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# EXPORT DEVELOPMENT OF KERALA

(Study on Selected Agricultural Commodities)

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Doctor of Philosophy in Management
under the Faculty of Social Sciences


by

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# D E C L A R A T I O N

I declare that this thesis is the record of benafide research carried out by me under the supervision of Dr. K.C. Sankaranarayanan, Professor and Head of the Department of Applied Economics, University of Cochin. 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.

Cochin-22,
1-3-1988.

(BABY JACOB)

## A C K N O W L E D G E M E N T

The work on this thesis started in the year 1978. However, the vastness of the scope of the theme proved to be a constraint in completing the work earlier. The study has been limited to the development of exports of selected agricultural commodities from Kerala which include Cashew, Fish and Fishery products, Spices, Coir and Non-traditional Agricultural products.

I am deeply indebted to Dr. K.C. Sankaranarayanan, Professor and Head, Department of Applied Economics, University of Cochin for the guidance and constant encouragement but for which I would not have been able to complete this work.

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-BABY JACOB-

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# CHAPTER - I

## INTRODUCTION

In the year 1972 the Market Research Division of the Indian Institute of Foreign Trade, New Delhi, took up an 'Export Potential Survey' of Kerala. The survey identified specific potential areas in the State which could generate export trade growth. These ranged from food and agriculture, minerals, engineering, textiles to handicrafts and other miscellaneous items. The major recommendation of the survey was the creation of an Export Promotion Board at State level to activate export efforts. However, till the end of 1983, even after a decade, the State Government could not implement this recommendation.* There has been a wide gap between the projections and the actual performance except in the case of seafood exports. But recently the State's share of seafood exports has also shown a declining trend.

Kerala, endowed with rich resource potential and unique agro-climatic conditions has not made commensurate progress in export performance when compared to other States which are less privileged. Kerala has to its credit a glorious history of foreign trade stretching over many centuries past. It had enjoyed virtual monopoly over the export of spices, cashew kernels, seafood, coir and coir products. In the case of some of these items

*The Government of Kerala has set up a State export trade development corporation in 1984.

the monopolistic position has already been lost while in the case of others it is under threat. The migration of traditional export-oriented industries from Kerala to adjoining states should be a matter of deep concern. A major part of the cashew industry in the private sector has already moved from Quilon - the centre of the industry in Kerala - to Kanyakumari District in the Tamil Nadu for reasons of lower processing cost and difference in wage rates. The seafood industry, due to declining fish landings and other factors, is also moving from the State's traditional bases. The coir industry is in the grip of a grave crisis precipitated by unrealistic government policies and aggravated by a rapidly shrinking share in the international market.

The present study which is done with a diagnostic perspective assumes relevance in this context. Besides investigating into the causes of the stagnant situation, the study with its specific reference to agricultural exports attempts a critical review of the policies of the government and an evaluation of the programmes and performance of the various organisations entrusted with the responsibility of the development of respective agricultural commodities.

Recommendations are made taking into account global marketing situations, changing consumer preferences highlighting the need to adopt appropriate strategies to consolidate and expand the market share. While an indepth study has been undertaken on major traditional agricultural products, the prospects of new

items of agricultural exports have also been examined in the light of the trends in world trade. The report of the Task Force on Agricultural Exports under the Chairmanship of Shri. G.V.K. Rao, (1978) elaborated specific potential areas where export performance could be emaximised. The recommendations of the Task Force have been evaluated against Kerala's individual potential.

The objectives of the present study are:

(1) To identify the causes for the decline of Kerala's agricultural export performance.

(2) To evaluate the policies of the government and also to assess the programmes/performance of the organisations assigned with the task of development of export trade of specific commodities.

(3) To recommend a plan of action with long term perspectives and suggest appropriate strategies for the export development of traditional and non-traditional agricultural items.

(4) To review the present trends in the world trade of the major exports from Kerala.

(5) To identify prioritywise measures necessary to remove the existing production and performance constraints.

(6) To recommend market consolidation programmes with emphasis on improvement of unit value, quality consistency and diversification of composition and direction of exports.

## METHODOLOGY

### Descriptive Method

(a) Primary data

Primary data were collected through interview of exporters, exporters associations, chief executives/chairmen, secretaries of commodity boards, export promotion councils, trade union leaders, farmers and farmer's organisations etc.

(b) Secondary data

Secondary data were collected from statistical publications, journals, bulletins, market survey reports, reports of trade delegations, proceedings of seminars/symposia, annual reports etc. Reports of academic organisations, books by eminent authors, reviews of reports of surveys, export potential survey reports, recommendations of Task Forces and other specific study groups, International Trade Centre Publications were also referred to.

The existing policies and programmes were reviewed, identifying the causes of shortfall, failures, gap between projections and actual performance to evolve an approach appropriate for the specific situations.

### Hypothesis

Though Kerala has a long history of exports the present situation is far from satisfactory. Apart from the fact that

there has been no appreciable growth rate in exports from this state, a perceptible decline in the export performance of some of the traditional items has also taken place.

Restrictive government policies, political interference, stagnant production levels, and the absence of appropriate marketing strategies have contributed to this state of affairs.

Export of traditional items could be considerably expanded if suitable long term policies are drawn up and faithfully implemented. New items of exports could be identified and developed on scientific basis, exploiting to the fullest extent the agro-climatic advantages of Kerala.

Limitations

The study gives specific emphasis on the development of export of four major groups of agricultural commodities viz., seafood, cashew kernels, spices and coir and coir products. Detailed review analysis of various aspects of these product groups have been attempted. However only a brief survey of the non-traditional agricultural products has been given as any study on this aspect would be voluminous. Hence the present study confining to the four traditional commodity groups will give only a sectoral view of the potential and prospects of agricultural exports from Kerala.

Scheme of the study

The study consists of nine chapters (Chapter I to IX):

The first chapter presents the approach, the objectives, methodology, hypothesis and limitations of the study. It also reviews the reports published and the surveys undertaken so far on the various aspects of the subject of study.

The second chapter traces the ancient trade connections which the Malabar Coast had with other countries of the world. It presents the references in the old Testament and other historical documents about the trade connections that existed between ancient Kerala and the empires of King Soloman, Alexander the Great and subsequently during the days of the Great Roman Empire. It also gives an account of the flourishing trade after the emergence of the Mohammedan power and later during the advent of the Europeans. The development of trade in agricultural products in ancient Travancore is also discussed in this chapter.

Chapter three presents the agro-climatic advantages of Kerala. It outlines the unique geographical features of the state and the varying crop patterns in each region. An account of the different crops of commercial importance domesticated over the years is given here. The need to maximise the distinct regional advantages of Kerala is highlighted in this chapter presenting a future perspective on crop planning for the State.

Chapter four presents a brief history of the cashew industry in Kerala. A detailed review of the period beginning from 1970 is given here highlighting the trends in production, processing and export of cashew. The chapter also tries to identify the various problems of the industry. It discusses the raw material crisis, the impact of the policies of the government and the world market situations. The competition from other producing countries and the levels of per capita consumption in the importing countries are examined. The migration of the industry from Kerala to neighbouring states and the need for a re-orientation of approach at government level to stabilise and develop the industry in Kerala are also discussed.

The origin and growth of fish and fishery products export industry in Kerala is presented in chapter five. The period beginning from 1970 is reviewed bringing out the salient features, changing patterns in the direction and composition of exports and other related aspects. The dispersion of seafood industry to other states in the east and west coasts and Kerala's decreasing share in the export of frozen fishery products and the factors responsible for the phenomenon are also examined in this chapter. The unique advantages of Kerala for developing culture fisheries are also discussed. The need for product diversification and development of new markets are also brought out in this chapter. The various aspects of development of export of fish and fishery products including changeover from institutional to consumer packing, establishing product-image,

improvement of packaging etc. are examined. The chapter also discusses the relevance of tie-ups with multinationals for deep-sea trawling, sales promotion and market development. The need for prevention of acquatic pollution by industrial and other effluents is also brought out here.

