricultural sector.

Economic Aspects of Cashew Industry : An Empirical Analysis

CHAPTER 5

ECONOMIC ASPECTS OF CASHEW INDUSTRY: AN EMPIRICAL ANALYSIS

The Second Chapter gives an overall picture of the Industry, including history, employee's benefits, society and economy. A comparison with other resource-based industries has also been dealt with so as to understand the relative position of the industry and its socio-economics. This chapter deals with the economic aspects of the industry in an empirical perspective based on primary survey conducted on a three-fold basis –the workers, trade union leaders and factory owners. This has been done so as to evaluate empirically the living standard of cashew workers in relation to the working days in a year as well as the reason for migration of the industry to the neighboring states. This would help to work out appropriate policy formulations for the revival of the industry *inter alia* the socio-economic development issues of the district.

Cashew factories and workers

This industry mainly concentrates in Kollam district. Out of 683 factories in Kerala 552 are in Kollam and of the 256996 workers

225146 are working in these factories as given table 5.1. Cashew nut workers in Kerala have similar problems irrespective of their geographical location and thus this study mainly concentrates in Kollam district.

Table 5.1Number of cashew factories and workers in Kerala

Sl. No.	District	No of Factories		No of workers	
		Govt	Pvt	Govt	Pvt
1	Kollam	34	518	29000	196146
2	Alappuzha	4	51	1810	12850
3	Trivandrum	2	74	910	16280

Source: Primary survey

Characteristic Profile of Workers

Most of the workers are females. They are mainly from the age group of 30 to 60 and literate. They have no skill in other works and out of the total workforce in the cashew sector 95 per cent is female workers. The table 5.2 gives a brief summary of the Population and Sample.

Map of Kollam indicating the main locations.

Table 5.2 Summaries of the Population and Sample.

	Total
Population Size	256996
Sample selected	486
Interviewed	467
Non response	4
Inability to comment	47
Response rate	89.07%

Nature of the population

For the purpose of analysis the total factories in the sector has been divided into three groups as small, medium and large (see table 5.3). Further, the factories are again subdivided into shelling, peeling and grading in the subsequent stage (see table 5.4)

Table 5.3 Number of factories according to size

Group	No of workers	No of factories		No of factories selected	
		Pvt	Govt	Pvt	Govt
Small	< 100	20	0	3	0
Medium	100-500	483	32	50	5
Large	500-1000	15	2	1	1
Total		**518**	**34**	**54**	**6**

Source: survey data

Shelling units selected

Sl.No	**Name of the Factory**
1.	A.S.CASHEW EXPORTERS
2.	ABBAS CASHEW COMPANY
3.	ADITHYA EXPORTERS

4. ALPHONSA CASHEW INDUSTRIES
5. ANU CASHEWS
6. BINOD CASHEW CORPORATION
7. K.GOPINATHAN NAIR&CO.
8. KAILAS CASHEW EXPORTERS
9. KERALA NUT FOOD COMPANY
10. CAPEX
11. KRISHNAN FOOD
12. LOURDES MATHA CASHEW INDUSTRIES
13. MOHANS INTERNATIONAL
14. QUILON EXPORT ENTERPRISES
15. RAJAN CASHEW COMPANY
16. SOUTH KERALA CASHEW EXPORT
17. ST GEORGE FOODS
18. KERALA STATE CASHEW DEVELOPMENT CORPORATION
19. VIJAYALAXMI CASHEW COMPANY
20. WESTERN INDIA CASHEW CO LTD

PEELING UNITS SELECTED

Sl.No Name of Factory

1. ABBAS CASHEW COMPANY
2. ALPHONSA CASHEW INDUSTRIES

3. K.GOPINATHAN NAIR&CO

4. KAILAS CASHEW EXPORTERS

5. KERALA NUT FOOD COMPANY

6. CAPEX

7. M.ABDUL REHUMAN KUNJU

8. MOHANS INTERNATIONAL

9. NAJEEM CASHEW

10. NOBLE CASHEW

11. PRAKASH EXPORTERS

12. ST GREGORIOS CASHEW INDUSTRIES

13. ST MARY'S CAHEW FACTORY

14. ST PAULS CASHEW FACTORY

15. SUNFOOD CORPORATION

16. KERALA STATE CASHEW DEVELOPMENT CORPORATION

17. VIJAYALAXMI CASHEW COMPANY

18. WESTERN INDIA CASHEW CO LTD

GRADING UNITS SELECTED

Sl.No	**Name of Factory**
1.	ABBAS CASHEW COMPANY
2.	ADITHYA EXPORTERS
3.	CAPEX
4.	NAJEEM CASHEW

5. NOBLE CASHEW

6. PRAKASH EXPORTS

7. PRASANTHI CASHEW

8. PRATAP CASHEW COMPANY

List of all workers in selected section of factories are collected. There are 9680 workers and 5 per cent of these workers are randomly selected using computer generated random numbers. The full addresses of these 486 workers also were collected. Out of these, 19 workers were removed from the list as they are not presently working or not living in a easily accessible location. The details are given in table 5.4

Table 5.4 Section – wise selection of factories in relation to size.

	Shelling	Peeling	Grading	Total
Small	9	5	3	17
Medium	192	184	61	437
Large	5	3	5	13
Total	206	192	69	467

Source: primary survey

A total number of 55 company owners were selected for understanding the perception of the owners of the factories for the migration of the factories from Kerala. The section wise selection of companies and owners are given in table 5.5

Table 5.5 Section- wise selections of company and owners

Large	15	3
Government	34	2
Total	552	55

Source: primary survey

In order to understand the issues of labour militancy, migration of the industry and Government policy and their relations to the perception of the trade union leaders has been worked out by incorporating all the major cashew workers trade unions. The total number of persons surveyed in this respect is 60. This is done in two stages. Stage one with respect to size in relation to ownership (see table 5.6)

Table 5.6 Size in relation to ownership

Group	No of workers	No of factories		No of factories selected	
		Pvt	Govt	Pvt	Govt
Small	< 100	20	0	3	0
Medium	100-500	483	32	50	5
Large	500-1000	15	2	1	1

Source: survey data

In stage two from 60 factories 46 union leaders have been selected for analysis as given in table 5.7 and the same is also shown in a pie diagram (see diagram 5.1)

Figure 5.1 Percentage share of trade union

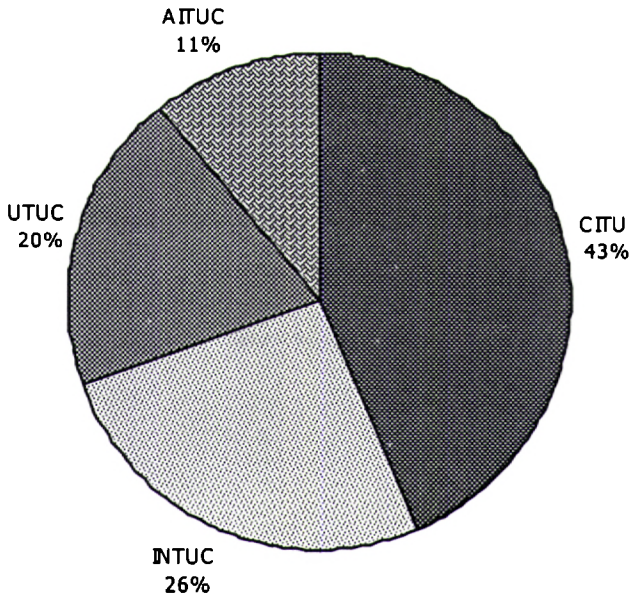


Table 5.7 Number of trade union leaders selected

Trade Union	Number of Leaders selected
CITU	20
INTUC	12
UTUC	9
AITUC	5
Total	46

Source: survey data

Statistical methods, such as Cronbach's Alpha, multi-dimensional sealing, Chi square test and Correspondence Analysis

have been employed to analyze the stress and R^2 with a view of explaining the reasons for migration and its relation to the living standard of the workers and the number of working days.

Reliability

Reliability comes to the forefront when variables developed from summated scales are used as predictor components in objective models. Since summated scales are an assembly of interrelated items designed to measure underlying constructs, it is very important to know whether the same set of items would elicit the same responses if the same questions are recast and re-administered to the same respondents. Variables derived from test instruments are declared to be reliable only when they provide stable and reliable responses over a repeated administration of the test.

Cronbach's Alpha: An Index of Reliability

Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the "underlying construct." Construct is the hypothetical variable that is being measured

The table 5.8 gives the overall reliability of the 10 questions related to the reasons for migration to other states.

Table 5.8 Cronbach's Alpha Index for reasons for migration

	Cronbach's alpha
Workers	0.8547
Trade union leaders	0.8124
Company owners	0.8765

Source: worked out from field survey data

As the value of the Cronbach's alpha is higher than .7 and above we can conclude that the responses are reliable. The next section we are using MDS technique to find the major reason for the migration of the industry to other states.

Multidimensional Scaling is a class of procedures for representing perceptions and preferences of respondents spatially by means of a visual display. The purpose of multidimensional scaling (MDS) is to provide a visual representation of the pattern of proximities (i.e., similarities or distances) among a set of objects. Multidimensional scaling (MDS) is a set of data analysis techniques that display the structure of distance-like data as a geometrical picture

MDS pictures the structure of a set of objects from data that approximate the distances between pairs of the objects. The data,

which are called similarities. Dissimilarities, distances, or proximities, must reflect the amount of dissimilarity between Pairs .In addition to the traditional human similarity judgment, the data can be an "objective" similarity measure or an index calculated from multivariate data. However, the data must always represent the degree of similarity of pairs of objects (or events).

Each object or event is represented by a point in a multidimensional space. The points are arranged in this space so that the distances between pairs of points have the strongest possible relation to the similarities among the pairs of objects. That is, two similar objects are represented by two points that are close together, and two dissimilar objects are represented by two points that are far apart.

MDS technique is applied to find out the reason for migration of cashew nut industry to other states. The accuracy of this procedure is measured by two quantities

1. **Stress** Degree of correspondence between the distances among points implied by MDS map and the matrix input by the user is measured (inversely) by a *stress* function. The stress below 0.05 is considered as very good.

2. **R^2:** This Value measure the percentage of variation explained the multidimensional model. A value above 0.95 is considered to be very good.

The results of the Multidimensional Scaling (MDS) is applied to find out the reason for migration of cashew industry to other states in the three levels, such as opinion from workers, trade union leaders and factory owners. The result of this is given in table 5.10.

The Two-dimensional configuration obtained by MDS for the reason for migration is given in figure 5.2. This is also the MDS plot for table 5.11 with respect to company owners.

Figure 5.2 Company owners

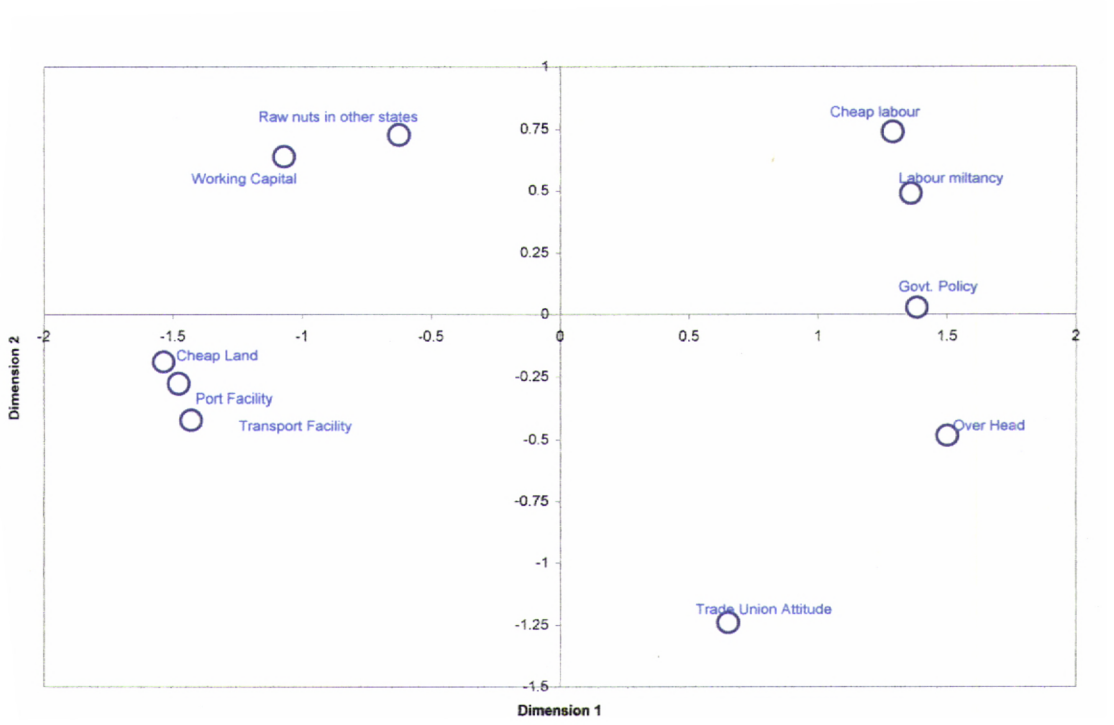


Table 5.11 Details of figure 5.2

Stimulus No	Stimulus Name Reason	Dimension 1	Dimension 2
1	Labor Militancy	1.3541	0.4875
2	Government Policy	1.3785	0.0264
3	Cheap Labor	1.2842	0.737
4	Raw nut in other states	-0.6284	0.7254
5	Working Capital	-1.0742	0.6387
6	Over Head	1.4961	-0.4853
7	Trade Union attitude	0.6477	-1.2402
8	Port facility	-1.4825	-0.278
9	Transport facility	-1.4342	-0.4217
10	Cheap Land	-1.5413	-0.1898

This configuration is derived in 2 dimensions. Figure 5.3 gives EDM for workers based on the MDS plot for the table 5.12

Figure 5.3 WORKERS

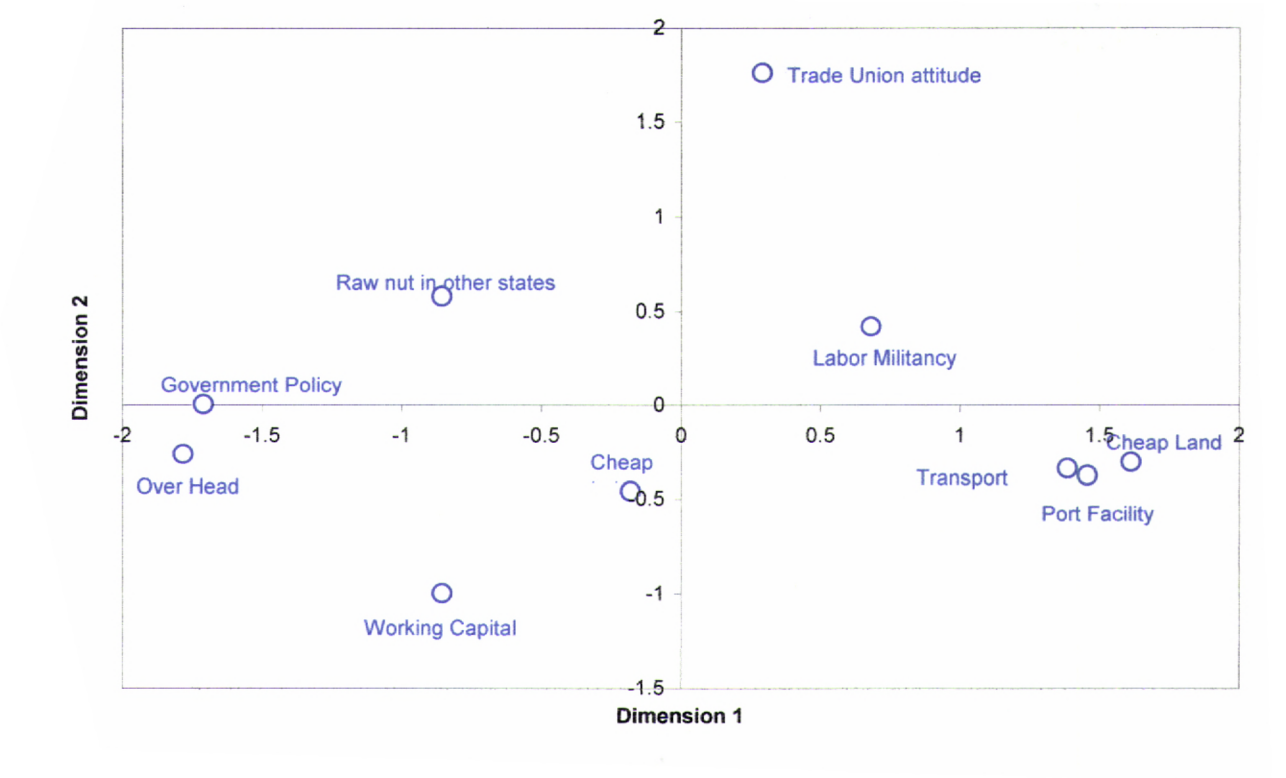


Table 5.12 Details of figure 5.3

Stimulus No	Stimulus Name	Dimension 1	Dimension 2
1	Labor Militancy	0.676	0.4163
2	Government Policy	-1.7142	0.0017
3	Cheap Labor	-0.1845	-0.4605
4	Raw nut in other states	-0.8601	0.5783
5	Working Capital	-0.8589	-0.9984
6	Over Head	-1.7863	-0.2655