Chapter six briefly outlines the history of Kerala's spices trade and brings out the agro-climatic advantages of Kerala for developing the production of spices crops. A review of the spices export from Kerala discussing the trends and patterns and fluctuations in the quantum of exports is attempted here. Various aspects like the emergence of new competitors, stagnant production levels, declining market share, restrictive effect of Government policies etc. are examined in detail. A close look at the prospects of large-scale plantations for spices crops with a view to developing exports is attempted in this chapter. The need to develop export market for spice products, spice oils, oleoresins etc. and the need for setting up a Spices Board for integrating all the activities relating to production, marketing and export of spices are also examined here.

The history of coir industry in Kerala is briefly described in chapter seven. It discusses the composition and direction of exports of coir and coir products from Kerala and reviews the exports during the period beginning from 1970 bringing out the salient features. The chapter examines in detail the declining share of coir and coir products in the world markets, the impact of governmental policies and legislations and the

implications of mechanisation of the industry. While identifying the reasons for the decline in the export trade the various components of a new market developmental strategy are outlined here.

In chapter eight the potential for development of export of non-traditional agricultural products like meat and meat products, processed fruits and fruit products, fresh fruits and vegetables, cut flowers, ornamental plants, cocoa and cocoa products, medicinal plants, herbs, phyto-chemicals, essential oils etc. is discussed. Besides, attention is also focussed on the scope for developing export markets for honey, mushrooms, oil seed extractions, oil cakes and other miscellaneous items. The chapter also outlines the need for identifying appropriate technology for the production and processing of the non-traditional agricultural products and for providing necessary inputs to the farmers/entrepreneurs. It also presents a case for an integrated approach for market exploration and promotion of sales sponsored by Government and also the setting up a specialised agency to co-ordinate all the efforts in the export development of agricultural items.

Chapter nine presents conclusions and recommendations of the study.

# C H A P T E R - II

## FOREIGN TRADE OF KERALA: HISTORICAL BACKGROUND

### Trade contacts in ancient times:

From time immemorial, Kerala had contacts with many countries of the world. Its contacts with the Arabs, the Assyrians, the Babylonians, the Phoenicians, the Israelites, the Greeks, the Romans and the Chinese have been proved beyond doubt. Initially these contacts were purely commercial. But later these led to the introduction of such religions as Christianity, Judaism and Islam into the land and helped to mould the culture of Kerala into a composite and cosmopolitan one.[1]

Ancient Kerala had been famous for the spices and it was her fame as the 'Land of Spices' that brought foreign peoples and cultures to her shores even from the third millenium B.C., if not earlier. The Assyrians and Babylonians whose civilisations flourished in the third and second millenia B.C. in the land of ancient Samur (Mesopotamia or Iraq), carried on an extensive trade in cardamom and cinnamon that came from the Kerala

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[1] Menon Sreedhara, A., A Survey of Kerala History, Sahitya Pravartaka Co-operative Society Ltd., p.53.

coast. The ancient Egyptians also used spices from Kerala to make perfumes and holy oils and also to preserve the dead bodies of their kings and other highly placed persons by a system of mummification.[2]

Refegences in ancient literature:

Reference could be seen in the Bible about the spices from India (Kerala). In the Old Testament (Exodus) chapter 35 it has been mentioned that Moses (B.C. 1500) asked the Israelites to bring cinnamon and other spices for performing various religious rites.[3] Cinnamon is referred to in the Bible as one of the ingredients of holy anointing oils and perfumes used in the ritual of Tabernacle erected by Moses, the great Jewish law giver in the wilderness of Sinai. The date of building the Tabernacle is given as 1490 B.C. and it is clear from this that cinnamon was well known to the Hebrews of the day. Another reference in the Holy testament to the use of spices is in connection with the visit of Queen Sheba to King Solomon of Israel (B.C. 1015 to 966). It is said that Queen Sheba came to Jerusalem "with a very great train with camels and that there came no more such abundance of spices as those that the Queen of Sheba gave to King Solomon".[4] In B.C. 2000 Assyrians and Babylonians bought

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[2] Ibid.

[3] Kerala Charitram, Kerala History Association, Cochin, p.36.

[4] Menon Sreedhara, A., A Survey of Kerala History, op. cit., p.54.

cardamom and cinnamon from Kerala. The spices from Kerala were used in embalming the corpses of the Pharoahs of Egypt.[5]

It has been mentioned in the Old Testament (Chapter entitled Book of Kings) that King Solomon was keenly interested in seafaring and that he built ships and put experienced navigators on board who travelled to the port of Ophira and loaded the hulls with merchandise from the East.[6] The port of Ophira mentioned in the Old Testament is said to be the port of Beypore.[7]

During the 14th century Kozhikode (Calicut) became an international port of great significance. At the time of the visit of Ibnu Batuta, Calicut had emerged as the most prosperous city of the Malabar coast. He travelled from Goa to Quilon and described Calicut as the most important port in the Malabar coast and one of the biggest ports in the world. He had recorded that traders from China, Sumatra, Ceylon, Maldives, Yemen and Persia besides persons from the various countries of the world used to visit these places.[8] At the time of Sulaiman's visit (851 A.D.) Quilon was the chief centre of Chinese trade. The Chinese ships paid a toll of 100 Dinars each at Quilon. Calicut became prominent during the 13th or 14th century with the decline of

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[5] Kerala Charitram, op. cit., p.37.

[6] Ibid.

[7] Ibid., p.25.

[8] Ibid., p.32.

Cranganore (Muziris). Cochin was the last of the ports which came into prominence. The port developed when the Cranganore harbour got silted due to floods in 1341. Cochin was a flourishing centre of trade in pepper and spices at the time of Huan's visit. With the coming of Portuguese in the 15th century Cochin became more prominent.[9]

Classical writers like Pliny and Ptolemy have given detailed accounts of the sea ports through which Kerala kept up her commercial and cultural contacts with foreign countries in the early centuries of the Christian era. The most important of these ports were Muziris, Tyndis and Barace. While Muziris has been identified by the scholars with modern Cranganore, there has been no unanimity in the matter of identification of the other places. Among the ports of ancient Kerala mentioned above, Muziris had an undoubted place of pride. It is referred to as Murachipattanam in the Valmiki Ramayana. Muziris was the gate of ancient India and apart from serving as an ancient emporium of trade for the Phoenicians, the Egyptians, the Greeks and the Romans in turn, it also gave shelter for the first time to the Christians, Jewish and Muslim communities who have enriched the heritage of Kerala. Pliny referred to Muziris as the most important port of India (primum emporium Indiae). He also mentioned that foreign ships anchored at a distance from the port and the cargo was taken into the ship from the shore in 'vallams'. Perhaps this is a reference to the fact that the mouth of the harbour was

[9] Menon Sreedhara, A., A Survey of Kerala History, op. cit., p.62.

not deep enough for the ships to anchor. It has been mentioned that there was brisk trade in pepper at the port of Muziris. "Sacks of pepper were brought from the houses to the markets; the gold received from ships in exchange for articles sold is brought on shore in barges at Muziris where the music of the surging sea never ceases and where Kuttuvan (Chera King) presents to the visitors the rare products of the seas and mountains". Next in importance to Muziris was Tyndis. The place figures in Tamil literature as Tondi. It has been identified by scholars alternatively as Kadalundi, Ponnani and Panthalayani Kollam. Another major centre of trade has been mentioned as Barace which is identified as Purakad, south of Alleppey. Other ports of commercial maritime in ancient Kerala were Varkala and Vizhinjam.[10]

Sumarians and Babylonians maintained close trade relations with Kerala. In the relics of the palaces of the Kings of Sumaria and Babylonia teak was found to be in use which was a product from Malabar. The Persian kings took elephants from Kerala by land to Punjab and from there to Persia to attack Greece in B.C. 480. The Greek physician Discorides in his book 'Materia Medica' had described the medicinal properties of cardamom, cinnamon, ginger, turmeric and pepper. Sanskrit authors have described pepper as "Yavanapriya" (dear to the Greek).[11]

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[10] Ibid., pp.58-60.

[11] Kerala Charitram, op. cit., pp.37-38.

After the Persian conquest of West Asia remarkable progress was made in the trade with India. King Darius explored new land and sea routes to India. Merchandise from India described by Hirodottus included a range of products from Kerala viz., myrrah, cinnamon, gassia, pepper and ginger. The Greek language adopted words like Oryza (Arisi), Aloes (Akil), Ginger (Inchi) and Pepper (Pippali) indicating the extent and intensity of trade which we had with them.[12] Philological evidence has been adduced to prove Greek commercial contacts with Kerala. Dr. Burnell considers the Greek word Zingiber as having been derived from the Malayalam word 'Inchi'. Similarly there is also a view that the Greek word Oryzi (rice) is derived from the Tamil word 'Arisi'.[13]

Reference about the flourishing trade in Kerala could also be seen in "Artha Sasthra" written by Kautilya. Chandra Gupta Mawrya had established trade contacts with Kerala and took diamonds, pearls, ivory and conch to Pataliputra. The Jewish traders who came to Kerala took precious diamonds from here and sold to Roman Emperors like Julius Ceasar and Egypt's Cleopatra.[14]

With Roman conquest of Egypt in the middle of the first century B.C. the Romans actively entered the field of spice trade

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[12] Ibid., p.25.

[13] Menon Sreedhara, A., A Survey of Kerala History, op. cit., p.55.

[14] Kerala Charitram, op. cit., p.39.

and the Arab monopoly was broken. In 45 A.D. the discovery by Hippalus of the existence of the monsoon winds regularly blowing across the Indian ocean gave an impetus to the trade between Kerala and the West. Roman gold and silver were steadily drained into South India in exchange not only for spices but muslin, silk and other costly luxuries. The discovery of Roman coins in many parts of Kerala testifies to the wide dispersion of Roman trade contacts. Pliny estimated that the Roman Empire paid annually a 100 million Sesterces (about £10,87,500) to India, China and Arabia for the purchase of luxuries. The demand for oriental spices especially pepper steadily increased among the Romans. Pepper formed the bulk of the westbound cargo from Kerala. It was valued by the Romans as highly as gold and silver.[15]

In Chilapathikaram it has been recorded that trade with Kerala and Ceylon existed between A.D. 125 and 180. Kerala's economy reached a glorious stage on account of the increase in foreign trade. It has been recorded that during this period 120 ships proceeded from Aden to Kerala coast at a time.[16]

The commercial products of the Malabar coasts have in ages long anterior to the Christian era, acquired a wide reputation in the leading markets of the ancient world and have ever since continued to be fruitful sources of attraction and

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15 Menon Sreedhara, A., A Survey of Kerala History, op. cit., p.56.

16 Kerala Charitram, p.40.

inspiration to the commercial instincts of the civilised nations. Though it may be bold conjecture to postulate that the cinnamon and cassia which played an important part in the religious services of the ancient Jews, had been supplied from Malabar, it may,however, be taken as an undoubted historical fact that the adventurous sailors of king Solomon had found their way to these distant shores and returned to Syria with their tiny crafts laiden with silver and ivory and apes and peacocks.[17]

Queen Hatshepsut sent an expedition of five ships down the Red Sea to obtain spices from the East. The great Egyptian city of Alexandria was for long the leading emporium of trade in oriental spices. The women of Egypt were said to have burnt ginger, cinnamon and other spices on a small charcoal set in a hole on the floor to produce scented fumes to bath their bodies.[18]

On the dissolution of Alexander's Empire the interest of trade with the East did not die out, but only passed into other hands, and Egypt under the rule of Ptolemies, became a great emporium of trade and the centre of commercial enterprises. From the Ptolemies the heritage of Eastern trade passed to the Romans and under imperial Rome commercial relations with the countries of the Southern India continued on an extensive scale

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[17] Nagam Aiya, B., Travancore State Manual, Vol.III (1906), p.180.

[18] Menon Sreedhara, A., A Survey of Kerala History, op. cit., p.54.

as is evidenced by the large number of Roman coins found in Malabar and the adjoining districts.[19]

After the decline of the Roman Empire it was the emergence of the Mohammedan power (Arabs and Moors). Later came the Portuguese in the 15th century to supercede the Moors and then came the Dutch. The French and the English followed in quick succession. The great nations of the world had struggled to secure the monopoly of the Eastern trade. Among the articles of commerce procurable from the East pepper and other spices of the Malabar coast had ever been the most conspicuous. Nations had come and gone with varying success but Malabar had ever continued to retain the interest of the world in it on account of its valuable natural products. She supplied the markets of the world not only with the best pepper and other spices but also with the best copra, coir and cocoanut oil.[20]

The period of trade with the Arabs;

Among the early pioneers of the spices trade were the Arabs and the Phoenicians. Most probably the first long voyage to Kerala coast and other regions of the East might have been undertaken by the Arabs of the Oman and Persian Gulf area and the first cinnamon from Kerala might have found its way to the Middle East through the Arabs. It is suggested that there were

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19 Nagam Aiya, S., ibid., pp.180-181.

20 Ibid., pp.181-183.

close commercial contacts between South India and North India even as early as the age of Indus Valley Civilisation and that several items found their way from the South to the Indus Valley. Some writers have mentioned of caravan routes connecting the Indus valley in North India with the countries of the Middle East. If this was so, it may not be wrong in assuming that there was a direct overland route from Kerala to the Middle East via the Indus Valley and the spices from the Kerala coast might have gone out along this land route as well.[21]

The advent of Islam in the 7th century boosted our trade with Arab countries. Bagdad had trade connections with Indian ports and several Arab merchants lived in Indian coastal cities and ports. During this period the major items of export were pepper, cardamom, camphor, sandalwood, aloe, etc. Animals and birds like elephants, peacock and civet were also exported. Import included gold, pearls, dates and manufactured items. There was great demand for the produce of Kerala which resulted in higher price realisation and a very favourable trade balance.[22]

The period of trade with the Europeans:

During the advent of the Portuguese the foreign trade of Kerala was dominated by Arabs and Muslims. It was during this period that Kerala's trade reached the zenith of its glory. The

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21 Menon Sreedhara, A., A Survey of Kerala History, op. cit., p.54.

22 Kerala Charitram, op. cit., p.31.

Portuguese found that there was keen competition in the field of foreign trade. The merchandise which Vasco-da-gama brought were not in demand in Calicut and the Muslim traders in Calicut tried to block the trade with the Portuguese. Even in this adverse situation the items which the Portuguese could buy from Kerala realised as many as sixty times the cost of journey. This tremendous profit made the King of Portugal avaricious and he determined to monopolise the trade with India.

This led to a prolonged war between the Portuguese and the Zamorins and the muslim tradesmen. The Portuguese emerged victorious and brought the trade under their monopolistic control which ultimately affected our economy adversely.[23] Thus the landing of Vasco-da-gama in Calicut in 1498 marked the beginning of a new era in the history of Kerala.