7	Trade Union attitude	0.2878	1.7549
8	Port facility	1.4512	-0.3787
9	Transport facility	1.3807	-0.3409
10	Cheap Land	1.6082	-0.3073

Figure 5.4 shows the EDM for trade union leader based on the MDS plot for the table 5.13

Figure 5.4 Trade union leaders

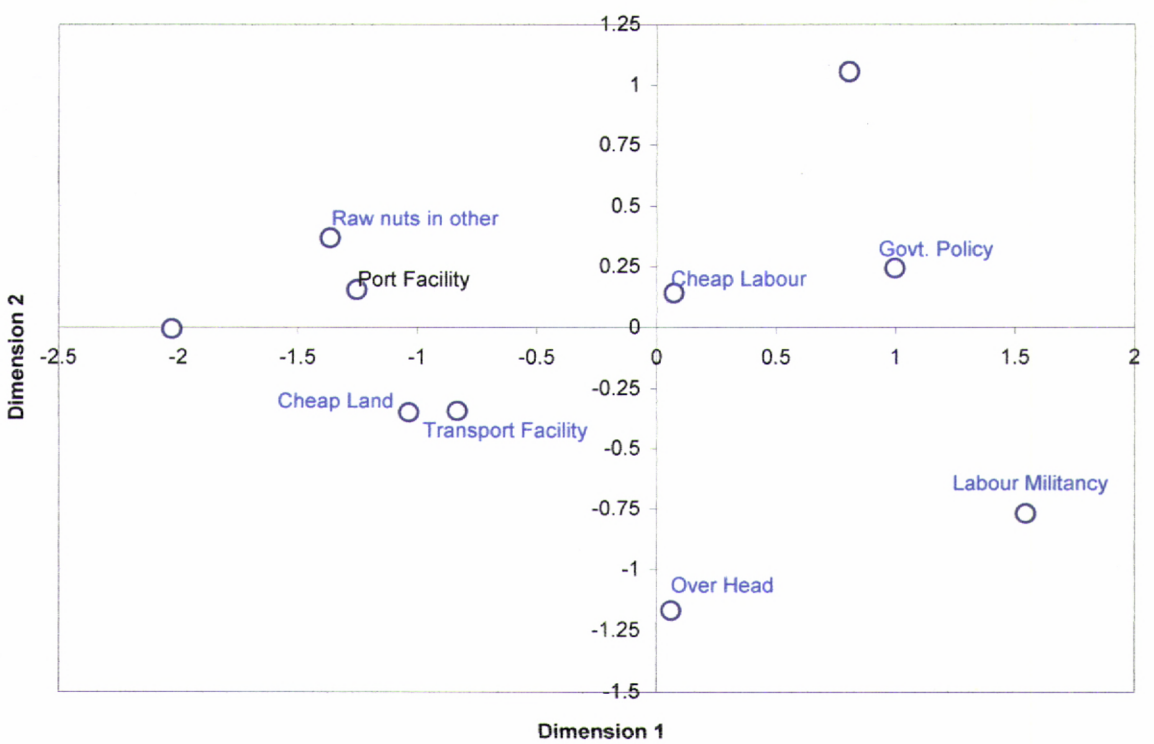


Table 1.13 Details of figure 5.4

Stimulus No	Stimulus Name Reasons	Dimension 1	Dimension 2
1	Labor Militancy	1.5395	-0.7711
2	Government Policy	0.9922	0.2399
3	Cheap Labor	0.0683	0.1388
4	Raw nut in other states	-1.3694	0.3639
5	Working Capital	0.801	1.0514
6	Over Head	0.0561	-1.1717
7	Trade Union attitude	-2.0315	-0.009
8	Port facility	-1.258	0.1513
9	Transport facility	-0.8376	-0.347
10	Cheap Land	-1.0394	-0.3536

Findings of the Study

The first two hypotheses relating to standard of living of cashew workers, working days available and their socio economic analysis shows that the average total expense (Mean 2310.73, SD 792.83) is higher than the average income from cashew (Mean 1970.99, SD 761.67). This is also statistically established using the **student's t** test with the t value 2.245 with a P value of 0.031as given in table 5.9

Table 5.9 the results of the t-test

Total Expense	Income from cashew	Difference	t	df	P value
2310.73	1970.99	339.74	2.245	637	0.031

Source: worked out from primary survey data

Since p value is less than 0.05 it can be concluded that average total expense is significantly higher than the average income from cashew. Thus living standard of cashew nut workers depends highly on the total numbers of working days available in a year.

This highlights the fact that the socio economic condition of cashew nut workers in Kollam district will badly affect if factories fail to give employment to workers

Table 5.10 Reasons for the migration of Industry to other states

	Reason	Workers		Company Owners		Trade Union Leaders	
1	Labor Militancy	0.6760	0.4163	1.3541	0.4875	1.5395	-0.7711
2	Government Policy	-1.7142	0.0017	1.3785	0.0264	0.9922	0.2399
3	Cheap Labor	-0.1845	-0.4605	1.2842	0.7370	0.0683	0.1388
4	Raw nut in other states	-0.8601	0.5783	-0.6284	0.7254	-1.3694	0.3639
5	Working Capital	-0.8589	-0.9984	-1.0742	0.6387	0.8010	1.0514
6	Over Head	-1.7863	-0.2655	1.4961	-0.4853	0.0561	-1.1717
7	Trade Union attitude	0.2878	1.7549	0.6477	-1.2402	-2.0315	-0.0090
8	Port facility	1.4512	-0.3787	-1.4825	-0.2780	-1.2580	0.1513
9	Transport facility	1.3807	-0.3409	-1.4342	-0.4217	-0.8376	-0.3470
10	Cheep Land	1.6082	-0.3073	-1.5413	-0.1898	-1.0394	-0.3536
	Stress	**0.05530**		**0.05861**		**0.06989**	
	R square	**0.98286**		**0.98331**		**0.97259**	

Source: worked out from primary data.

Further the standard obtained under the MDS has again been tested by using the method of Cronbach's alpha index for examining the reliability.

As the test results (shows that the Cronbach's alpha for workers -.8547, trade union leaders .8124 and Company owners .8765) in all the three cases have resulted in value .7 and above it. Hence it can be concluded that these responses are reliable.

A further analysis based on primary data has been done so as to understand the standard of living and socio-economic condition of the workers. This is particularly done to test two major hypotheses, such as,

1. *The living standards of cashew nut workers do not depend on the total numbers of working days available in a year.*

2. *The socio economic condition of cashew nut workers in Kollam district will remain unaltered even if factories fail to give employment to workers*

The average values of total income, income from cashew and total expense are worked out and given in table 5.14

Table 5.14 Income – Expenditure of cashew workers

	Mean	SD
Total income	2627.45	467.01
Total expense	2310.73	792.83
Income from Cashew	1970.99	761.67

Source: worked out from primary survey data

It can be seen that average total expense is higher than the average income from cashew sector. Also 53.33 per cent of employees have no other source of income (see figure 5.5 and 5.6) figure 5.5 is also statistically established using the **student's t** test and given in table 5.15.

Table 5.15 t-test for income analysis

Total Expense	Income from cashew	Difference	t	df	P value
2310.73	1970.99	339.74	2.245	637	0.031

Source: worked out from primary survey data

Since p value is equal to 0.031 we can conclude that average total expense is significantly higher than the average income from

cashew. This shows that the living standard of cashew nut workers depends highly on the total number of working days available in a year.

This also highlights another important aspect that the socio economic condition of cashew nut workers in Kollam district will badly affect, if factories fail to give employment to workers.

Figure 5.5 *Percentage of employees having other source of income*

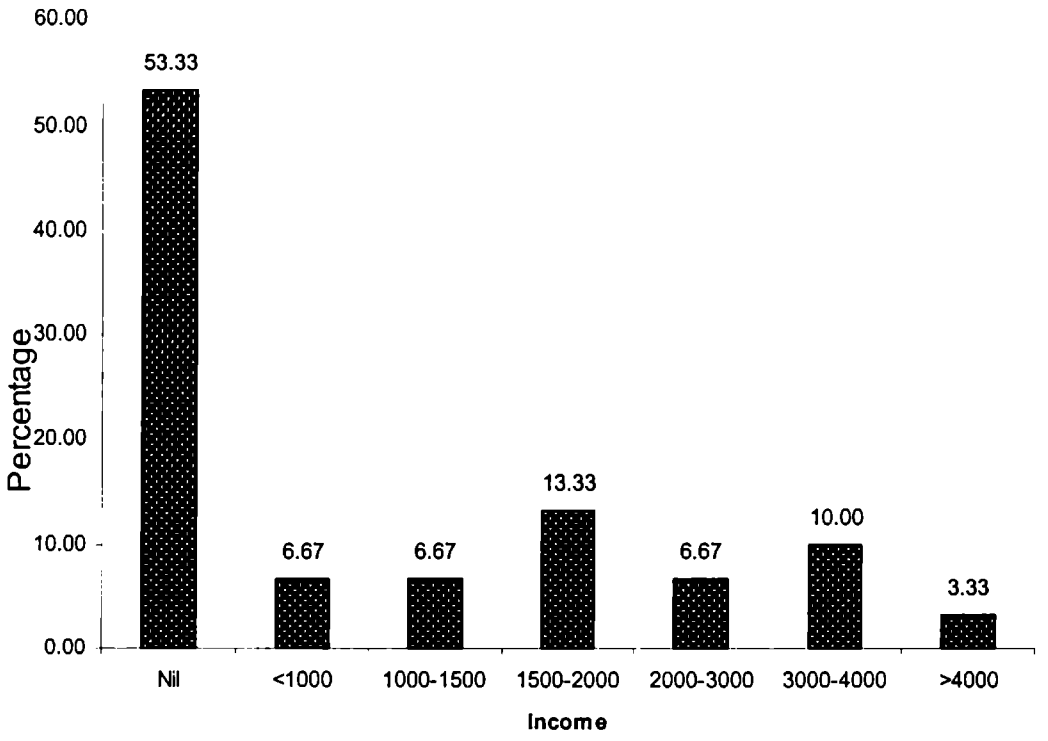
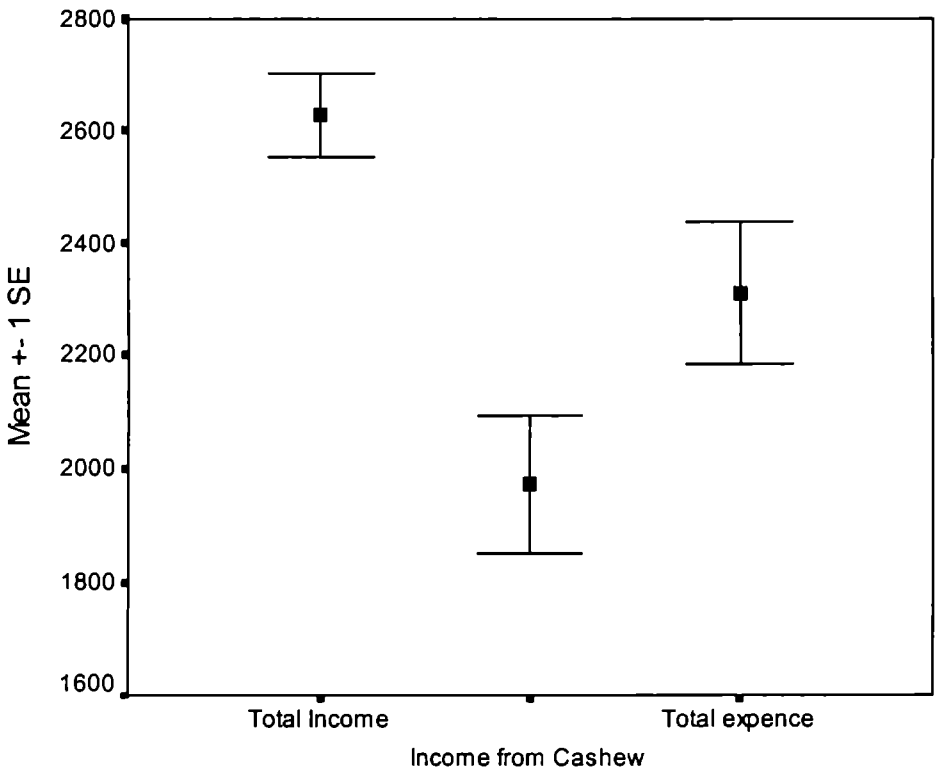


Figure 5.6 showing income / expenditure of cashew workers



To work out the socio-economic condition of the cashew workers the data collected have been classified as number of members in a family table 5.16, facilities in house of cashew nut workers table 5.17, educational qualification (table 5.18), parents education level table 5.19 and education qualification of the children (table 5.20).

Table 5.16 Number of members in a family

No of members	Percent
2	3.33
3	33.33
4	53.33
5	6.67
6	3.33

Table 5.17 Facilities in the house of Cashew nut workers

	Percent
Bank Account	06.67
News	66.67
TV	46.67
Radio	63.33
Phone	20.00
Politics	23.33

Table 5.18 Educational Qualification of the workers

Class	Percent
Illiterate	3.33
2	3.33
4	16.67
5	6.67
6	3.33
7	6.67
8	13.33
10	36.67
12	10.00

(Median Educational qualification 8th class)

Table 5.19 Parents Educational Qualification

Education	Percent
Illiterate	11.67
Literate	80.00
PDC	8.33

Table 5.20 Educational Qualification of children

Education	Percent
School	63.46
PDC	26.92
Degree	9.62

Source: primary data

In order to understand whether the children of the cashew workers are willing to take up the same work, a comparison of educational levels of the cashew workers and their children have been done. This helps us to infer any improvement in the education level in the next generation and their socio- economics. Figure 5.7 shows a big transition in the educational level of their children.

Figure 5.7 Comparison of educational qualification of workers and their children

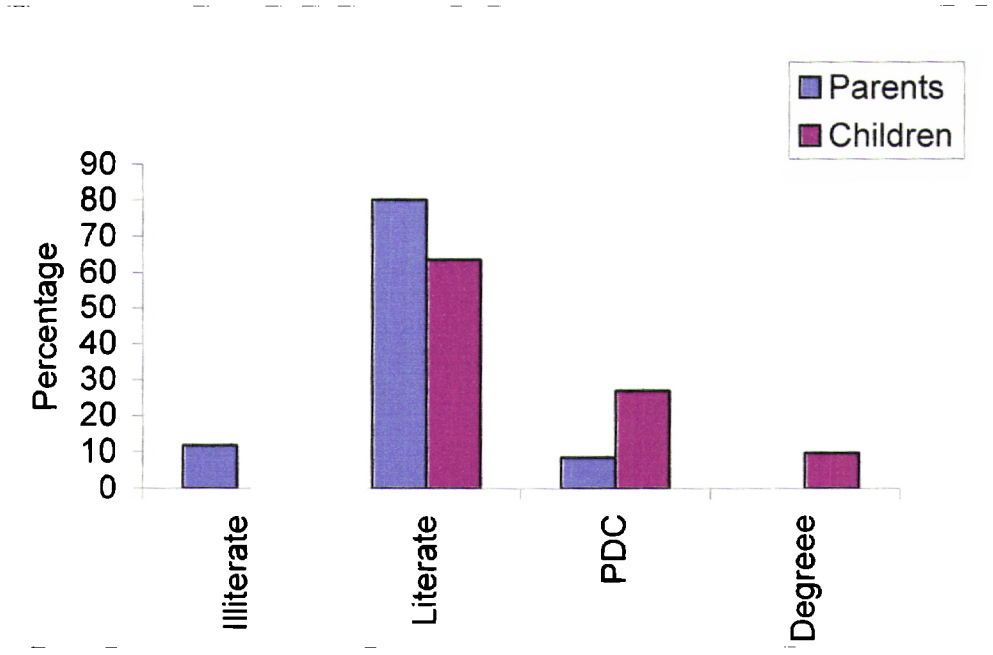


Table 5.21 Educational Qualification of children

Sex	Literate	PDC	Degree	Total
Male	65.52	27.59	6.90	100.00
Female	61.90	28.57	9.52	100.00

Source: primary data

Table 5.21 gives a comparison between educational levels (sex - wise) of the children of cashew workers. Chi- square test of independence is analysed to know any discrepancy in education with respect to sex.

Ho: There is no association between sex and educational level

Chi-square = 0.134

DF = 2

P = 0.9351

Conclusion: as the P value is greater than 0.05 we accept the null hypothesis

Next an analysis of the saving habits of the workers is analysed on the basis of processing capacity of the workers. This is done on the basis of an average processing capacity of a worker (7.17 kg). This is further analysed on different income groups (See table 5.22)

Table 5.22 Saving habits of Cashew nut workers

Income Group (Rs)	**Saving Group**
<1500	No Savings
1500-3000	<250
3000-4500	>250
>4500	

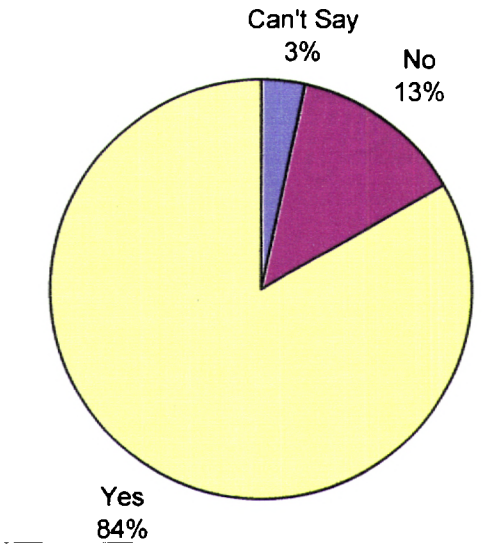
Chi square test is employed (table 5.23) with a view of understanding any significant association between income and saving habits of the workers. The results of the chi-square test show that there is an association between income level and saving level.

Table 5.23 Association between income and saving habit

Saving Group				Total
Income	No Sav	<250	>250	
<1500	42.86	14.29	42.86	100.00
1500-3000	50.00	25.00	25.00	100.00
3000-4500	66.67	0	33.33	100.00
>4500	33.33	33.33	33.33	100.00

Chi square value	3.341
DF	6
P value	0.765

Figure 5.8 relation between stable work with low wages



Another important aspect worked out here is whether the workers are willing to accept low wages provided they get continuous employment. The owner's opinion for migration of the industry from Kerala to neighboring state is primarily because of the high wage rate prevailing in the industry. This has been considered as an opposing view in as much as the workers in Kollam (based on the survey) are willing to work at low wages provided they get continuous employment. 84 per cent of the workers surveyed were willing to work at low wages provided they get continuous employment (see figure 5.8). The basic

reason for this preference according to them is that this would enable them to plan their expenses in a planned manner.

Figure 5.9 reasons for migration

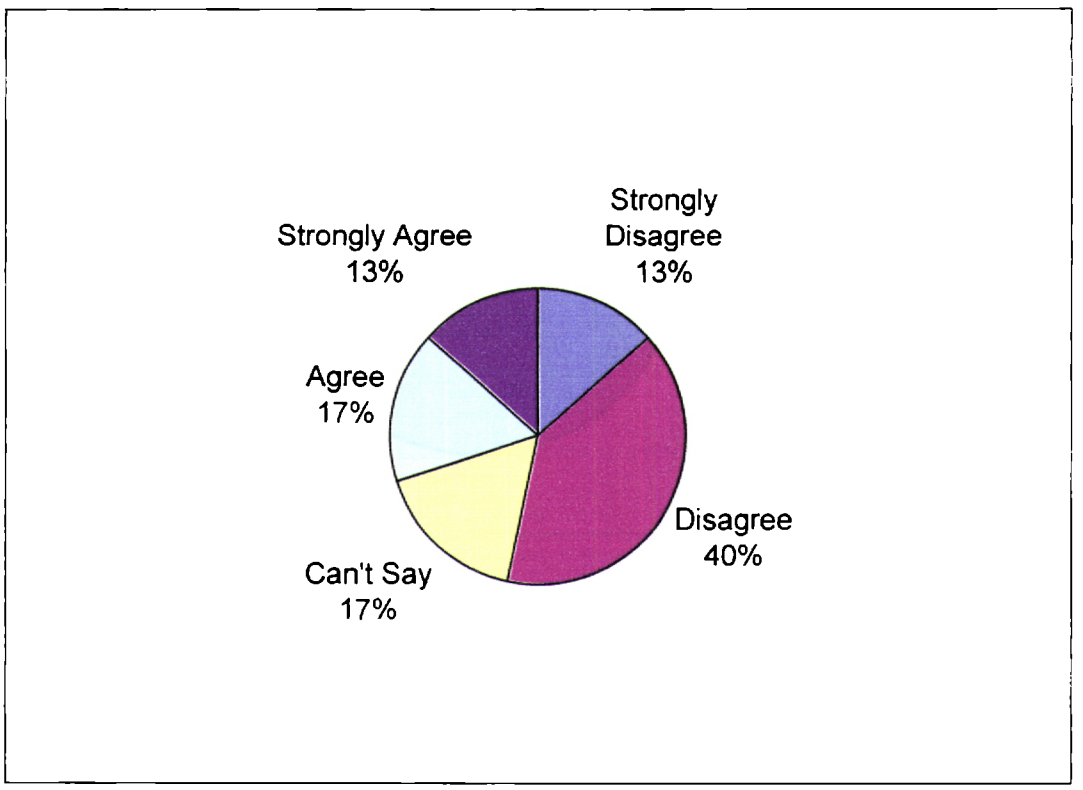
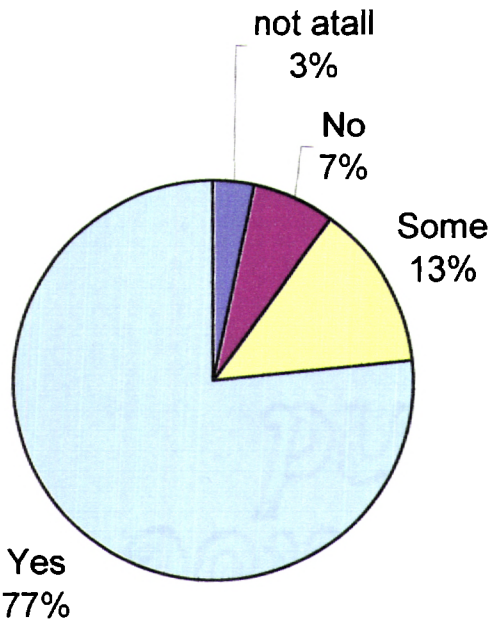


Figure 5.9 gives an analysis relating to another pertinent reason for migration, i.e., the migration and the employees bargaining for more benefits. Here also the workers view is entirely different as 53 per cent either strongly or disagree this as an important reason for migration. But 17 per cent have neither agree nor disagree this important reason for migration.

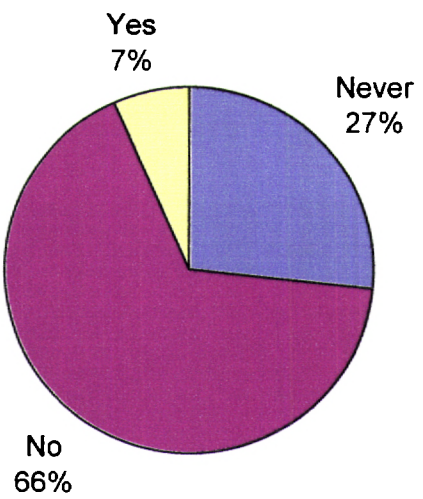
Figure 5.10 Job satisfactions of cashew workers



Based on the survey data an analysis of the workers relating to job satisfaction has worked out based on pie- diagram (figure 5.10). Earlier, we found that the workers are willing to work for lower wages provided they get continuous employment. The figure 5.10 shows that 77 per cent of the workers have job satisfaction. By considering the educational qualifications of the workers (only literate), they are well aware that with this educational back ground it is impossible for them to get a job in an organized factory set up with all statutory benefits like ESI, PF, and so on.

Low wages, job satisfaction and quitting the existing job are highly co-related. The workers are willing to work at low wages and they are getting job satisfaction and they are even not willing to quit the job. This shows that cashew workers and their socio-economic aspects are well interwoven. They have strong commitment to their work. Majority of the workers (66 per cent) are not willing to quit the present job. This may also be due to the non-availability of alternative employment to the majority of women workers in this region (see figure 5.11).

Figure 5.11 workers attitude towards quitting cashew job



Regarding the question in relation to their willingness for sending their children to the same work. The majority gives a negative response (66 per cent) as given in figure 5.12. The main reason for this may be that their children are having much more educational qualification than the present cashew workers. Hence they like the general view in the economy also prefer to go for white-collar jobs. However, 13 per cent of the respondents still willing to send their children to this sector.

We have already come to the conclusion that cashew workers are willing to work at low wages if then get continuous employment. A comparison of the willingness of the workers to do job in the private or Government companies shows that workers in general are willing to work in private companies. This is because; they are getting more days of work in the private companies (52 per cent) in comparison to the Government companies (45 per cent) as given in table 5.13. But the striking difference in the private sector is that the wages are very low and more over, majority of them are not getting any statutory benefits.

Figure 5.12 willingness of sending their children for this job

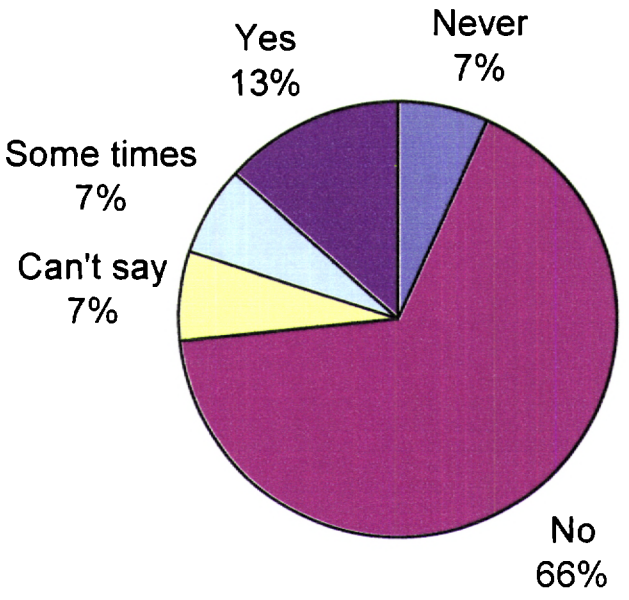
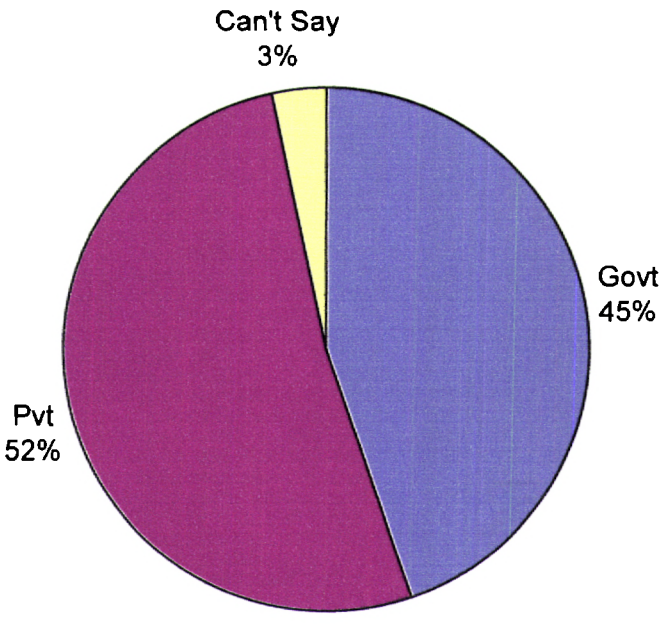
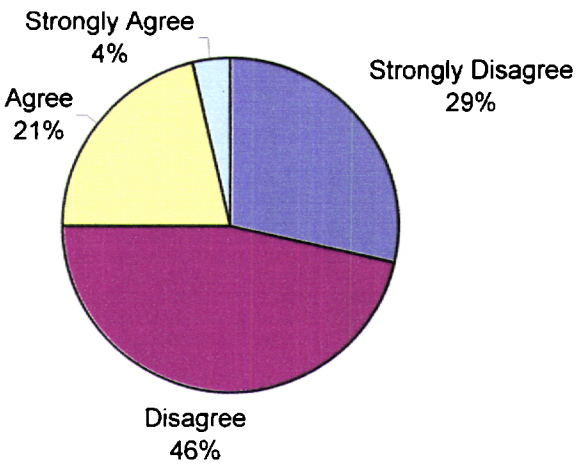


Figure 5.13 willingness to work in Government /private companies



An evaluation based on primary survey for substantiating the pathetic condition of the cashew industry and migration and the resultant sickness of the industry. One of the reasons they cite for this is the labor militancy because of high unionization of the sector. About 25 per cent of the workers (figure 5.14) agree that they are responsible for the plight of the industry. Another interesting factor is that they are at present willing to salvage the industry from its pathetic situation by working at lower wages. The only option they put forward is that of regular employment.

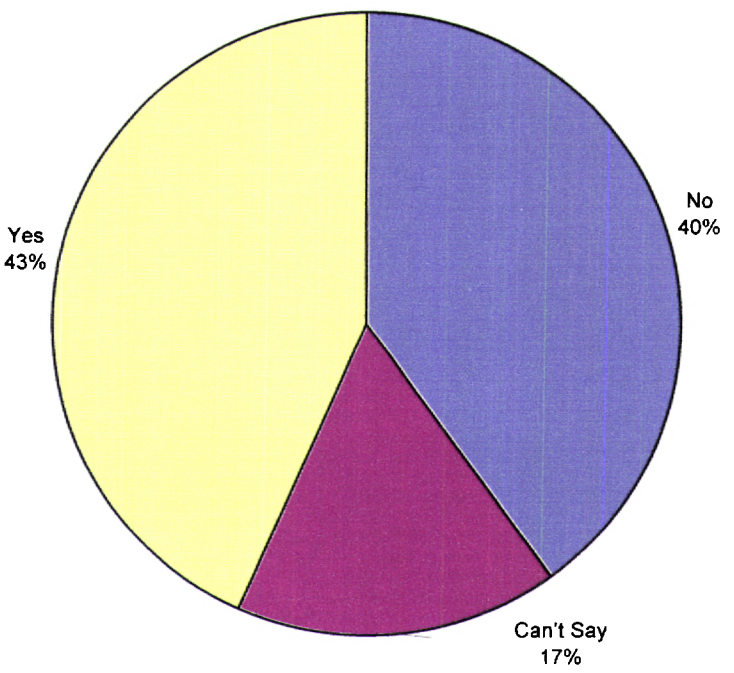
Figure 5.14 workers perception for the pathetic condition of the industry



Cashew industry is depending for its raw materials (raw nuts) both from the domestic sources as well as from imports. Imports of raw nuts for processing are one of the reasons for the cost escalation of the industry. To overcome this it is high time to increase the domestic production of raw nuts. This will not only help the industry to give more and continuous employment to the workers but also help the industry to move ahead in a cost effective manner. Survey data in this regard shows that workers view in this regard is positive. It also shows that 53.3 per cent of the workers work out their living from the income

of this sector alone. Therefore 43 per cent (see figure 5.15) are willing to engage in cashew farming in their small house plots. If we work out this for more than one lakh families of 2.53 lakh workers, their contribution of raw nuts for processing will be a substantial quantity.