After Vasco-da-gama's successful visit to India, King Manuel of Portugal lost no time in mounting a large trade mission which set out to India via Cape of Good Hope ih 1500 under Pedro Alvares Cabral. Cabral arrived at Calicut in 1500. He established Portuguese trading posts at Calicut and Cochin. He returned toLisbon in 1501 with rich supplies of pepper, ginger, cinnamon, cardamom, nutmeg, mace and cloves.[24]

The huge profits reaped by the Portuguese attracted other European navigators like the Dutch, the English and the French.[25]

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23 Ibid., p.33.

24 Purseglove J.W., et.al., Spices, Vol.I (1981), Longman, London/New York, p.6.

25 Kerala Charitram, p.34.

During the Portuguese domination trade from Cochin reached its peak. James Forbes, an English historian had recorded that Cochin had became an important centre of trade. The port was full of ships and the streets were crowded with tradesmen.

The Dutch and the Portuguese quarrelled among themselves for the supremacy of the sea routes to Malabar and by 1664 A.D. the Portuguese had practically been driven out of Cochin and Cannanore ports by the Dutch who had virtually become the masters of Malabar coast. Thus the Portuguese chapter in the spice trade of Kerala came to an end. The principal object of the Dutch in expelling the Portuguese from the Malabar coast was to possess the monopoly of pepper trade.[26]

Gallete, a Dutch historian, has recorded that during the 18th century the Dutch sold in Holland pepper at five times the price they bought in Malabar. He mentioned the instance of the Dutch buying 10 lakh pounds of pepper for £12,000 and selling in Europe for £60,000.[27]

The English and the French traders who came to India wanted to impose fixed prices for pepper and other spices. The European traders vied with each other in controlling the prices

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[26] Mahindru, S.N., Spices in Indian life, Sultanchand & Sons, New Delhi (1982), p.126.

[27] Kerala Charitram, op. cit., p.45.

of the produce from Kerala. The rulers of Kerala who realised this, took over the monopoly of trade in spices. In 1743 His Highness Marthanda Varma, the King of Travancore declared the trade in pepper as a State monopoly. In 1785, Tippu Sultan who also imposed monopoly in trade in Malabar for pepper, cardamom and sandalwood inflicted a heavy blow on the English trade interests. This led to the third Anglo-Mysore war after which the Malabar province was brought under the English East India Company. Cochin and Travancore also came later under the influence of the East India Company and thus Kerala's foreign trade was subjugated to the dictates of the English East India Company.[28]

The trade which Kerala had with the countries of the world right from ancient times continued through the centuries.

Export trade in the old Travancore State:

Export trade in the erstwhile Travancore State recorded progress under its enlightened rulers. The liberal measures adopted by the rulers greatly helped the steady expansion of trade as a consequence of which exports registered a growth rate of cent per cent over a period of seven years from 1861-62 to 1868-69. During the year 1903-1904 the state of Travancore exported produce worth a total value of Rs.1,69,78,848 which comprised of copra, coir, pepper, tea, coconut oil, dry ginger,

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[28] Ibid., pp.34-35.

arecanut, salt fish, timber, tamarind, hides, coffee and coconut.[29]

Trade in coconut and its products:

The crucial importance of coconut in the economy of the state was observed by G.T. Mackenzie, I.C.S., a British administrator of the period. According to him Travancore lived on this tree. He had seen the wharves of Alleppey and Cochin covered with various products of coconuts, barrels of coconut oil, tonnes of kernels, bales of coir which find their way to the various ports of the world. He had also remarked that without the money obtained by the export of coconut and coconut products, the people of Travancore could not buy rice from Burma or tobacco from Jaffna. He had mentioned about the preference for coconut oil from Travancore in London market compared to the same product from Ceylon.[30]

The dried kernel of coconut known as copra was one of the principal articles of export. Large quantities were yearly exported to Bombay, Karachi and other places. The first export of copra to European ports was made by Mr. James Darragh of Alleppey by about 1882 but he could not continue the business. M/s. Peirce Leslie of Cochin took up the trade in 1897 and continued for four successive years. There was a break at the end

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[29] Nagam Aiya, B., op. cit., p.188.

[30] Ibid., p.191.

of this period perhaps due to lack of demand. However, the business was revived in 1904.

Export of coconut oil was started in Alleppey by two European firms. But owing to prohibitive duties and absence of facilities for shipping they later moved to Cochin. M/s. Darrah Smail & Co. later started coconut oil export trade in Alleppey.

Coir was exported largely as coir yarn and coir mattings The coir matting industry was first started by James Darragh which was successfully continued for many years. Subsequently a large number of local firms also started the business and heavy shipments were made every year to the different ports of the world.[31]

Growth of trade in pepper:

There was a decline in the export trade in cardamom from 1894-1904. However, pepper was exceptionally free from wide fluctuations from year to year. It was exported to Bombay and other places in British India as well as Colombo, New York and London. It is worth mentioning that the export trade of pepper registered an impressive growth from 15,237 candies in 1893-94 (M.E. 1070) to 21,244 candies in 1903-04 (M.E.1079).[32]

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[31] Ibid., p.196.

[32] Ibid., p.203.

Mr. G.T. Mackenzie, in his address to the students of Maharaja's College, Trivandrum made the observation that the State of Travancore stood on firm ground because the state exported produce which were not easily produced outside the British empire. He remarked that pepper, the time honoured crop, made this coast to be known as the Pepper Coast. It was pepper which attracted Vasco-da-gama to this coast centuries ago.[33]

The history of export trade of Kerala is replete with past glory which would serve to inspire the present generation of entrepreneurs. Some of the traditional export items even today form a good portion of the agricultural exports from this state with no appreciable change in the product composition.

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[33] Ibid., p.191.

# C H A P T E R - III

## AGROCLIMATIC ADVANTAGES OF KERALA

Though Kerala accounts for only 1.18 per cent of the total land area of India, a large variety of crops of commercial significance are grown in the state.[1]

The state has a long coastal belt, a mountainous range and a vast mid region. A very wide range of soil types are found in the state ideally suited for many crops of diverse nature. The coastal belt itself has distinctly different soils like lateritic, alluvial and sandy loam. According to agro-metereologists what constitutes a unique agro-climatic region are total rainfall in the area, annual distribution of rainfall, temperature conditions and the amount of sunshine.[2] Kerala has abundant rainfall, sunshine and a range of temperature to suit the different crops grown.

### The Crop Pattern:

Kerala has a wide spectrum of plantation crops unlike in any other part of the country. Tropical crops like coconut,

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1 Thampan, P.K., 'Coconut Development in India - in restrospect', Souvenir on Diamond Jubilee of Coconut Research in India (1976), p.46.

2 Handbook of Agriculture, Indian Council of Agricultural Research, New Delhi (1980), p.12.

rubber, pepper, arecanut are grown extensively in the state as tropical agro-climatic conditions prevail in major part of the area. Coffee and tea are grown in the sub-tropical regions in the hilly areas. For many centuries past, a wide range of spices crops have been grown in the state winning it the fame as the 'Land of Spices'. Pepper, cardamom, ginger, turmeric, cloves, cinnamon and nutmeg thrive very well under the eco-geographical conditions prevalent here. Many of the crops successfully grown in the state are of exotic origin. Tea, coffee, rubber, cashew, tapioca and cocoa are some of the crops of exotic origin which have thrived on the congenial eco-physical, agro-climatic and socio-economic conditions available in the state accounting for the largest area under most of these crops in the whole country. The distinct agro-climatic advantages which made some of the important commercial crops uniquely successful in Kerala are examined below in detail to identify the specific positive factors which led to the situation.