Figure 5.15 willingness for cashew farming by cashew worker



The empirical analysis shows that the major element contributing the socio- economic aspect of the workers is continuous employment. It is proved that the workers are willing to work at lower wages provided they get continuous employment. This is what the

private factory owners follow in total. But the Government policy of giving more statutory benefits and higher wages are not at all conducive for the industry for its growth and survival. Instead of giving more wages and benefits the Government should take steps to give more employment at a reduced wage structure. This could be made possible through negotiations with the workers representatives and trade unions as they are willing to accept this, rather than getting fewer days of work at higher wages.

Performance of Cashew Industry - A Comparative Analysis

CHAPTER 6

PERFORMANCE OF CASHEW INDUSTRY – A COMPARITIVE ANALYSIS

In Cashew Industry there are 3 segments of factories based on the ownership of factories.

1. Government
2. Co-operative and
3. Private

There are 30 factories in the Government sector under Kerala State Cashew Development Corporation (KSCDC) and 10 factories under Kerala State Cashew Workers Apex Industrial Co-operative Society Ltd (CAPEX). In private sector there are 643 factories in Kerala.

The Government developed KSCDC and CAPEX to work as model employer by safeguarding the welfare and overall growth of the industry but these Government organizations is not working as per the basic intention of its formation whereas the private factories are working in full swing throughout this year by making profits. The

survey result shows that people are willing to work even for less wages if they get continuous employment. In this context, the details of the working of these organizations will be important to a greater extend in the workers point of view as well as in the industries point of view.

KERALA STATE CASHEW DEVELOPMENT CORPORATION (KSCDC)

Kerala State Cashew Development Corporation (KSCDC) is the largest cashew-processing unit working in the country with 39 factories in its fold employing 23000 people. Among the thirty-nine factories four are tin factories and one a Tannin factory. The corporation owns nine factories and the rest are taken on rent.

The Corporation was incorporated in July 1969 and commenced activities in the year 1971 through taking over a few private factories. This was with an objective to provide more days of work to the employees facing large-scale unemployment in the private companies.

If public sector companies can work as a model employer, the chances are high that the same may be extended to the workers in the private sector also. This serves the social responsibility of the Government to the industry from exploitation by the private sector.

The Corporation was working in profit, during the first five years up to 1974-75. But later it went into losses and the losses started accumulating beyond tolerable limits. Working efficiency got eroded and the corporation had to depend on more loans from Government. Later the govt. converted the loans to share capital.

A close analysis of the working of the corporation shows that most of the losses of the corporation were not due to operational inefficiency, but due to certain policies and programmes of the government.

Government implemented most of the policies and programmes through KSCDC and failed in making payment to the corporation at proper time, which finally reflected in the poor financial performance of the corporation.

After having undergone through different phases of set backs, the corporation could set a strong capital base of Rs.116.79 crores as on 31.3.97. The productivity of the corporation has been continuously improving and the man-days required to process a unit of 80 kgs of raw nuts had come down from 7.4 to 6.9 man-days in the previous years. Though the corporation could provide only 13 and 38

days of work in the year 1995-96 and 1996 97 respectively, the factories had worked for 40 days from March to September 1997.

Now the Corporation looks forward to increasing the number of working days to a laudable extent of 250 days in a year. The major hurdle is lack of working capital. Table 6.1 shows the number of days the KSCDC has been processing cashew nuts from 1970-71. Table 6.1 also shows that the maximum number of employment was given to the workers in 1971-72 (207 days) and there was no work in 2002-03.

Table 6.1 Working Days in KSCDC from 1970-71

Year	Working days
1970-71	149
1971-72	207
1972-73	197
1973-74	169
1974-75	147
1975-76	150
1976-77	85
1977-78	97
1978-79	113
1979-80	80
1980-81	61
1981-82	73
1982-83	70

1983-84	75
1984-85	103
1985-86	42
1986-87	71
1987-88	104
1988-89	125
1989-90	113
1990-91	102
1991-92	57
1992-93	87
1993-94	13
1994-95	50
1995-96	13
1996-97	38
1997-98	85
1998-99	105
1999-00	140
2000-01	200
2001-02	44
2002-03	0
2003-04	18
2004-05	42

Source: KSCDC (1970 – 2004)

Reasons for the poor performance of KSCDC

The best period of the corporation was the first 8 years of its operation. A cumulative profit of Rs. 74.59 lakhs in the first five years up to 1974-75. The year 1975 –76 showed a reverse trend but this had during the next two years, 1976-77 and 1977-78 and again the corporation made profits. But the year 1978-79 was considered to be a dismal year as it generated a loss of Rs.16.27 crores. This is not actually the business loss of the corporation but because of the take over of 90 factories from the private sector by Government and entrusting them with the Corporation.

Government with a laudable objective of procuring cashew for the factories of Kerala declared Monopoly Procurement of Cashew nut in the year 1978. This was mainly to prevent flow of nuts to outside States as well as to achieve equitable distribution of nuts to the existing factories based on the strength of the employees in the respective factories. The private sector companies working in Kerala refused to take cashew nuts since they felt that the price of raw nuts through monopoly procurement was too high and could lead them to huge losses. They agreed to the government to give their factories to run under KSCDC for one year. In this context, 90 cashew-processing units came to the fold of the corporation. But the nuts

procured had not been processed in time, which resulted in the quality of the kernels. All these had lead to a huge loss to the corporation. Because of this, all these 90 factories have been given to the private owners at the end of the first year itself.

The corporation had faced continuous loss due to the financial overheads on account of loans rose subsequently and it started getting reflected in the operational results too.

Increase in the procurement price of raw nuts in 1987-88 made private factories to stop processing and the Corporation brought these 36 factories under its control. They procured all the nuts, which were of inferior quality and resulted in further heavy losses. These taken over factories had been given back to its owners after a court order in 1994.

In 1992-93 the organization incurred highest loss of Rs. 34.11 crores in spite of the higher turnover of Rs. 119.32 crores due to increase in the floor price of raw nuts in monopoly procurement. In 1993-94, the firm found difficulty in raising funds from banks and found difficulty in repaying the loans, which resulted in heavy interest burden as well. All these resulted in providing employment to workers only for 13 days.

In 1995-96, the Government converted Corporation's loan amount of Rs.86.13 crores to share capital and the overdue interest along with penal interest, amounting to Rs. 39.60 crores was written off by the Government. Further an additional loan of Rs. 68.71 crores including Rs.6 crore-margin money loan made available to the corporation.

Government's delay in taking timely decision worsened the debt equity position of the firm and overburdened it with debts.

Therefore, it could be seen that the heavy accumulated losses are not mainly due to operation alone, but diversion of funds for payment of salaries and other expenses without operation, gross under utilization of capacity, poor working capital turnover etc. are the other reasons observed.

Timely procurement of raw-nuts from internals sources, forward trading etc. could be resorted to for improving the operations.

SUGGESTIONS TO IMPROVE PERFORMANCE

1. To increase the number of working days to 250

2. To take all efforts to mobilize working capital required for increasing the number of working days.

3. To make necessary steps for timely procurement of the required raw nuts from internal and external sources.

4. To streamline policies on procurement of raw nuts and sale of kernels.

5. To promote and expand indigeneous marketing of processed cashew nuts.

6. To maximize cashew processing with the co-operation of the employees.

7. To achieve value addition by developing by-products through secondary processing.

8. To identify new products by way of related diversification and implement projects for that.

KERALA STATE CASHEW WORKERS APEX INDUSTRIAL CO-OPERATIVE SOCIETY (CAPEX)

The Kerala State Cashew Workers Apex Industrial Co. operative Society (CAPEX) was registered in the year 1984 to work as an apex body to take care of the operations of the ten defunct cashew

factories taken over by the Government, which were owned by private industrialists. Ten cashew factories were taken over by Government during the period 1984-85 and were converted to Primary Societies. The responsibility of CAPEX as an apex society was to procure raw nuts, distribute the same to the primary societies, and get it processed by them and markets the processed kernels.

A performance analysis of the society shows that the society made profits only for two years i.e. 1990-91 and 91-92 in its working for the last 18years. The accumulated loss of the society as on 31-3-2004 has been around Rs.54 crores (see table 6.2)

The cashew processing was stopped in the primary societies in August 2000 due to heavy losses and lack of working capital. An amount of Rs.1.91 crores was developed in the packing credit provided by the State Bank of Travancore. There are liabilities on account of arrears of PF, ESI and other payables. At the same time the Govt. provided an amount of Rs.3.00 crores for restarting operations. The Government in 2002 also provided an amount of Rs.1.50 crores towards payment of arrears and another Rs.0.6 crores towards payment of bonus in 2002. The factories were restarted in July 2002. The amount provided is not sufficient to undertake operations on a continuous basis. Working capital has to be made

available from the Bank for the procurement of raw materials for providing continuous operation.

Though the society had incurred huge losses in its operations, major portion of the loss was due to certain policies and programs of the Government mainly aimed at improvement of the cashew industry in the State. These macro-level policies were implement by the Government through the CAPEX and the Kerala State Cashew Development Corporation (KSCDC), the two public sector undertakings in the industry. The Government also compensates the losses. At the same time, inefficiency is noticed in several areas of their operations too. Serious efforts are being made to address such inefficiencies. This has happened due to heavy losses in these organizations due to unprecedented fall in kernel prices i.e. from $3.10/lb of W320 kernels in November 1999 to $.1.65 in May 2001 and to $1.60 in February 2003. There was a continuous decline in the price and it affected the entire industry, and various steps were resorted to for a come back.

Cashew is considered to be a prime tree nut. The technology is traditional and there is not much of a change. Therefore, the commercial and technical feasibilities are not attempted. It is assumed that the proposal is commercially viable and technically

feasible. What is attempted is to analyze the financial viability in the context of revival incorporating changes. Strict controls are already brought in for reducing the operational costs in CAPEX including restructuring of staff pattern and increasing work load. The financial viability is found good.

Reasons for poor performance of CAPEX

There are a large number of reasons for the poor performance of the Society. They are given below:

1. The Govt. used to misuse the services of the Society to implement some of its policies. Offering reasonable price for the raw cashew nuts to the farmers through monopoly procurements and providing maximum number of days of work to the workers were some of the major policies of the Government. These had led to heavy losses of CAPEX. But at the same time, the Govt. was kind enough to pay for these losses. The payments are made in a delayed manner and hence most of the problems.

2. The purchases are to be done strategically. Purchase failures had happened in CAPEX in spite of adequate

care taken. Problems related to untimely procurement of raw nuts from both internal and external sources are also noticed. This is due to lack of timely availability of funds.

3. The factories were taken over from private owners and steps were not taken to modernize the taken over units. The working conditions in the factories are very poor. Buildings, plant and machinery are very old. Maintenance cost is found to be very high. Absence of continuous processing adds to this problem,

4. Cost of processing is found 30-40 per cent higher than the average in the private units processing costs. Absenteeism, late coming, and old age of the workers result in low productivity.

5. High overhead expenses in the factories and Head office are also resulting in the cost of production.

6. Overstaffing in head office and factories is yet another reason for increasing the costs and the resulting losses. The society has to pay salary to the permanent office Staff and retaining allowance to the factory staff.

7. Inefficiency is noticed at all levels of functions namely viz.purchase, production, sales etc. where professionalism is found lacking.

Revival initiative by Govt.of Kerala

The existence of public sector in traditional industry, such as cashew is found essential to sustain good manufacturing and labour practices in the industry. This is a purposeful intervention by Government to achieve the above objective. The main motivation to revive CAPEX is also the same.

Formation of Cabinet Sub Committee and cost reduction

The Govt. has constituted a sub committee of three Ministers viz. the Hon. Ministers for Industry, Electricity and Labour to discuss issues related to labour and suggest measures to reduce cost of production in CAPEX and KSCDC. The Govt. had already issued an order exclusively for CAPEX with the objective of reducing cost of production ad streamlining operations. The order was implemented during the first round of production activities carried out in CAPEX in the period of July-August 2002. There were opposition and resistance from several corners. But all conditions stipulated in the order are implemented except in the case of payment of increment to

the staff and gratuity to the workers. The order stipulated streamlining of purchases.

Table 6.2 Sales and Profit and loss of CAPEX.

Year	Sales	Profit / Loss
1984-85	168.66	100
1985-86	169.50	101.23
1986-87	1151.65	94.73
1987-88	628.32	136.73
1988-89	800.59	161.80
1989-90	106.74	107.01
1990-91	1450.17	+76.42
1991-92	1064.78	+241.20
1992-93	3226.91	649.15
1993-94	3284.72	276.55
1994-95	4044.45	235.05
1995-96	2762.29	103.59
1996-97	681.29	304.67
1997-98	1397.63	204.10
1998-99	1300.28	196.32
1999-00	3202.39	180.53
2000-01	1181.24	417.36
2001-02	315.71	69.28

2002-03	3917.1	198.41
2003-04	6019.83	177.47

Source: CAPEX (1984 - 2004)

Table 6.3 Working Days from 1984 to 2004

Year	Days
1984	12
1985	159
1986	115
1987	166
1988	118
1989	129
1990	146
1991	97
1992	160
1993	201
1994	178
1995	203
1996	72
1997	90
1998	40
1999	125
2000	73

2001	
2002	29
2003	51
2004	136

Source: CAPEX (1984 – 2004)

Where as in private sector they are giving full employment throughout the year but CAPEX giving employment to its workers less number of days as given in table 6.3. But most of them are not giving wages and other benefits as per the direction of the Government.

The processing charge per bag of 80 kg in private sector is only Rs.700 to Rs.800 but in the case of CAPEX and KSCDC it is more than Rs. 1000 per 80 kg of bag as the amount includes statutory payments like ESI, PF, etc.

If CAPEX and KSCDC can work as a model employer without making losses it will be very good for the industry to protect the interest of the workers and Government and it will help to improve the socio economic situation of the workers and the overall development of the Kollam district.

Conclusion and Recommendation

CHAPTER 7

CONCLUSION AND RECOMMENDATION

India's export earnings for the financial year 2004-05 is Rs. 2600 crores. India is the biggest producer and processor of cashew in the world. Cashew Processing is a highly skilled job. The quality of kernels in the international market is decided by number of white wholes in a pound of cashew kernels. Compared to other processors in the world Indian processors are getting more white wholes because of patients, dexterity of hands etc of Indian women cashew workers and highly related to the working environment.

The socio-economic study reveals that the Government of Kerala is very much concerned about the well being of these people because this is an industry, which gives employment to more than 2.5 lakh people from the lower strata of the society. Different steps were taken to uplift the Socio-economic condition of these groups.

Minimum Wage policy along with social security measures like ESI, PF, LWF etc. were introduced. The Cashew Development Corporation (KSCDC) as well as Cashew Workers Apex Industries Co-operative Society (CAPEX) were formed to work as model

employers in the industry. But, unfortunately, these model employers have not been working as per the expectation of the Government. In addition to the above, the Government also set up a high level committee on cashew to study the problems in cashew industry. This committee recommended various measures for the revival of the industry. Understanding its importance, the Government has taken steps to implement these recommendations.

A comparative study with Cashew Industry with two important traditional industries, Coir and Handloom is also conducted. It reveals the organized nature of the working of cashew industry in comparison with the other two. For the improvement of the socio-economic nature of these workers what is required is continuous employment. Among these resource-based industries, cashew industry alone could be able to give regular employment with all statutory benefits.

In the third chapter, the commercial aspect of cashew is reviewed. The three aspects of the business namely, procurement of raw nut processing and marketing is analyzed showing that the Monopoly Procurement Policy imposed by Government of Kerala is a failure. It is proved that a market-controlled system will be good for farmers as well as industry to sustain.

In processing segment, a lot of improvement is needed by considering the fact that the cashew consumers are mainly from U.S. and Europe. So, this requires quality standards for processing. The processor still follows the old methods for processing in India. Quality standards should be improved to the international standards.

In marketing a quantum jump is needed in promotional aspects. Cashew processors in India do not take adequate promotional support in the international market. The cashew is an agricultural commodity giving an earning of more than Rs.2600 crores from exports. By considering the importance of this huge foreign exchange earnings and because of the recent spurt in demand of this product in the international market with consideration of it as a "tree nut" the government has to take appropriate steps to popularize this through promotional measures.

The value addition and packaging is other important area to be looked into. Even now, the processors are using the old age tin based packaging. It is to be changed to value added product in the eco-friendly packaging as per the requirements of the international consumers. The importers are making several value additions and packaging and gaining much out of it. If it is done here, it will not only increase the foreign exchange earnings but it will also increase

the employment in this sector. Further more, it will definitely enhance competitiveness of our product in the international market.

The production, demand and supply gap analysis shows that India, the highest producer cum processor of cashew in the world, requires about 10lakh MT raw nut for processing but produces only 5 lakh MT. This deficit of 5 lakh MT is met by imports. For getting this raw nut we are facing stiff competition in the procurement market from Vietnam and Brazil and this increases the price of procurement, which in turn leads to high cost of production. To reap the economies of scale, it is necessary to improve the internal production of raw nut in large scale.

The study conducted among the workers, trade unions and owners of the business to evaluate the socio economic situation of cashew workers and reasons for migration of industry to neighboring states based on the primary survey reveal the fact that labour problems and government policies are the reasons for migration of industry to other states. For example, the purchase tax paid by the processors in the neighboring states will be refunded after exports, but this is not followed in Kerala. A change in this method is expected with the introduction of VAT regime. Another interesting aspect is that the labourers themselves are of the view that there is certain

level of labour militancy in Kerala followed by processors. Only trade union leaders disagree with this point.

Another interesting aspect is that the workers are willing to work with low wages provided they get continuous employment. They are not even making distinction whether it is a private or government factory. The study also reveals that the socio-economic condition of cashew workers depends mainly on the number of working days available in a year. Different statistical techniques employed has also shown this result.

Government of Kerala incorporated KSCDC and CAPEX to work as model employers. The formation of this helped the workers to have good bargaining power. If these two organizations could be able to provide employment throughout the year, this would in a way compel the private owners also to provide workers with all service benefits at present prevailing in the government factory set up.

The Kerala state Cashew Development Corporation, the biggest employer in the industry is not able to work as an international business organization meeting international requirements. This is mainly due to inefficiency followed by the changes in policies with the change in government as well as with the change in the top-level

management of the organization. A complete reorganization of the Kerala State Cashew Development Corporation to the international standard is necessary for the protection of the industry.

The operational efficiency of KSCDC and CAPEX should be improved because of the reason that private factory owners purchase raw nut from same market and sells the product in the same market. Hence the need for the requirement of professionalism for meeting these type of competition. Above all these organizations need to pay all type of statutory benefits to its workers giving rise to a situation of difficulty in making profits. The suggestion forwarded by the High Level Committee for the formation of a Research and Development Centre is of considerable significance in this regard.

Potentials of the Industry

India is a country with vast human resources. The cashew industry is a highly skilled labor oriented industry, which is very suitable for Indian condition. Cashew is a commodity with international demand. Statistics shows that it is possible to get an average export earning to the tune of Rs. 2600 crores. If we are able to produce the required raw nuts with in the country this export earning will play an important role in our economy and the socio-

economic aspects of the cashew workers in particular. The processing factories are concentrated in Kollam District, even though other states are also producing raw cashew, 95 per cent of the product is processed in Kollam. As per the statistics 2.5 lakhs employees are directly involved in the processing industry, which is about 10 per cent of the population of Kollam. Out of the 2.5 lakh workers 95 per cent of them are Women workers and about 35 per cent are belonging to SC /ST category. It is a fact that the wages getting to these employees will be directly utilized for the survival of their households. So the survival of the industry is not for the sake of the industry alone but the survival and the socio economic development of the Kollam district itself.

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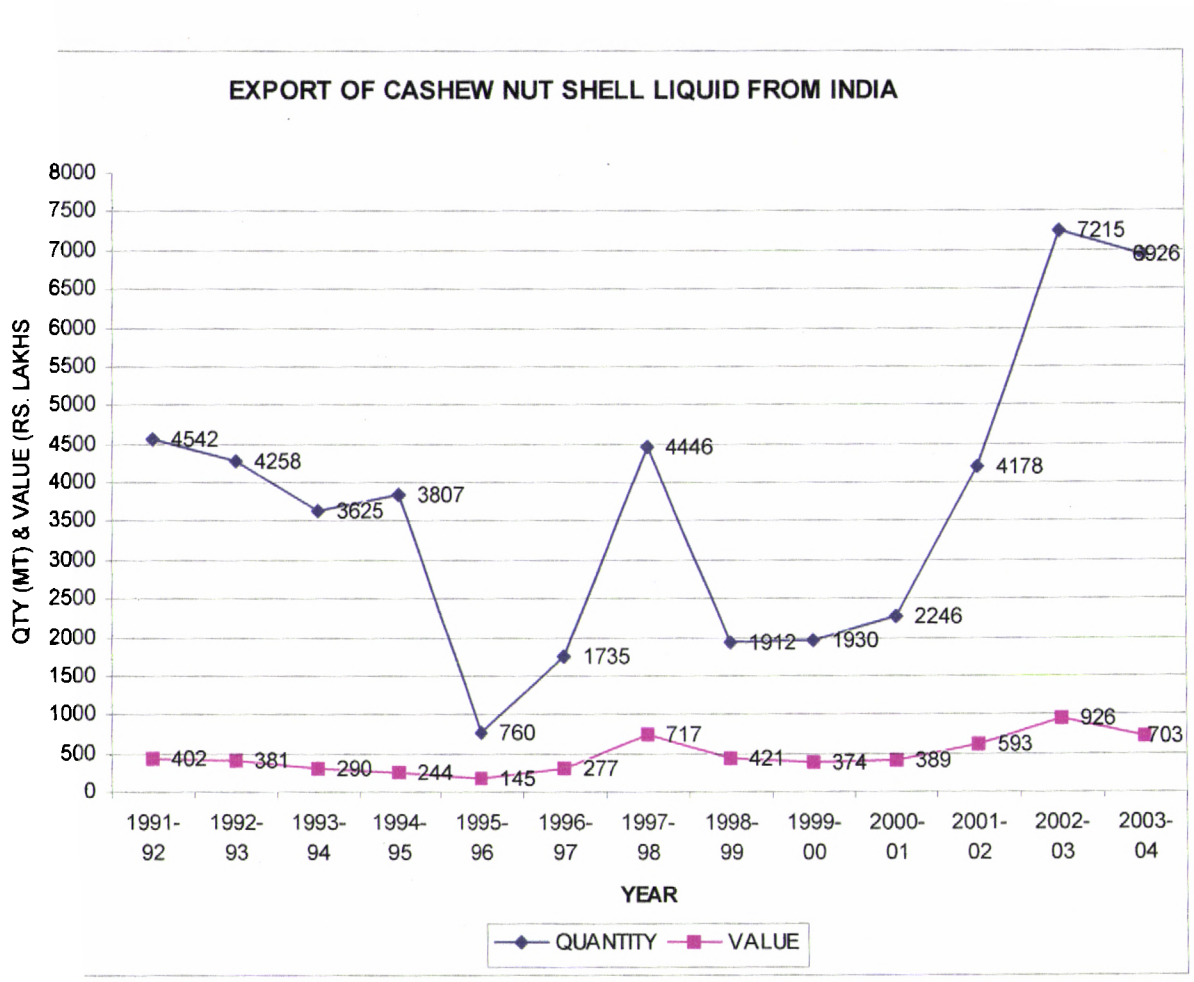
Appendices


EXPORT OF CASHEW NUT SHELL LIQUID FROM INDIA
QTY (MT) & VALUE (RS. LAKHS
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
4542
4258
3625
3807
760
1735
4446
1912
1930
2246
4178
7215
6926
402
381
290
244
145
277
717
421
374
389
593
926
703
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
YEAR
QUANTITY
VALUE

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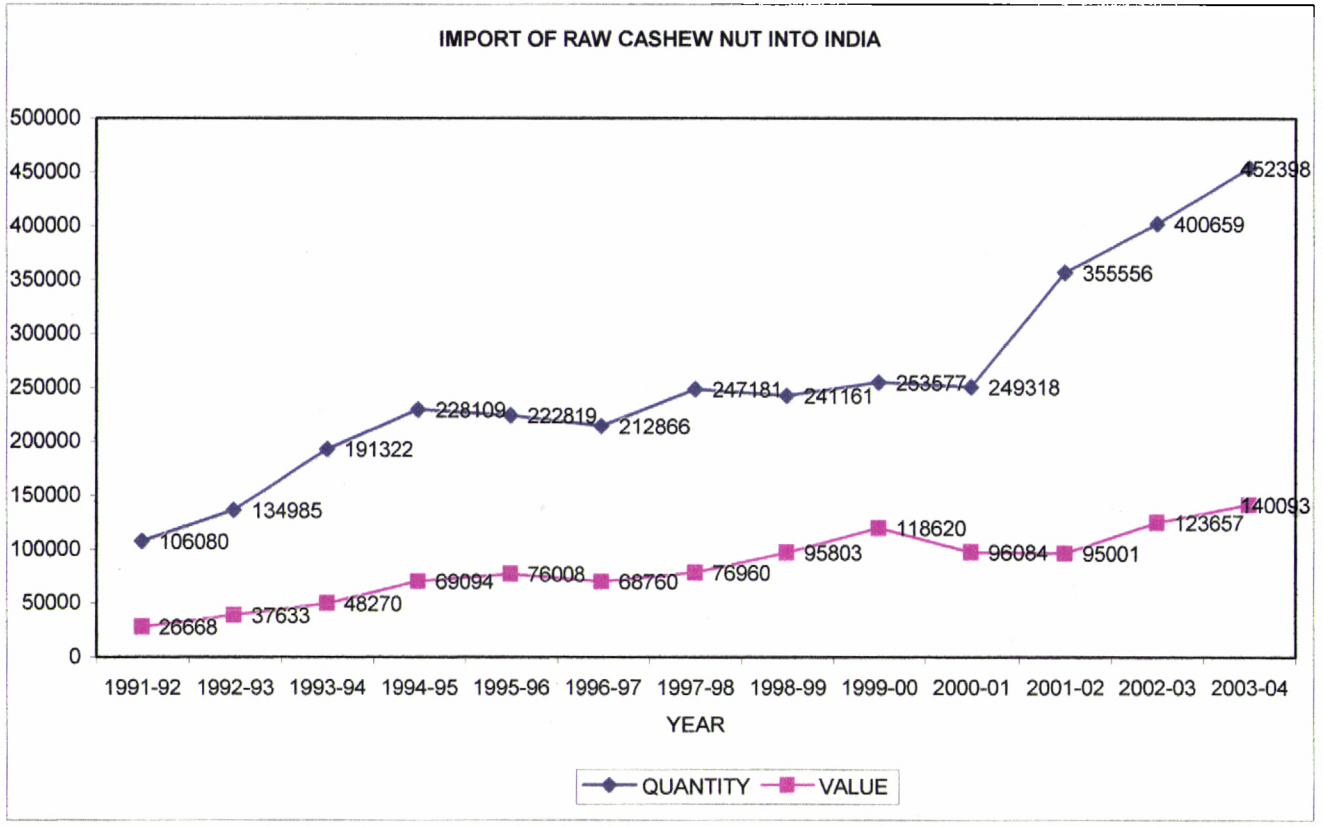
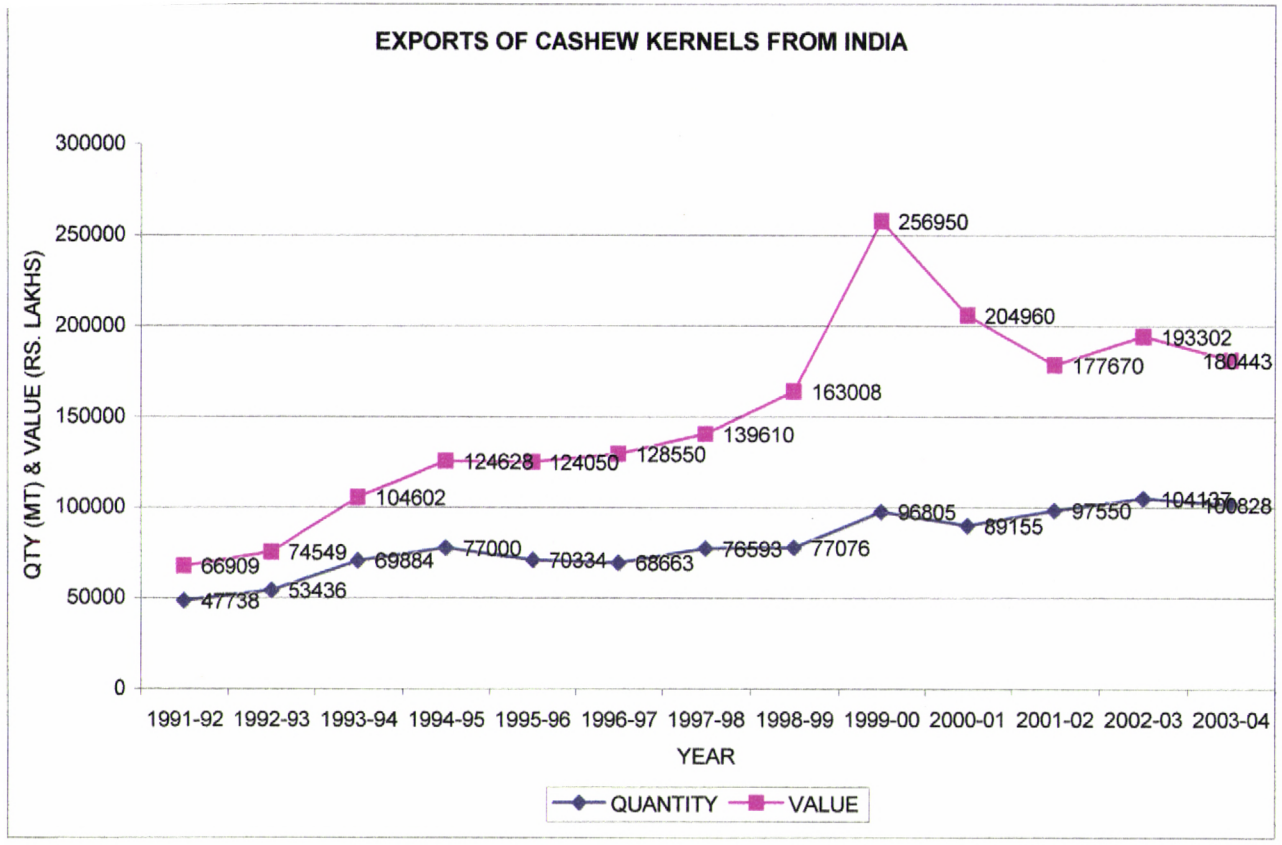
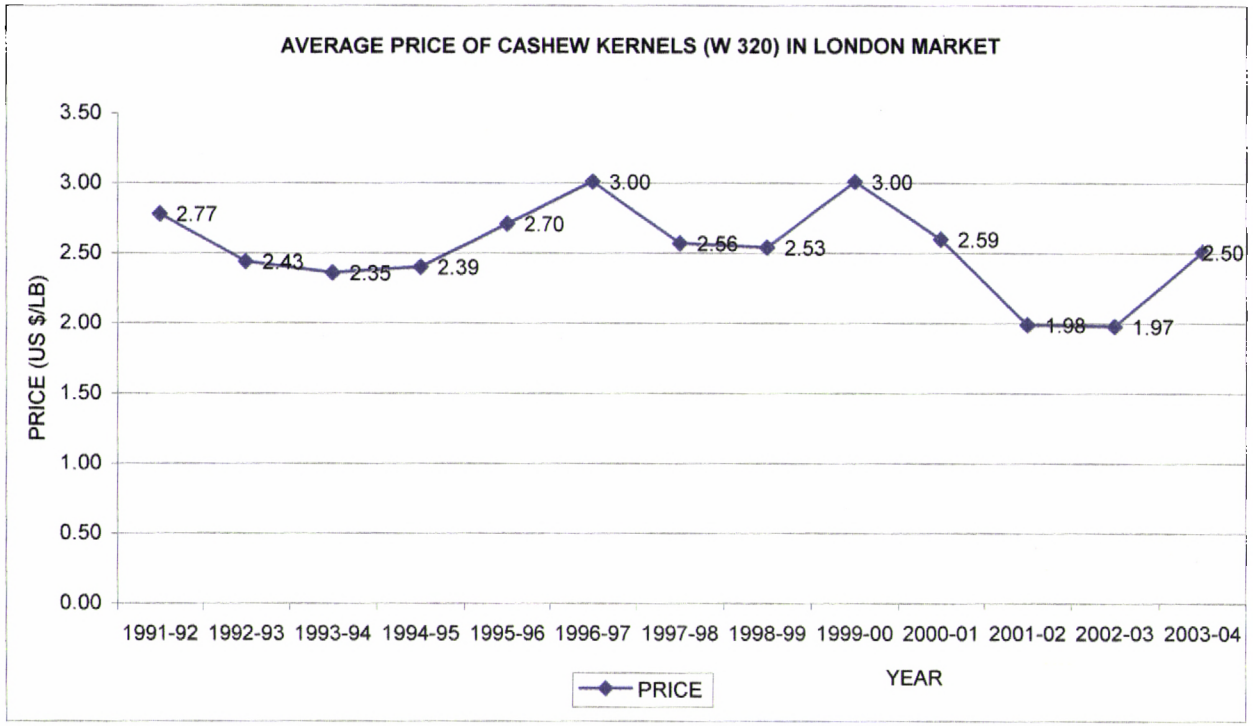
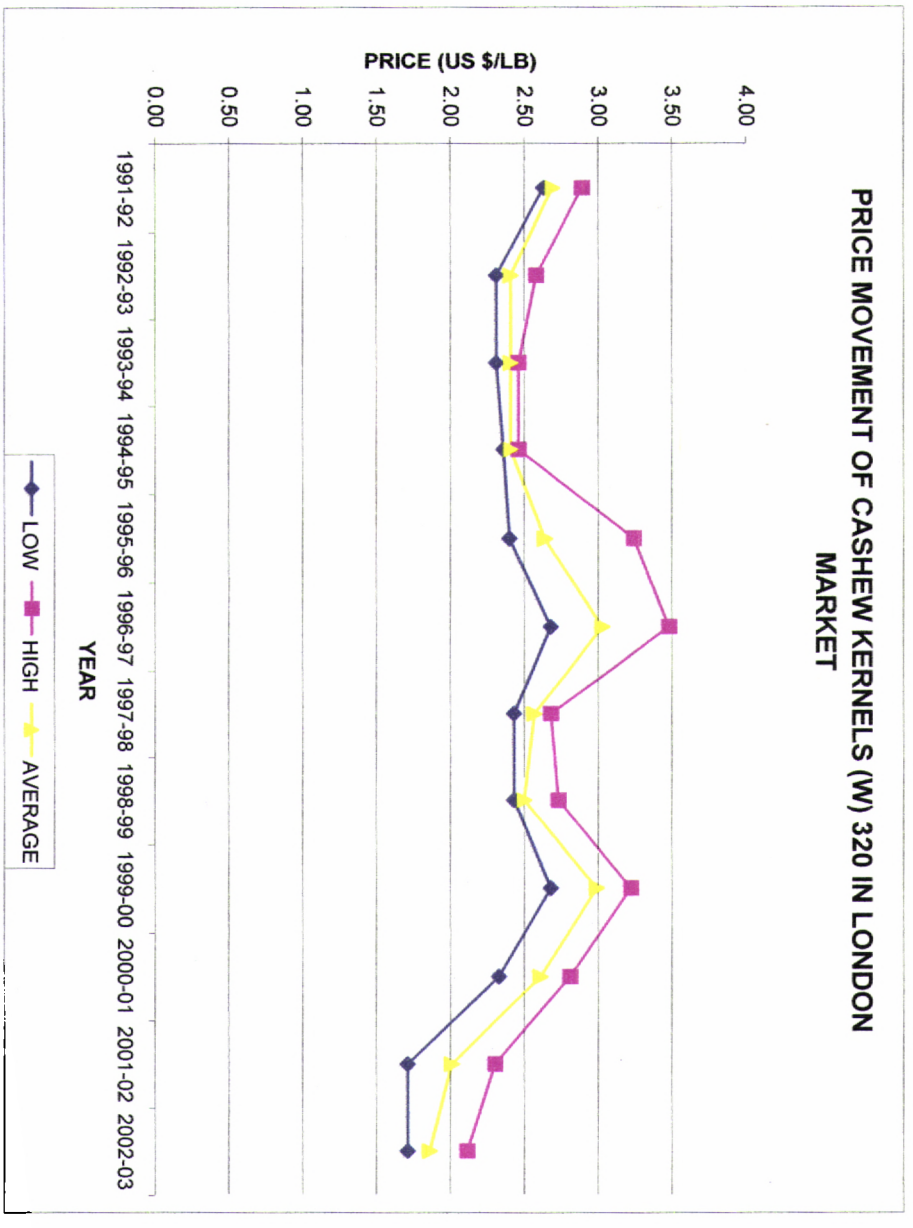