Coconut (Cocos nucifera)

Coconut palm has been known to exist in the country since 3,000 years. The coastal belt of Kerala provides the optimum eco-physiological factors for the successful cultivation of coconut. Before the dispersion of coconut cultivation to neighbouring States, Kerala accounted for more than 70 per cent of the total area under the crop in the country.[3] In

[3] Thampan, P.K., op. cit., pp.46-47.

1981-82 the State had an area of 667,800 hectares under coconut which formed 62 per cent of the total area under the crop in India.[4] The coconut growing areas in Kerala have soils which are broadly categorised as sandy loam, alluvial and lateritic. The coastal belt have soils which are well drained and possessing good water holding capacity. Coconut is a crop which requires abundant sunshine and a well distributed rainfall. The South West and North East monsoon and the intervening summer have considerably helped in the successful establishment of the crop in the state. Basically the potential for extensive coconut cultivation in the state was derived from the congenial climatic factors prevalent here.

Rubber (Hevea brasilienseis)

Originated in Brazil Rubber was introduced into Kerala on commercial scale of cultivation by the British planters in 1902. Since then the crop has extended to vast areas in the state. Today Kerala is the largest rubber growing state in India with a total planted area of 2.6 lakhs hectares under the crop which is equivalent 86.6 per cent of the total area under rubber in India.[5] More than the eco-geographical factors it was the socio-economic factors which helped the significant extension of rubber cultivation in the State. Being a tropical crop rubber thrives very well in the laterite loamy soils of Kerala

[4] India's Production, Export and Internal Consumption of Coir, Coir Board (1983), p.1.

[5] Rubber Board, Kottayam.

with abundant sunshine and a rainfall which is more than the actual requirement of the crop. In the present context it is more appropriate to increase the yield per hectare of the cropped area by intensive agronomic practices maximising the climatic and edaphic factor endowments.

Cashew (Anacardium occidentale)

Cashew is a crop of Brazilian origin. It was introduced into Kerala by the Portuguese about four centuries ago. A hardy tropical plant cashew soon established successfully in the state.[6] Today Kerala is the largest single state growing cashew with an area of 147,363 hectares under the crop.[7] It is equivalent to more than 30 per cent of the total area under cashew cultivation in India. While cashew cultivation has now dispersed widely to other states in India, Kerala has the highest yield per hectare. This high productivity is the result of the favourable agro-climatic conditions in the state.

Cocoa (Theobroma Cacao)

The crop which is of South American origin was only recently introduced into Kerala. The largest area under cocoa in the country is in Kerala where it is grown as a mixed crop in

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6 Indian Cashew Journal, Vol.XII, No.1, p.10.

7 Status paper on Cashew, Directorate of Cashewnut Development, Cochin (1984).

coconut and arecanut gardens. The cultivation of cocoa has proved to be such a phenomenal success that there was a problem of disposal of the surplus production. Being a crop of the humid tropics cocoa found Kerala as an ideal habitat which caused the spontaneous success in the production of the crop.

Cocoa thrives well with a rainfall well spread and ranging from 150-200cm. annually. It tolerates a temperature from 15°C to a maximum of 40°C.[8] Temperature around 25°C is considered ideal. It grows on loose soils allowing root penetration, movement of air and retention of moisture. The clay loams and sandy loams in Kerala are ideal subtrata for cocoa.

Pepper (Piper nigrum)

Pepper is the most important and earliest known spice cultivated in Kerala. More than 90 per cent of the total production of pepper in the country is from Kerala. A crop of the humid tropics pepper thrives well with the agro-climatic conditions of the state. Being a water pollinated crop it depends heavily on the monsoon for fruit bearing. An annual rainfall of 250cm. is considered ideal for the crop.[9] It thrives best on forest soils or loamy soils with humus content. The temperature range ideally suited for pepper is between 10°C to 40°C.

8 Cocoa, Directorate of Cocoa, Arecanut and Spices Development, Calicut (1979), p.1.

9 'System of Pepper Cultivation', Report of the International Seminar on Pepper (1976), p.11.

What made pepper to establish successfully in Kerala is the ideal agro-climatic conditions prevalent here.

A large number of cultivars of pepper have naturally evolved under the ecological and climatic system in the pepper growing areas in the state. This establishes the congeniality of the various factors for successful cultivation of pepper in the state. The future strategy of production of pepper has to be based on higher productivity. There is hardly any scope for further extension of area under the crop. Hence it is imperative to employ agro-techniques like selective breeding of high yielding varieties and optimal utilisation of inputs to maximise productivity making use of the abundant climatic and ecological advantages for the crop in the State.

Cardamom (Elettaria cardamomum)

Kerala which accounts for 63 per cent of the total registered area under cardamom cultivation in India has been recognised by botanists as the natural habitat of the smaller type of cardamom known by the scientific name Elettaria cardamomum. The hills in the Western Ghats north of Thamraparni river were being referred to as the cardamom hills of Travancore.[10] The scientific name Elettaria has been derived from the Malayalam word 'Elathari' by Maton who segregated it in 1810 as 'Malabar cardamom' distinct from Ammonium cardamom.[11]

[10] "South Indian Cardamom and their Agricultural Value", I.C.A.R Bulletin No.79 (1958), p.16.

[11] Ibid.

What constituted the 'cardamom hills of Travancore' to be the house of smaller cardamom are the unique eco-geographical and agro-climatic conditions prevailing in the region. The cardamom produced in the state has certain distinct characteristics like colour, flavour and fragrance which have created a specific market demand for it. This advantage could be maximised by selective propogation and scientific agro-techniques.

Ginger (Zingiber officinale)

One of the oldest spices grown in Kerala, ginger is the third important spice exported from the state. An area of 12,360 hectares are under the crop in the state annually producing 30,480 metric tonnes of ginger. Ginger is said to have had its origin in Kerala. However, there are other investigators attributing its origin to China or South East Asia.

Ginger grows best in warm and humid climate upto an altitude of 1,500 metres. It needs heavy and well distributed rainfall and thrives well in soils with good drainage. The different types of soils in the ginger growing track in the state range from sandy loam, lateritic loam, to clayey loam.[13] Almost the entire quantity of dry ginger exported from the country is of Kerala origin. The distinct features of ginger produced in Kerala are its high volatile oil content and strong

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[13] Ginger, Directorate of Cocoa, Arecanut and Spices Development, Calicut, 1978, pp.1-5.

pungent taste. These characteristics make the product distinct from those produced in other states. Further, the low moisture content and lower fibre content of Kerala ginger have created a specific export market demand for it.[14] The varietal characteristics of the ginger cultivated in Kerala in combination with compatible agro-climatic conditions prevalent in the state are determinants of the distinct features of quality of the product. In view of the increasing competition from other producing countries in the world the position could be sustained only though an appropriate production strategy to further improve the distinct quality features of the ginger produced in Kerala. This could be done by evolving cultivars with desired characteristics as low fibre, low moisture, high oleoresin, high pungency, buff colour etc. Expansion of export trade in ginger largely depends upon the improvement of quality of the product.

Turmeric (Curcuma longa)

A tropical herb, turmeric has been successfully grown in the state for many centuries. Turmeric is believed to have originated in the Malabar coast. It thrives well in rich loamy soil with good drainage. Though Kerala has only the 7th position in the production of turmeric in the country, the varieties grown in the state have good export market demand. The entire quantity of the variety known as 'Alleppey turmeric' grown in

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14 Proceedings of the Third Annual Symposium on Plantation Crops (PLACROSYM III) (1980), p.34.

the state is exported.[15] The quality factor of this variety responsible for the specific demand in the export is the high curcumin content.[16] As in the case of ginger it is the distinct features of the turmeric produced in Kerala which have to be further improved to expand the exports of this item. Evolving varieties with desired characteristics and maximising the edaphic and climatic benefits would be the right strategy for future.