IMPORT OF RAW CASHEW NUT INTO INDIA
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
106080
134985
191322
228109
222819
212866
247181
241161
253577
249318
355556
400659
452398
26668
37633
48270
69094
76008
68760
76960
95803
118620
96084
95001
123657
140093
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
YEAR
QUANTITY
VALUE


EXPORTS OF CASHEW KERNELS FROM INDIA
QTY (MT) & VALUE (RS. LAKHS)
300000
250000
200000
150000
100000
50000
0
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
YEAR
QUANTITY
VALUE
66909
74549
104602
124628
124050
128550
139610
163008
256950
204960
177670
193302
180443
47738
53436
69884
77000
70334
68663
76593
77076
96805
89155
97550
104137
100828

iv


AVERAGE PRICE OF CASHEW KERNELS (W 320) IN LONDON MARKET
PRICE (US $/LB)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2.77
2.43
2.35
2.39
2.70
3.00
2.56
2.53
3.00
2.59
1.98
1.97
2.50
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
YEAR
PRICE


PRICE MOVEMENT OF CASHEW KERNELS (W) 320 IN LONDON MARKET
PRICE (US $/LB)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
1991-92 1992-93 1993-94 1994-95 1995-96 1996-97 1997-98 1998-99 1999-00 2000-01 2001-02 2002-03
YEAR
LOW
HIGH
AVERAGE

PRODUCTION OF RAW CASHEWNUTS BY MAJOR PRODUCING COUNTRIES

Year	India	Mozambique	Tanzania	Kenya	Brazil	Others	Total
1972	56000	173000	117000	25000	41000	2000	414000
1973	61000	170000	107000	13000	25000	5000	381000
1974	81000	213000	137000	26000	31000	5000	493000
1975	91000	188000	142000	31000	61000	5000	518000
1976	107000	122000	86000	20000	46000	5000	386000
1977	102000	91000	86000	13000	46000	5000	343000
1978	122000	61000	76000	5000	71000	5000	340000
1979	122000	66000	66000	10000	66000	5000	335000
1980	117000	71000	51000	18000	66000	12000	335000
1981	127000	91000	57000	17000	76000	12000	380000
1982	112000	58000	44000	12000	81000	12000	319000
1983	91000	18000	33000	8000	91000	12000	253000
1984	127000	25000	48000	19000	61000	12000	292000
1985	137000	30000	33000	9000	117000	12000	338000
1986	122000	36000	18000	10000	122000	12000	320000
1987	127000	41000	16000	9000	76000	12000	281000
1988	132000	41000	24000	13000	132000	12000	354000
1989	152000	15000	38000	13000	163000	15000	396000
1990	132000	20000	20000	7000	146000	9000	334000

Source: Edible Nut Market Reports, Gill & Duffus Group Ltd. London
Man-Producten Rotterdam B.V. The Netherlands and Sindicaju, Brazil.
* : Less than 1000 tonnes

SOURCE WISE IMPORT OF RAW CASHEWNUTS INTO INDIA (JAN-DEC)

Q= Quantity in M.T. V=Value in Rs. (000)

Countries	1993		1994		1995		1996	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Mozambique	14777	352836	20808	548853	7665	183804	31396	1002033
Myanmar								-
Netherlands			100	2670				-
Nigeria	8667	184409	11887	290497	17132	514471	13193	350154
Papua N. Guinea					218	7562		-
Pakistan								-
Philippines	1148	28918	647	18619	778	25181	302	9768
Saudi Arabia								-
Senegal	1132	29127	2420	63606	2893	104443	1393	50626
Singapore	5667	147073	39345	1237810	15022	469448	30001	1058573
South Africa					25	569	920	29560
Sri Lanka								-
Tanzania	38368	894906	56374	1463387	51346	1641836	86232	3030089
Thailand			400	10818				-
Togo	276	5276	204	5039	1489	47039	463	14450
Turkmenistan			67	3548				-
U.A.E.					407	12974	120	3397
U.K.								-
U.S.A.	521	15585			1171	34288	1354	45547
Venezuela							221	6903
Vietnam Soc. Rep	26966	661556	44055	1385810	14109	496945		-
Others	-	-	-	-	-	-	422	10824
Total	136242	3463892	264377	7855610	193425	6278092	220170	7399698

Source: D.G.C. I & S., Calcutta

SOURCE WISE IMPORT OF RAW CASHEWNUTS INTO INDIA (JAN-DEC)

Countries	1997		1998		1999		2000		2001		2002	
	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)
Afghanisthan					3	0.01						-
Australia					168	0.74	184	0.56				-
Benin	12209	38.11	12710	42.64	9875	38.78	27143	105.41	32317	78.31	36922	106.65
Cameroon	1522	4.62										-
Brazil			40	0.1							1147	3.17
Burkinafaso			263	0.88			1306	4.94	245	0.38		-
China					220	0.85						-
Costarica							99	0.34				-
Chinese Taipei					237	0..98						-
El Salvador			457	1.64	442	1.76			249	0.98	341	1.37
France			7	0.16								-
Gambia					1008	4.47	243	1.03	2028	3.96	6194	20.59
Germany			15	0.11								-
Ghana	2108	6.44	2679	9.08	1796	7.5	3475	13.46	3745	8.03	6038	17.06
Guinea	16085	44.1			1120	4.93	3097	14.27			381	1.04
Guinea Bissau	35680	117.69	19020	78.77	20193	98.53	57163	271.57	70118	192.8	68568	243.27
Hong Kong					29	0.14						-
Indonesia	5006	16.71	36684	124.3	20870	96.61	16287	72.07	34414	110.05	44224	147.44
Iran Islamic Rep					103	0.51						-
Israel			498	1.57	180	0.57						-
Ivory Coast	25187	65.03	29009	95.67	16430	68.55	50169	189.73	68829	166.4	84051	236.69
Kenya	207	0.52	465	1.38	12379	54.23	5029	20.82	7613	20.61	7900	22.54
Malagasy Rp	438	1.21	1416	4.72	1405	5.3						-
Madagascar									997	2.26	1995	4.29
Monaco	-	-	-	-	-	-	-	-	-	-	200	0.53

Contd.

SOURCE WISE IMPORT OF RAW CASHEWNUTS INTO INDIA (JAN-DEC)

Countries	1997		1998		1999		2000		2001		2002	
	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)	Qty (M.T.)	Value (Rs. Crs)
Morocco			1152	4.12								-
Mauritus					122	0.57						-
Mozambique	11219	34.01	21709	66.54	27274	114.43	18223	75.22	25952	65.75	28699	76.27
Myanmar			53	0.21	115	0.54	183	0.7				-
Netherlands							200	0.84				-
Nigeria	10568	25.63	11422	33.18	8002	30.3	10742	31.59	9694	19.94	17618	40.04
Panama											113	0.27
Pakistan							21	0.06				-
Philippines			1084	4.41							279	0.82
Qatar					355	1.56						-
Saudi Arabia					735	3.55	2223	8.45				-
Senegal	1799	5.9	5154	22.77	4779	22.7	4993	16.64	5447	13.09	7758	26.41
Singapore	4590	14.18	408	1.68	131	0.61	224	0.87	200	0.47	158	0.43
South Africa	892	2.66	1014	2.99								-
Sri Lanka			618	2.34								-
Sudan					96	0.5						-
Tanzania	27107	91.87	113356	436.14	67111	335.82	66439	321.16	128867	394.34	82995	263.74
Thailand			300	1.01	50	0.23	184	0.61			485	1.77
Togo	95	0.25	384	1.33	167	0.67	121	0.43				-
United Arab Emirates	575	1.34					8	0.03				-
United Kingdom											162	0.57
USA	264	0.74					45	0.3				-
Vietnam	4232	12.74										-
Others	-	-	-	-	-	-	317	1.3	-	-	-	-
Total	159783	483.74	259917	937.74	195395	895.92	268118	1153.01	390722	1077.42	394240	1215.06

Source: D.G.C.I.S, Calcutta, Custom Daily Data

AVERAGE MONTHLY UNIT VALUE OF RAW CASHEWNUTS IMPORTED INTO INDIA

Rs./M..T.

Year	April	May	June	July	August	September	October	November	December	January	February	March
1965-66	918	977	914	918	978	974	879	944	960	908	920	971
1966-67	1041	1071	1715	1777	1776	1878	1533	1758	1615	1525	1527	1509
1967-68	1495	1572	1499	1515	1528	1568	1356	1314	1476	1490	1506	1476
1968-69	1481	1283	1440	1571	1569	1552	1521	1608	1649	1678	1579	1729
1969-70	1677	1560	1701	1672	1700	1667	1602	1733	1738	1700	1798	1763
1970-71	1776	1680	1715	1828	1716	1955	1748	1696	1747	1703	1667	1638
1971-72	1638	1610	1614	1354	1550	1669	1813	1806	1537	1699	1658	1585
1972-73	1544	1594	1616	1669	1377	1540		1632			1617	-
1973-74	1548	1475	1376	1548	2175	1956	2270	1868	2110		2385	2345
1974-75	2304	2302	2296	2158	2234	2340	2330	2395	2296	2303	2329	2147
1975-76	2095	2011	2518	2505	2379	2400	2737	2287	2200	2265	2192	2000
1976-77	2392	2234	2249		2546	2382	2383	2395	2286	2434	2512	2639
1977-78	3018	3052	3142	2984	3316	2853	3390	2469	2556		4065	-
1978-79	3957			3909	4333			4154	2522	4990	4816	-
1979-80	4944	4509	4733	4769	4655	4597	4847	4654				-
1980-81		6544	5535	5899	5950	8534		8483	8545	8000		9155
1981-82	9256	10046	13211	14058	7569	13920	13513	6864			9742	9666
1982-83	5750	9914		9500					7559	5000		-
1983-84				6236	7178		9286	7393		8576	10881	10085
1984-85	11190	10292	10920	12729	10563	10566	9974	10350	10582	10379	10409	3884
1985-86	11584		8500	13461	10828	11588	10592	9772	6238	10719	11694	11240
1986-87	14373	12625	13007	13929	12637	13091	14164	14716	12635	10147	15254	18358
1987-88	16043	15413	15805	15507	16273	15326	17474	15718	15044	15359	16300	14321
1988-89	15245	9441	13730	14805	14711	12764	11537	14584	11990	13483	15553	13788
1989-90	13696	13703	10976	14309	11550	12095	13538	12197	12831	14388	15343	15641
1990-91	13195	13383	13155	15189	16020	20032	16375	17370	15697	20985	17239	16849

Source : DGCI & S and Custom Houses.