Clove, Cinnamon and Nutmeg (Eugenia caryophyllus) (Cinnamomum zeylanicum) (Myristica fragrans)

It was the pioneering efforts of the British East India Company which introduced into India the spice crops of clove cinnamon and nutmeg. These crops were first grown in the 'spice garden' at Courtallam in Tamil Nadu.[16] In 1767 a spice estate in Anjarakandy in North Malabar was established which later won the fame as the largest single estate in the world for cinnamon.[17]

According to the survey conducted by the Indian Council of Agricultural Research, hill regions of South West of India ranging from 300-900 metres above sea level covering parts of Kerala, Tamil Nadu and Karnataka are suitable for clove cultivation.[18] In the earlier days clove was grown in the southern

14 Devakaran, D., "Indian Export Trade on Ginger and Turmeric", Proceedings of the National Seminar on Ginger and Turmeric, Calicut (1980).

15 Ibid.

16 Ginger, Directorate of Cocoa, Arecanut and Spices Development, Calicut (1979), p.1.

17 Mahindru, S.N., Spices in Indian Life (1982), pp.143&144.

18 Report of the National Commission on Agriculture, Part VI, Ministry of Agriculture, New Delhi, pp.386-387.

region of the erstwhile Travancore state and the slopes of the western ghats of the former Cochin state. The crop is found to thrive in the black loamy forest soils but grows satisfactorily on laterite loams and clay loams as well. It is strictly a tropical plant requiring a warm humid climate. It is these agro-climatic conditions which helped the expansion of clove cultivation in Kerala. Today the state accounts for the largest area under clove in the country with an extent of 600 hectares approximately.[19] As clove is at present imported to meet the domestic demand there is significant economic potential for the development of the crop in the state.

Kerala has the largest area in the country under cinnamon cultivation. It is considered to have had its origin in the Malabar coast and Ceylon, though cultivation on plantation scale was started in 1767 by the British planters. It is grown in a wide range of soils with an admixture of humus. Annual rainfall of 200-250cm. is ideally suited for the crop. The quality of the bark of the tree which is the product of commercial importance is influenced by the edaphic and ecological factors.

Production of cinnamon in the country is insufficient to meet the internal demand. Hence the requirement is met

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[19] Clove, Directorate of Cocoa, Arecanut and Spices Development (1979), pp.1-2.

through imports of cinnamon and cassia. Only cinnamomum zeylanicum which is grown in Kerala and Ceylon is considered to be true cinnamon while other species of cinnamon known as cassia are considered to be secondary in quality.[20] In view of the current and prospective demand in the country as well as the export potential when surplus production levels are achieved, cinnamon is of considerable economic importance to the state.

In the case of nutmeg also, Kerala accounts for the largest area under the crop in the country. Though the plant originated in Indonesia it has successfully adapted to the agro-climatic conditions in the Western Ghats. The crop thrives very well in warm humid climate. While a well distributed annual rainfall of 250cm. is ideal for nutmeg it cannot tolerate either excessively dry or water logged conditions.[21] In the recent years the cultivation of nutmeg became more prevalent in Kerala due to the efforts of the state department of agriculture. It is grown in coconut gardens as a mixed crop. As congenial agro-climatic conditions prevail in the state for the successful cultivations of nutmeg the area under the crop could be further extended.

Miscellaneous Crops:

A wide range of medicinal and aromatic plants and herbs are grown in Kerala. However, the potential is only marginally exploited inspite of the congenial ecological and climatic factors

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20 Ibid.

21 Nutmeg, Directorate of Cocoa, Arecanut and Spices Development (1979), pp.1-2.

for the successful growing of these crops. Even those crops which have been raised in the state for several years in the past are getting reduced in area due to various reasons like problems of marketing and relative advantages from growing alternative crops.

Lemongrass (cymbopogon flexuosus), citronella grass (cymbopogon winterianus), palmarosa oil grass (cymbopogon martinii and vetivir (vetiveria zizanoides) are some of the aromatic oil plants successfully adapted to agro-climatic conditions of the state.[22]

Medicinal plants like Rauwolfia (Rauwolfia serpentina), Belladona (Atropa belladona), Senna (Cassia angustifolia), Opium poppy (Papaver somniferum and Foxglove (Digitalis lanata) would thrive under the soil and climatic conditions of the state.[23]

While some of the crops of commercial significance now grown in Kerala have been of exotic origin but were successfully domesticated, many crops like cardamom, ginger, turmeric, pepper are believed to have originated here. It is pertinent to infer that the process of evolution of the crops of indigenous origin was activated by the congenial agro-climatic conditions of the region. The successful adaptation of exotic tropical crops to the eco-climatic system of the state demonstrates its inherent advantages which helped the process. The specific varieties of

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22 Handbook of Agriculture, Indian Council of Agriculture Research, New Delhi (1980).

23 Ibid.

ginger, cardamom, pepper, turmeric etc. which have marked export demand due to their intrinsic quality factors, have to be further upgraded to sustain and expand the demand. The monopoly position which the state had enjoyed in the past in respect of these crops is fast getting eroded as the crops are increasingly being cultivated in other states in the country. Cardamom is successfully grown now in Sikhim and West Bengal while ginger cultivation has extended to Meghalaya. Coconut and cashew have spread extensively to many states in the country. In view of these developments, the advantages of the state's eco-climatic system may lose its dominance in the coming years. Hence an appropriate strategy for varietal upgradation and development of high yielding strains of the crops with required quality characteristics would become necessary.

# C H A P T E R - IV

# C A S H E W

## ORIGIN OF CASHEW INDUSTRY IN KERALA

### Historical background:

The Portuguese who came to Kerala four centuries ago brought with them cashewnuts and planted them in the sands of Kerala. Cashew was initially planted for checking soil erosion. Slowly the tree established itself in the west coast of India and later in the east coast and other parts of the country. During the early stages of cashew production it was the fruit or apple which was considered of value. It was only in the beginning of the present century that the cashew kernel or the kernel inside the nut was found to have value and thus its economic and commercial importance came to be recognised. In the earliest method of processing, the raw nuts were burnt in open fire or in a pan. When the cashew nut shell liquid was nearly burnt away, the brittle shells were removed and the wholesome kernel taken out. In those days it was a common sight to see village women sitting on the wayside selling cashewnuts which was known in the local language as Parangi Andi (meaning: Portuguese nuts).[1]

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[1] "The Indian Cashew Industry , Indian Cashew Journal, Vol. XII, No.2, Cashew Export Promotion Council, Cochin,1979, pp.3-4.

Cashew processing industry had its beginning in Mangalore but soon it shifted to Quilon in Kerala. More processing units were started there within a short period and Quilon became the centre of cashew industry in India, giving employment to thousands of workers.

The beginning of exports

Between 1900 and the outbreak of the first world war in 1914, very small quantities of unbleached cashew kernels were exported from India. The shipments were mainly destined to Marseilles and occasionally to London. The unpeeled kernels were packed in wooden cases which were lined with paper. Small quantities of cashew kernels were imported into U.S.A. as early as 1905. Import trade started after representatives of General Foods Corporation discovered these nuts during their mission to India in early 1920s. The first shipment consisted of small quantities of cashew kernels. But in 1923 a load of 45 tonnes was shipped to U.S.A. At that time it took 45 to 50 days for a ship to reach U.S.A. from India. The first shipments of cashew kernels arrived infested with weevils. After that no shipments took place until 1928 when it was found that nuts stored in air-tight containers filled with carbon dioxide gas could be kept in good condition for about 3 to 4 months.[2]

Growth of exports

Soon after the first successful shipments, the industry in Kerala started developing and various processing factories

[2] Ohler, J.G., Cashew, Royal Tropical Institute, Amsterdam, 1979, pp.16-17.

were established. Besides regular shipments to U.S.A., small consignments were also sent to several European countries particularly to U.K. and the Netherlands. The cashews were readily accepted by the American consumers. With the success of the shipments, orders started coming from New York for more supplies. Messrs. Becker - Bennett - Day (Now General Foods Corporation) took keen interest in this new commodity and sent representatives to India to establish contacts with the local processors and also to assist them in developing the industry. They introduced the new idea of packing cashew kernels in air-tight tins in an atmosphere of carbon dioxide gas. The process was known as Vita Packing. Messors. Becker - Bennett - Day opened their branch office in India called Vita Pack Corporation which proved to be of real fillip to the industry. This new mode of packing prevented development of infestation and deterioration in quality, thus paving the way for large-scale shipments to foreign countries. However, until the end of second world war the exports were small but the growth thereafter was indeed very rapid.[3]

During the last fifty years world exports of cashew kernels steadily grew to significant levels. Cashew, today occupies the second position among the most important edible tree nuts in the world, next only to Almonds. With a growing market, production and export of cashew will reach new heights in the coming decade.

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[3] Indian Cashew Journal, Vol.XXI, No.1, Cashew Export Promotion Council, Cochin, 1979, p.11.

## AGGLOMERATION OF THE INDUSTRY IN KERALA

Quilon district in Kerala had the unique distinction of the highest concentration of cashew processing units in the country. The major reasons for this phenomenon were the availability of skilled labour in abundance and the dynamic entrepreneurship of the businessmen of the place. According to Shri M.K.K. Nayar, former Chairman of the Cashew Export Promotion Council, it was the ingenuity of the people of the west coast of India which made possible the removal of kernel from the nut without getting it contaminated by the shell liquid, a process know-how that found for the country a flourishing export market.[4]

Today, though the industry has migrated in large-scale to the neighbouring Tamil Nadu for reasons of lower processing cost, the labour in Kerala still retains the distinction of highest productivity.

The phenomenon of agglomeration underwent rapid change as a consequence of lower wages prevalent in the adjoining state of Tamil Nadu. In the absence of any regional wage policy the entrepreneurs of Kerala could not ignore the benefits of lower processing cost there which induced the migration of the cashew industry from Kerala. Cashew being a low capital intensive industry the exporters based in Kerala could easily develop sufficient processing capacity in Tamil Nadu. The cost of processing in Kerala continued to rise due to the periodic upward

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[4] Mahindra, S., Indian Cashew Journal, Vol.IX, No.4, Cashew Export Promotion Council, Cochin, 1974, p.8.

revision of wages of the workers. Initially, the workers in Tamil Nadu were far behind the level of productivity of their counterparts in Kerala, but slowly they improved their performance. Today the cost of processing of cashewnuts in Tamil Nadu is only one third of that prevalent in Kerala. The reasons which existed earlier for the agglomeration of the industry in Kerala have been completely overtaken today by the wide disparity in wage structure between Kerala and Tamil Nadu.

## A REVIEW OF EXPORT TRADE IN CASHEW

### Direction of Exports

Table 4.1 presents the directional pattern of exports from 1950-1983. A review of the table reveals certain important features. Until the year 1956 U.S.A. had the unique position of being the major buyer of Indian cashews. In 1957 U.S.S.R. entered the market and made a purchase of 2,103 metric tonnes of cashew kernels in the year. This marked a turning point in the history of India's cashew exports. The purchases by U.S.S.R. steadily increased and by the year 1965 it reached a substantial quantity of 13,315 metric tonnes which was almost 50 per cent of the total quantity purchased by U.S.A. in that year. In the year 1969 Russia bought a quantity of 25,715 metric tonnes of cashew kernels exceeding the U.S. purchases for the first time by 1,391 metric tonnes. However, in the succeeding years of 1970 and 1971 this performance could not be repeated. Again in 1972 the U.S.S.R purchased a quantity of 25,385 metric tonnes (U.S.A. 19,568 metric tonnes) setting a record. For the next three years which

## Table 4.1

### Quantum of Country-wise Exports of Cashew Kernels from India
(Quantity in Metric Tonnes)

| Year | Australia | Canada | German Dem. Republic | Japan | Nether-lands | U.K. | U.S.A. | U.S.S.R. | Total including other countries |
|---|---|---|---|---|---|---|---|---|---|
| 1950 | N.A. | 344 | - | - | - | 3930 | 20843 | - | 85799 |
| 1951 | N.A. | 432 | - | - | - | 5280 | 14660 | - | 21250 |
| 1952 | N.A. | N.A. | - | - | N.A. | N.A. | N.A. | - | 26499 |
| 1953 | N.A. | N.A. | - | - | N.A. | N.A. | N.A. | - | 28121 |
| 1954 | N.A. | N.A. | - | - | N.A. | N.A. | N.A. | - | 31652 |
| 1955 | N.A. | N.A. | - | - | N.A. | N.A. | N.A. | - | 31452 |
| 1956 | N.A. | N.A. | - | - | N.A. | N.A. | N.A. | - | 32490 |
| 1957 | 749 | 1359 | 529 | - | 126 | 2786 | 25752 | 2103 | 34577 |
| 1958 | 646 | 1298 | 592 | - | 356 | 2717 | 27775 | 5095 | 39673 |
| 1959 | 592 | 1263 | 1140 | 120 | 236 | 2199 | 26289 | 4456 | 38172 |
| 1960 | 1089 | 1404 | 943 | 150 | 314 | 2568 | 25363 | 5569 | 39436 |
| 1961 | 1344 | 1591 | 1183 | 238 | 410 | 3391 | 25500 | 3961 | 41191 |
| 1962 | 1448 | 1400 | 1107 | 294 | 627 | 2603 | 26098 | 5275 | 46436 |
| 1963 | 1717 | 1691 | 1215 | 320 | 500 | 2441 | 29319 | 8903 | 53394 |
| 1964 | 1911 | 1653 | 833 | 575 | 680 | 3574 | 27530 | 9838 | 52645 |
| 1965 | 1365 | 1510 | 630 | 535 | 483 | 2857 | 27048 | 13315 | 53793 |
| 1966 | 1245 | 1311 | 470 | 416 | 526 | 2299 | 23346 | 13554 | 48616 |
| 1967 | 1824 | 1896 | 494 | 423 | 660 | 2758 | 26419 | 12601 | 52256 |
| 1968 | 1790 | 2015 | 615 | 421 | 599 | 2827 | 29359 | 17460 | 60491 |
| 1969 | 1910 | 1776 | 616 | 479 | 647 | 2261 | 23323 | 25712 | 62678 |
| 1970 | 1073 | 2297 | 394 | 810 | 647 | 1107 | 23769 | 17979 | 54074 |
| 1971 | 1079 | 3788 | 428 | 1194 | 818 | 1638 | 29309 | 16485 | 59985 |
| 1972 | 1332 | 5486 | 892 | 2001 | 1079 | 1991 | 19568 | 25385 | 64542 |
| 1973 | 1120 | 3978 | 1103 | 3168 | 1070 | 1503 | 20313 | 20700 | 57062 |
| 1974 | 1900 | 3615 | 811 | 1509 | 1145 | 910 | 12311 | 31742 | 57976 |
| 1975 | 2220 | 2830 | 577 | 3769 | 1402 | 808 | 18458 | 24797 | 59174 |
| 1976 | 2377 | 3974 | 1304 | 5480 | 1792 | 1015 | 20550 | 15755 | 55940 |
| 1977 | 1980 | 1231 | 490 | 3015 | 1176 | 405 | 9813 | 20155 | 40051 |
| 1978 | 594 | 604 | 341 | 3441 | 1125 | 490 | 6015 | 8885 | 23820 |
| 1979 | 1460 | 1161 | 638 | 3877 | 1553 | 666 | 12949 | 12258 | 37287 |
| 1980 | 1160 | 307 | 220 | 1798 | 1678 | 397 | 5948 | 22780 | 36856 |
| 1981 | 905 | 48 | 31 | 931 | 383 | 302 | 3483 | 21183 | 29449 |
| 1982 | 943 | 171 | 68 | 1658 | 570 | 548 | 5206 | 18922 | 31787 |
| 1983 | 1460 | 1202 | 269 | 2318 | 2738 | 1167 | 22215 | 4 | 35729 |