AVERAGE MONTHLY UNIT VALUE OF RAW CASHEWNUTS IMPORTED INTO INDIA

(Rs./M.T.)

Year	April	May	June	July	August	September	October	November	December	January	February	March
1991-92	22840	18353	18588	24482	24657	28084	24294	25836	26768	26769	24895	25333
1992-93	29606	28429	30640	25166	24736	27786	27217	21950	24473	25311	25325	29751
1993-94	24331	22892	24131	27580	24157	22032	20622	24424	23877	27359	24557	26903
1994-95	28594	29923	31516	27730	28034	32831	31519	30763	30766	30901	31353	31437
1995-96	34755	33961	29831	30904	27910	30362	38978	38036	38204	36238	36099	35162
1996-97	26416	34532	30762	34484	35523	31260	31474	28789	31764	33355	30747	29939
1997-98	28307	34216	30212	27752	31286	27655	29163	26480	34682	33200	33138	31099
1998-99	28030	30520	36300	33180	36670	37590	37020	43490	43950	44900	42790	44180
1999-2000	40120	39170	41220	46020	41770	49020	41800	43840	45650	61780	47330	50270
2000-2001	37480	39550	37310	51090	41930	42620	41570	40190	36320	32120	29490	29070
2001-2002	24720	24960	23150	24850	24680	25040	27790	28830	28940	29150	30740	28760
2002-2003	26730	26000	27010	30060	33180	34540	33580	33294	31510	29926	-	-

(US $/MT)

Year	April	May	June	July	August	September	October	November	December	January	February	March
1991-92	1151	894	885	961	962	1084	941	999	1035	1030	961	978
1992-93	1144	1098	1183	972	955	1073	1051	848	936	966	967	944
1993-94	777	731	768	879	770	702	657	779	761	872	783	858
1994-95	911	954	1005	884	894	1047	1005	980	980	985	999	993
1995-96	1106	1081	950	985	884	915	1129	1095	1093	1014	986	1022
1996-97	771	986	879	971	995	875	883	806	886	930	878	835
1997-98	790	955	844	777	871	759	805	711	884	843	852	787
1998-99	710	750	860	780	860	880	870	1030	1030	1060	1010	1050
1999-2000	940	920	960	1060	960	1130	960	1010	1050	1190	1090	1150
2000-2001	860	900	840	1140	920	930	900	800	780	690	630	620
2001-2002	530	530	490	530	510	520	580	600	600	600	630	590
2002-2003	550	530	560	620	690	720	700	693	656	623	-	-

Source: DGCI & S & Custom Houses

MONTHLY AVERAGE UNIT VALUE OF CASHEW KERNELS EXPORTED FROM INDIA

(Rs. /M.T)

Year	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
1965-66	5272	5284	5335	5282	5386	5413	5477	5393	5214	5266	5402	5428
1966-67	5778	6022	8278	9331	9713	9942	9674	9339	8905	8635	8192	8058
1967-68	7986	7836	8370	8210	8458	8249	8353	8539	8309	8715	9050	9155
1968-69	9546	9969	9721	9416	9522	9504	9878	9759	9127	9555	9202	9392
1969-70	9409	8802	9415	9006	9477	9550	9277	9397	9509	9949	10288	9926
1970-71	9986	10206	10401	10373	10914	10280	10618	10507	10345	9910	10539	9971
1971-72	10181	10172	10062	10540	10073	9772	10323	9984	10648	9753	9517	10342
1972-73	10267	10258	10092	10735	10556	10565	10469	10221	10340	10205	10268	10515
1973-74	10985	11399	11883	13956	14983	15208	15275	14848	17128	16038	15812	16786
1974-75	17636	19041	18934	19609	19290	15968	19382	16451	18028	17798	17620	17327
1975-76	18578	18813	18245	18201	18276	18483	17681	16945	16678	16957	18656	18356
1976-77	18582	18758	19719	20162	20568	20855	21763	21375	21313	23615	23735	28080
1977-78	31291	35826	37623	39542	36565	38159	42738	39877	34458	34582	34064	32817
1978-79	31998	32739	32856	32858	33005	31525	31505	31826	25961	25778	26100	26814
1979-80	27714	28328	30109	28867	29280	29863	30815	32523	30612	33093	37521	41187
1980-81	43522	42124	42908	42887	42238	44171	36117	43209	46791	48055	51252	49942
1981-82	54840	59340	60212	60937	61027	61086	59822	55159	58398	55776	56222	57369
1982-83	54628	51732	44471	43360	44824	45949	44158	42761	42541	37960	36870	35045
1983-84	34898	34394	36730	38064	39081	39550	40717	43122	46859	52773	56018	52136
1984-85	55501	57023	57794	59293	58964	55021	56173	52365	49712	54711	54635	50365
1985-86	49929	52421	56542	57776	63551	56919	64452	66858	70718	76962	77745	72493
1986-87	73921	72793	75551	76414	78168	79111	83330	84935	85273	86065	88041	87962

MONTHLY AVERAGE UNIT VALUE OF CASHEW KERNELS EXPORTED FROM INDIA

(Rs. /M.T)

Year	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
1987-88	82953	85932	89183	90120	90987	90383	88924	86833	84043	84153	81024	77319
1988-89	80464	80144	79606	80491	80457	82765	82885	76458	82621	84715	82924	83326
1989-90	71532	83367	79205	82046	82401	81329	77596	80130	81891	80642	81515	80040
1990-91	81890	83534	84047	87452	84728	87918	90288	92621	92593	91968	95041	94156
1991-92	104496	111670	120243	138983	149587	102746	152768	146523	150067	147451	150485	156516
1992-93	153253	149874	151353	145608	141937	129875	130122	128239	131574	136413	142253	146725
1993-94	160847	15243	154140	150865	152006	145321	145671	146007	145716	146892	155351	155415
1994-95	163005	156069	159546	157079	161113	158178	163796	156745	166533	165375	167987	162400
1995-96	157080	155461	158367	164947	179146	186831	187514	198060	192360	192183	156937	185649
1996-97	184018	188874	208464	189916	192793	156536	191297	186109	182412	182401	167064	179851
1997-98	183009	183836	189110	190050	191023	177204	172870	179849	181417	183491	184830	185649
1998-99	182488	185317	193241	205655	212815	217322	218427	214621	220280	223082	224685	236811
1999-00	252993	265464	264602	269962	268382	273202	272051	267434	271919	267962	255165	247262
2000-2001	247520	258940	238710	237210	232220	233900	237010	222380	220130	216830	203570	215060
2001-2002	208930	217460	200630	187280	201210	188760	178510	178090	183610	171400	170740	181770
2002-2003	184160	182090	192790	193640	188830	188190	189370	184778	185819	185464		

Source: D.G.C.I. & S. Calcutta & Custom Houses

AVERAGE ANNUAL UNIT VALUE OF EXPORT OF CASHEW KERNELS FROM INDIA (APR-MAR)

Year (Apr. Mar.)	Quantity MT	Value Rs. (000)	Unit Value Rs/MT	Year (Apr. Mar.)	Quantity MT	Value Rs. (000)	Unit Value Rs/MT	Year (Apr. Mar.)	Quantity MT	Value Rs. (000)	Unit Value Rs/MT	Year (Apr. Mar.)	Quantity MT	Value Rs. (000)	Unit Value Rs/MT
1946-47	15410	55,610	3609	1960-61	43625	1,89,130	4335	1974-75	65025	11,81,373	18168	1988-89	33994	27,39,324	80583
1947-48	16906	41,330	2445	1961-62	41756	1,81,705	4352	1975-76	53640	9,61,328	17922	1989-90	45632	36,63,571	80285
1948-49	18578	49,250	2651	1962-63	48555	1,93,613	3987	1976-77	51565	10,59,861	20553	1990-91	49874	4,42,2392	88671
1949-50	19277	56,080	2909	1963-64	50994	2,14,147	4199	1977-78	40300	14,95,392	37107	1991-92	47738	66,90,885	140158
1950-51	26307	85,510	3250	1964-65	55676	2,90,615	5220	1978-79	27084	8,03,672	29673	1992-93	53436	7454893	139511
1951-52	21250	88,900	4184	1965-66	51267	2,73,996	5344	1979-80	38033	11,82,627	31095	1993-94	69884	10460201	149679
1952-53	28343	1,29,774	4579	1966-67	50756	4,27,535	8423	1980-81	32265	14,01,301	43431	1994-95	77000	12462758	161854
1953-54	27056	1,09,906	4062	1967-68	51039	4,30,291	8431	1981-82	30740	18,14,992	59043	1995-96	70334	12405047	176373
1954-55	34784	1,06,968	3075	1968-69	63661	6,09,291	9571	1982-83	30896	13,53,600	43811	1996-97	68663	12855000	187219
1955-56	31359	1,29,246	4121	1969-70	60625	5,74,217	9472	1983-84	36897	15,08,694	40889	1997-98	76593	13961270	182279
1956-57	31275	1,45,345	4647	1970-71	50284	5,20,658	10354	1984-85	32374	17,96,752	55500	1998-99	77076	16300812	211490
1957-58	36735	1,51,568	4126	1971-72	60378	6,13,321	10158	1985-86	37097	22,51,121	60682	1999-00	96805	25694801	265428
1958-59	41020	1,58,525	3865	1972-73	66278	6,88,214	10384	1986-87	43004	32,75,528	76168	2000-01	89155	20495832	229890
1959-60	38789	1,60,514	4138	1973-74	52293	7,44,322	14234	1987-88	35971	31,12,899	86539	2001-02	97550	17767357	182136

COUNTRY WISE SHARE OF EXPORT OF CASHEW KERNELS FROM INDIA

Countries	1996-97			1997-98			1998-99			1999-2000			2000-2001			2001-2002 (P)		
	QTY (M.T.)	VALUE Rs. Crs	% of Total Value	QTY (M.T.)	VALUE Rs. Crs	% of Total Value	QTY (M.T.)	VALUE Rs. Crs	% of Total Value	QTY (M.T.)	VALUE Rs. Crs	% of Total Value	QTY (M.T.)	VALUE Rs. Crs	% of Total Value	QTY (M.T.)	VALUE Rs. Crs	% of Total Value
U.S.A	24877	455.6	35.44	29678	536	38.39	34793	722	44.29	47190	1232.8	47.98	40392	923.6	45.06	48161	884	49.75
Netherlands	16708	321.5	25.01	17827	332.8	23.84	14222	303.4	18.61	18668	502.6	19.56	16069	380.1	18.55	13915	254	14.29
U.K	4180	79.7	6.2	5078	95.7	6.85	5375	117.2	7.19	7016	195.8	7.62	6416	148.7	7.25	6849	125	7.04
Japan	5142	99.1	7.71	5261	97	6.95	4925	108.7	6.67	5003	137.5	5.35	5370	122	5.95	4166	78.1	4.4
U.A.E	2156	40.5	3.15	2437	45.3	3.24	2901	64.5	3.96	3200	84.4	3.28	3688	83.6	4.08	3273	61.8	3.48
France	2891	55.2	4.3	1865	29.8	2.13	2313	45.5	2.79	1866	47.4	1.84	2343	55.3	2.7	2810	58.9	3.31
Canada	427	7.5	0.58	630	11.4	0.82	447	10.1	0.62	1547	41	1.6	1463	32.5	1.59	2370	35.2	1.98
Saudi Arabia	705	12.7	0.99	1013	18.2	1.3	1110	24.8	1.52	1093	29.1	1.13	1630	37.7	1.84	1609	28.5	1.61
Spain	411	7.7	0.6	783	15	1.07	571	12.9	0.79	776	21.3	0.83	1058	24.8	1.21	1219	24.5	1.38
Israel	1115	22.6	1.76	1170	24.1	1.73	1116	26.4	1.62	1088	31.3	1.22	1205	29.2	1.43	1167	24.4	1.37
Singapore	1580	29.2	2.27	1102	18.2	1.3	1037	21.9	1.34	1088	27.7	1.08	1297	24.2	1.18	1590	24.1	1.36
Italy	374	7.2	0.56	883	17.3	1.24	904	18.8	1.15	986	26.6	1.04	1106	26.2	1.28	1143	21.9	1.23
Germany	1506	28.9	2.25	1339	23.1	1.65	1110	22.3	1.37	560	15.1	0.59	922	20	0.98	1138	17.8	1
Australia	990	17.9	1.4	1939	35.1	2.51	1920	40.1	2.46	1696	45.9	1.79	762	17.3	0.84	968	14.7	0.83
Hong kong	1075	21	1.64	700	14	1	957	22.9	1.4	652	18.5	0.72	627	15.6	0.76	575	11.5	0.65

Greece	457	9	0.7	874	16.5	1.18	427	9.2	0.57	434	12	0.47	585	13.9	0.68	522	9.6	0.54
Norway	0	0	0	34	0.6	0.04	38	0.7	0.04	16	0.4	0.02	175	4.2	0.2	586	9.6	0.54
Lebanon	276	4.5	0.35	133	2.8	0.2	16	0.3	0.02	270	7.9	0.31	245	4.6	0.23	575	8.9	0.5
Kuwait	285	5.6	0.43	258	5.1	0.37	229	5.3	0.32	351	9.8	0.38	230	5.7	0.28	376	7.8	0.44
New Zealand	303	5.9	0.46	349	6.4	0.46	382	8.2	0.5	531	14.4	0.56	229	5.5	0.27	411	6.9	0.39
Russia	664	8.8	0.68	1190	16.2	1.16	368	4.8	0.29	363	7.4	0.29	352	5.8	0.28	547	5.8	0.33
Bahrain	166	2.9	0.22	285	4.8	0.34	244	5	0.3	286	7.4	0.29	454	9.5	0.46	287	4.4	0.25
Korea Rep.	305	4.4	0.34	115	2.1	0.15	108	2.2	0.13	176	2.2	0.09	80	2.1	0.1	176	2.9	0.16
Malaysia	368	6.6	0.51	229	3.7	0.27	218	4.8	0.3	66	1.7	0.07	111	2	0.1	132	1.9	0.11
Chinese Taipei	546	10.6	0.82	209	3.9	0.28	146	3	0.18	103	2.7	0.11	127	3	0.15	98	1.6	0.09
Others	1156	20.7	1.61	1212	21	1.51	1199	25.4	1.56	1780	46.6	1.81	2219	52.6	2.57	2887	53	2.98
Total	68663	1285.5	100	76593	1396.1	100	77076	1630.1	100	96805	2569.5	100	89155	2049.6	100	97550	1776.7	100

Source : D.G.C.I & S., Calcutta (P): Provisional figures

IMPORT OF CASHEW KERNELS BY MAJOR CONSUMING COUNTRIES

(Quantity in M.T.)

Countries	1991	1992	1993	1994	1995
USA	47764	59808	57947	59671	52663
Canada	4740	4944	5534	4786	4151
Netherlands	3221	4717	5012	6282	8550
Germany	3674	5103	6486	7983	9616
U.K.	4627	5579	6282	5511	5126
Others - W-Europe	3538	5262	5511	6464	7054
China	NA	998	4990	7507	14991
Japan	5534	4899	5625	6192	6418
Others - Asia	3742	3334	4332	4536	5602
Australia	3311	2948	3765	4491	5534
Middle East	2041	2268	3130	3493	3901
Others	3310	2404	3153	3946	4695
Total	85502	102264	111767	120862	128301

Source :- Man - Producten Rotterdam BV

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NA = Not available

IMPORT OF CASHEW KERNELS BY MAJOR CONSUMING COUNTRIES

(Quantity in M.T.)

Countries	1996	1997	1998	1999	2000	2001
U.S.A	61087	66457	65916	72706	82496	60439 (Jan-Sep)
Netherlands	17420	19428	17613	16272	16734	10594
U.K.	6542	6135	6661	7675	7932	9372
Japan	6555	6527	5532	4886	5660	5746
U.A.E	3150	3430	2900	3850	N.A	3443
Australia	1200	2000	3100	3700	N.A	N.A
France	3800	2750	3300	4639	4524	5154
Germany	2500	3300	3100	2600	2304	3667
Others	25000	26200	27000	29000	N.A	N.A
TOTAL	127254	136227	135122	145617		-

PRICES (C & F) OF CASHEW KERNELS IN LONDON MARKET

(U.S.$. Per lb)

Year	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
1991-92												
W320	2.62	2.88	2.88	2.87	2.87	2.83	2.83	2.68	2.68	2.68	2.68	2.68
L.W.P.	1.90	1.95	1.95	1.00	1.00	1.80	1.95	1.20	1.20	1.20	1.20	1.20
1992-93												
W320	2.45	2.50	2.45	2.44	2.44	2.30	2.30	2.30	2.39	2.57	2.57	2.40
L.W.P.	1.70	1.75	1.70	1.59	1.50	1.40	1.40	1.40	1.45	1.42	1.40	1.35
1993-94												
W320	2.37/2.45	2.37/2.45	2.30	2.30	2.30	2.30	2.35	2.35	2.35	2.40	2.40	2.40
L.W.P.	N.A.	N.A.	N.A.	N.A.	1.35	1.35	1.35	1.35	1.35	1.50	1.50	1.50
1994-95												
W320	2.45	2.45	2.45	2.40	2.40	2.35	2.35	2.35	2.35	2.35	2.35	2.40
L.W.P.	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.98	1.98
1995-96												
W320	2.40	2.40	2.40	2.63	2.61	2.49	2.39	2.47	3.18	3.11	3.03	3.23
L.W.P.	1.98	1.98	1.98	1.98	1.98	1.98	2.15	2.25	2.25	2.20	2.20	2.20
1996-97												
w 320	3.25	3.18	3.47	3.42	3.02	2.93	2.93	2.88	2.88	2.67	2.67	2.67
LW.P.	2.20	2.20	2.20	2.20	2.09	2.09	2.09	2.09	2.09	1.89	1.89	1.89
1997-98												
W 320	2.67	2.58	2.58	2.58	2.77	2.56	2.56	2.53	2.53	2.48	2.46	2.42
L.W.P.	1.89	1.89	1.89	1.89	1.83	1.81	1.85	1.85	1.85	1.76	1.77	1.77

1998-99												
W 320	2.42	2.42	2.45	2.48	2.48	2.49	2.49	2.49	2.54	2.72	2.70	2.70
L.W.P.	1.76	1.74	1.80	1.87	1.90	1.90	1.90	1.90	1.90	2.08	2.07	2.07
1999-00												
W 320	2.67	2.97	2.98	2.98	2.99	3.00	3.00	3.00	3.00	3.21	3.12	3.05
L.W.P.	2.42	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.43	2.53	2.47	2.41
2000-01												
W 320	2.80	2.80	2.80	2.77	2.71	2.65	2.60	2.42	2.46	2.46	2.32	2.29
L.W.P.	2.20	2.20	2.20	2.00	2.00	2.00	1.87	1.75	1.75	1.75	1.75	1.75
2001-02												
W 320	2.29	2.07	2.00	2.00	2.00	2.00	2.00	1.96	1.92	1.94	1.82	1.70
L.W.P.	1.75	1.64	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
2002-03												
W 320	1.70	1.70	1.85	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.02
L.W.P.	1.60	1.60	1.40	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60

N.A.= Not Available

Source: The Public Ledger, London

MONTH WISE AVERAGE UNIT VALUE OF CASHEWNUT SHELL LIQUID EXPORTED FROM INDIA

Year	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1965-66	1573	1707	1618	1577	1559	1597	1527	1320	1479	1365	1398	1188
1966-67	1344	1105	1924	2086	1860	2006	1883	1886	2019	1798	1664	1574
1967-68	1558	1444	1690	1496	1650	1416	1451	1573	1344	1286	1447	1711
1968-69	1180	1254	1322	752	1311	1273	1229	1232	1344	1100	1108	1066
1969-70	1074	1053	1158	1209	1220	1446	1261	1129	1369	1194	1859	1128
1970-71	851	1112	921	1100	1227	1099	1935	1146	1225	1240	1996	1168
1971-72	1000	1278	1016	1140	1140	1113	1189	1048	2065	1211	1076	1341
1972-73	1250	1433	1089	1109	1110-		1244	1244	1244	1006	1006	1006
1973-74	1926	1092		1247	1166	1836	1197	1550	1176	1911	1892	-
1974-75	2065	1911	2150	1993	2417	2221	2308	2428	3380	2539	3321	-
1975-76	2751	2647	2428	2667	1763	2557	2707	2160	2169	1792	2388	1750
1976-77	1905	2248	2779	2835	1755	1954	3110	2794	1864	1888	2500	2414
1977-78	3375	2815	3935	2701	4364	5111	5421	6008	5929	4627	6689	5000
1978-79	6325	5155	7041	6305	8196	6912	10488	10863	9615	11694	9304	10654
1979-80	11558	11437	11334	13198	10703	11340	11160	11714	11291	10919	10998	9911
1980-81	10023	9719	10336	7677	9247	8235	6555	4648	4518	4842	4874	6802
1981-82	6447	4426	4772	4808		4650	4133	4156	4550	4243	4507	4127
1982-83	3065	2205	4958	2320	3613	2657	2591	2984	3123	5031	3429	3891
1983-84	3692	3086	4094	5400	4431	4400	4465	3150	3968	3319	4820	4608
1984-85	4450	4967	4948	4828	5165	6600	5746	5391	6522	7400	6243	5609
1985-86	6255	7300	5777		6738		6313	6593	5168	6270	5282	6073
1986-87	5222	5240	6919	5278	5592	5195	5176	5125	5504	7469	5559	5234
1987-88	4719	5266	6361	6178	14267	7703	11162	8367	7710	8907	9291	8877
1988-89	8536	9242	7083	9018	7382		8204	8847	8992	8636	9896	9771
1989-90	9713	7994	10622	9662	9620	8847		10304	6867	7726	9889	7843
1990-91	8925	9132	6611		7248	6100	9848	8093	6282	8461	7796	7095
1991-92	7028	8697	7370	11133	10988	8580	9169	8754	8255	22020	10777	11000

Source: DGCI & S, Calcutta and Custom Houses.

Contd.

MONTHWISE AVERAGE VALUE OF CASHEWNUT SHELL LIQUID EXPORTED FROM INDIA

(Rs./M.T)

Year	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
1991-92	7028	8697	7370	11133	10988	8580	9169	8754	8255	22020	10777	11000
1992-93	9849	8979	8743	9469	8929	8702	10330	8726	7407	8882	10215	9468
1993-94	9585	7882	6325	8135	14490		6779	8400	24300	10138	8591	7818
1994-95	7938	7981	6586	12313	8031		9875	8786	5985	8461	10429	11771
1995-96	15562		12802	19365	14938		30155	21521	37108		38667	41419
1996-97	20986	11885	14162	39258	37688	9209	33100	21380	33596	18673	38739	23704
1997-98	34333	12859	17593	20383	11005	23755	34186	22020	15300	16777	37250	26659
1998-99	16953	17720	15850	32849	28228	26225	25124	31979	17978	34118	19815	39304
1999-2000	24180	19765	16586	16034	31145	18590	19562	22366	0	12856	26355	37693
2000-2001	13750	20723	18382	30848	33026	19259	26594	17072	11376	19372	18331	16247
2001-2002	13750	22970	15938	16946	13538	13685	32787	15313	26658	15048	13538	17785
2002-2003	11472	13942	20280	17708	12055	22013	21714	16783	11689	14583	NA	NA

(US.$ / M.T.)

1991-92	354	423	351	437	429	331	355	339	319	847	416	425
1992-93	380	347	338	366	345	336	399	337	283	339	390	300
1993-94	306	252	201	259	462		216	268	775	323	274	249
1994-95	253	254	210	393	256		315	280	191	270	332	372
1995-96	495		408	617	473		873	619	1062		1056	1204
1996-97	610	339	405	1106	1056	258	929	598	938	521	1107	661
1997-98	959	359	491	570	306	652	944	591	390	426	958	675
1998-99	427	438	375	773	660	617	593	755	422	803	467	935
1999-2000	566	462	385	370	717	427	450	515	0	295	604	865
2000-2001	315	471	412	669	723	420	574	367	244	416	392	347
2001-2002	293	489	338	359	282	285	683	320	549	309	278	365
2002-2003	235	286	415	365	250	457	452	350	243	304	NA	NA

Source :- Provisional Figures of D.G.C.I & S., Calcutta (US $ conversion as per RBI rates)

1. പേര്

2. വയസ്

3. ജാതി

4. കുടുംബാംഗങ്ങളുടെ എണ്ണം

5. വിദ്യാഭ്യാസ യോഗ്യത

	ഗൃഹനാഥൻ	ഗൃഹനാഥ	ആൺകുട്ടി വയസ്സ്	പെൺകുട്ടി വയസ്സ്
Below S.S.L.C എഴുതാൻ അറിയാം വായിക്കാൻ				
PRE-DEGREE				
DEGREE & ABOVE				

6. വീട്

	സ്വന്തം	വാടക	ഓലമേഞ്ഞത്	ഓട്	ടെറസ്
AREA/NO. OF ROOMS					

7. ഏത് ഫാക്ട്ടറിയിൽ ജോലി ചെയ്യുന്നു

8. ഏത് സെക്ഷനിൽ ജോലിചെയ്യുന്നു

9. എത്ര കിലോ കശുവണ്ടിയാണ് പ്രോസസ് ചെയ്യുന്നത്

10. വരുമാനം

	ഗൃഹനാഥൻ	ഗൃഹനാഥ	മറ്റുള്ളവർ
കശുവണ്ടിയിൽ നിന്ന്			
മറ്റിനം			

11. ചിലവ്

ഭക്ഷണം	വിദ്യാഭ്യാസം	ആശുപത്രി	സമ്പാദ്യം	കടം	മറ്റിനം	താമസം	ബാങ്ക് അക്കൗണ്ട്

12. ജോലി സംബന്ധമായ അസുഖങ്ങൾ ഉണ്ടോ?

ഉണ്ട്	ഇല്ല	ചെറുതായുണ്ട്	തീരയില്ല

13. വെള്ളത്തിന്റെ ലഭ്യത

കിണർ	
ഗവൺമെന്റ്	
മറ്റ് മാർഗം	

14. ലാട്രിൻ സൗകര്യം

ഉണ്ട്	ഇല്ല

15. പത്രം വായന

ഉണ്ട്	ഇല്ല

ടെലിവിഷൻ

ഉണ്ട്	ഇല്ല

റേഡിയോ

ഉണ്ട്	ഇല്ല

ഫോൺ

ഉണ്ട്	ഇല്ല

16. രാഷ്ട്രീയ പ്രവർത്തനം

ഉണ്ട്	ഇല്ല

17. കൂലികുറഞ്ഞാലും തുടർച്ചയായി ജോലി ലഭിച്ചാൽ സ്വീകാര്യം ആണോ?

ആണ്	അല്ല	പറയാൻ ആവില്ല

18. ആനുകൂല്യങ്ങൾ കൂടുതൽ ചോദിക്കുന്നത് കാരണം ഈ വ്യവസായം മറ്റ് സംസ്ഥാനങ്ങലിലേക്ക് പോകുന്നു

ശരി	തെറ്റ്	കുറച്ച് ശരി	പൂർണ്ണമായും തെറ്റ്	അഭിപ്രായം ഇല്ല

19. ജോലിയിൽ സംതൃപ്തി ഉണ്ടോ?

ഉണ്ട്	കുറച്ച് ഉണ്ട്	ഇല്ല	തീരഇല്ല	അഭിപ്രായം ഇല്ല

20. ജോലി ഉപേക്ഷിക്കണം എന്ന് ഉണ്ടോ?

ഉണ്ട്	കുറച്ച് ഉണ്ട്	ഇല്ല	തീരഇല്ല	അഭിപ്രായം ഇല്ല

21. പുതിയ തലമുറയെ ഈ ജോലിക്ക് വിടുമോ?

വിടും	ഇല്ല	ചിലപ്പോൾ	ഒരിക്കലും ഇല്ല	അഭിപ്രായം ഇല്ല

22. സർക്കാർ ഫാക്ട്ടറിയ്ല ജോലി ചെയ്യുവാനാണോ സ്വകാര്യ ഫാക്ടറിയിൽ ജോലിചെയ്യുവാനാണോ താല്പര്യം?

	സർക്കാർ	സ്വകാര്യം	അറിയില്ല
എന്ത് കൊണ്ട്			

23. വ്യവസായത്തിന്റെ ശോചനീയ അവസ്ഥയ്ക്ക് ഉത്തരവാദികൾ തൊഴിലാളികളാണ്.

ശരി	തെറ്റ്	പൂർണ്ണമായും ശരി	പൂർണ്ണമായും തെറ്റ്	ട്രേഡ് യൂണിയനുകൾ	മുതലാളിമാർ	ഗവൺമെന്റ്

24. കശുമാവ് കൃഷി ചെയ്യുവാൻ അവസരം ഉണ്ടായാൽ അതിന് താല്പര്യമുണ്ടോ?

ഉണ്ട്	ഇല്ല	തീർത്ത് പറയാൻ വയ്യ

25. എത്രവർഷമായി ജോലി ചെയ്യുന്നു

26. കഴിഞ്ഞ കാലങ്ങളിൽ ഓരോ വർഷവും എത്ര ദിവസം ജോലി ലഭിച്ചു

Year	No. of days	Year	No. of days	Year	No. of days
1969		1982		1994	
1970		1983		1995	
1971		1984		1996	
1972		1985		1997	
1973		1986		1998	
1974		1987		1999	
1975		1988		2000	
1976		1989		2001	
1977		1990		2002	
1978		1991		2003	
1980		1992		2004	
1981		1993		2005	

To factory owners

1. Name
2. Name of factory
3. Number of factories in

	Kerala	Other states
No.		
Size		

4. Reasons for the sickness of the industry

Reasons for migration of cashew Industry to other states

1. Labour millitancy of kerala
2. Goverment policies of kerala
3. Availability of cheap labour in other state.
4. Availability or Raw nuts in other states
5. Working capaital availability
6. Less over heads in other states
7. Trade union attitude in Kerala
8. Availability of port facility
9. Transporting facility
10. Availability of cheap land.

Trade Union Leaders

1. പേര്

2. യൂണിയൻ

3. കശുവണ്ടി വ്യവസായത്തിന്റെ
ശോചനീയാവസ്ഥയുടെ കാരണങ്ങൾ
എന്തൊക്കെയാണ്

4. നൂതനസാങ്കേതികവിദ്യകൾ ഉപയോഗിച്ചാൽ
ഉത്പാദനം വർദ്ധിക്കുമോ

നന്നായി വർദ്ധിക്കും	വർദ്ധിക്കും	ഇല്ല	തീരെയില്ല	അറിയില്ല

5. യൂണിയനുകളുടെ അതിപ്രസരം
വ്യവസായത്തെ എങ്ങനെബാധിക്കും

പ്രതികൂലമായി ബാധിക്കും	അനുകൂലമാണ്	ഒട്ടുംബാധിക്കില്ല	ഒട്ടും അനുകൂലമല്ല	അറിയില്ല

6. കൂലി അല്പം കുറഞ്ഞാലും തുടർച്ചയായി
തൊഴിൽ കൊടുക്കുവാൻ കഴിഞ്ഞാൽ
അതല്ലെ തൊഴിലാളിക്ക് നല്ലത്

അതെ	അല്ല	കുറച്ച് ശരി	ഒട്ടും ശരിയല്ല	അറിയില്ല