Source: Cashew Export Promotion Council, Cochin.

followed, Russia continued to maintain the lead. In 1976, the positions were reversed but in the subsequent years Russia maintained its position as the major buyer of Indian cashews. From 1977 onwards the total quantity of cashew kernels exported began to show a declining trend. In 1981 the U.S. purchases from India plummetted to 3,483 metric tonnes while the U.S.S.R. bought a quantity of 21,183 metric tonnes.[5]

These changes in the directional pattern of exports were caused by several visible and invisible factors which are discussed in detail subsequently. In 1982 U.S.S.R. bought a reduced quantity of 18,922 metric tonnes with U.S.A. trailing behind with a quantity of 5,206 metric tonnes. In 1983 the entire picture was changed totally with U.S.S.R. keeping off from the market. However, U.S. purchases rose to an impressive level of 22,215 metric tonnes during the year.

Quantum of Exports

A review of the pattern of the quantum of cashew exports over the years has revealed significant information. In the post-independence period India's exports of cashew kernels registered steady growth until 1964 when there was a marginal decline. However in the succeeding year the position was regained. Further, in 1966 there was a perceptible decline in quantity. In 1969 the performance was quite appreciable when India could export a quantity of 62,678 metric tonnes of cashew kernels. The succeeding

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[5] Cashew Statistics, Cashew Export Promotion Council, Cochin.

two years witnessed marginal fall in the quantity but in 1972 an all time high record of 62,678 metric tonnes was established. From 1973 onwards a declining trend in the quantity exported was observed until 1981 except for a few of the intervening years. 1978 witnessed a steep fall when the quantity dropped by 45 per cent to a dismal figure of 23,820 metric tonnes. The world exports of cashew had also considerably shrank as a consequence of the dwindling raw nut production.[6]

Table 4.2 presents the data regarding export of cashew kernels imports of raw nuts, components of indigenous production in the export trade and percentage of indigenous production reflected in exports. While the share of indigenous nut in the total quantity of raw nuts processed for exports has steadily increased over the years to the level of 97.56 per cent in 1982, the total availability of rawnuts for the industry has not improved. The increase in the percentage of indigenous component has, therefore, been caused by the shrinkage of imports of raw nuts into the country. From 1978 to 1982 the production levels of raw cashew nuts in the country have remained erratic without registering any appreciable increase.

## RAW MATERIAL POSITION IN THE CASHEW PROCESSING INDUSTRY

### Import of Rawnuts

The decline in India's quantum of exports could be directly linked to the shortfall in the availability of imported

[6] Ibid.

## Table 4.2

## Exports of Cashew Kernels, Imports of Raw Cashewnuts and the Component of Indigenous Production in the Export Trade

| Year | Exports of Cashew Kernels | | Remarks equivalent to 24% recovery in M.T. | Imports of Raw Cashewnut | | Components of indigenous production converted into export trade in M.T. | Percentage of indigenous production reflected in export |
|---|---|---|---|---|---|---|---|
| | Quantity in M.T. | Value in Rs.('000) | | Quantity in M.T. | Value in Rs.('000) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1957 | 34577 | 147306 | 144071 | 97217 | 73011 | 46854 | 32.52 |
| 1958 | 39673 | 154702 | 165304 | 122247 | 74703 | 43057 | 26.04 |
| 1959 | 38172 | 151826 | 159050 | 91763 | 60690 | 67287 | 42.30 |
| 1960 | 39436 | 184661 | 164317 | 99631 | 82300 | 64686 | 25.88 |
| 1961 | 41191 | 187062 | 171629 | 127202 | 93542 | 44427 | 25.89 |
| 1962 | 46636 | 185151 | 194317 | 131108 | 77525 | 63209 | 32.53 |
| 1963 | 53394 | 217685 | 222475 | 164369 | 102523 | 58106 | 26.12 |
| 1964 | 52645 | 264934 | 219354 | 170315 | 136892 | 49039 | 22.96 |
| 1965 | 53793 | 287586 | 224138 | 175489 | 163475 | 48649 | 21.70 |
| 1966 | 48616 | 376373 | 202567 | 140746 | 176432 | 61821 | 30.52 |
| 1967 | 52256 | 431721 | 217733 | 144546 | 217903 | 73187 | 33.61 |
| 1968 | 60491 | 574195 | 252046 | 203517 | 308173 | 48529 | 19.38 |
| 1969 | 62678 | 585479 | 261158 | 190785 | 320870 | 70373 | 26.95 |
| 1970 | 54074 | 558231 | 225308 | 170785 | 301059 | 54523 | 24.20 |
| 1971 | 59985 | 610762 | 249938 | 167459 | 276226 | 82479 | 32.99 |
| 1972 | 64542 | 665306 | 268925 | 192879 | 310812 | 76046 | 28.28 |
| 1973 | 57062 | 753080 | 237758 | 172110 | 298972 | 65648 | 27.61 |
| 1974 | 57976 | 1046823 | 241566 | 177289 | 407894 | 64227 | 26.58 |
| 1975 | 58174 | 1055335 | 246558 | 135815 | 332570 | 110743 | 44.92 |
| 1976 | 55940 | 1109098 | 233083 | 76181 | 180279 | 156902 | 67.32 |
| 1977 | 40051 | 1449282 | 166879 | 65076 | 190622 | 101803 | 61.00 |
| 1978 | 23820 | 752074 | 99250 | 23009 | 90319 | 76241 | 76.81 |
| 1979 | 37287 | 1077950 | 155362 | 34203 | 165032 | 121159 | 77.98 |
| 1980 | 36856 | 1510478 | 153566 | 20682 | 149589 | 132884 | 86.53 |
| 1981 | 29449 | 1719410 | 122704 | 31298 | 385831 | 91406 | 74.49 |
| 1982 | 31784 | 1507261 | 132433 | 3212 | 30149 | 129201 | 97.56 |

Source: Directorate of Cashewnut Development, Cochin.

raw nuts. The availability of rawnuts from the African countries had been showing steadily declining trend on account of various factors like the development of mechanical processing facilities, fall in production and productivity and also political changes in these countries.

Table 4.3 presents data on imports of rawnuts into India from 1970-71 to 1981-82.

Table - 4.3

Import of Raw Cashew Nuts into India

| Year | Quantity (Metric tonnes) | Value (Rs. '000) |
|---|---|---|
| 1970-71 | 169,359 | 2,94,076 |
| 1971-72 | 169,985 | 2,79,060 |
| 1972-73 | 197,938 | 3,18,093 |
| 1973-74 | 150,249 | 2,87,986 |
| 1974-75 | 160,358 | 3,66,043 |
| 1975-76 | 137,196 | 3,35,578 |
| 1976-77 | 75,122 | 1,83,299 |
| 1977-78 | 56,299 | 1,79,817 |
| 1978-79 | 20,496 | 91,633 |
| 1979-80 | 24,222 | 1,16,034 |
| 1980-81 | 25,715 | 1,95,665 |
| 1981-82 | 28,582 | 3,62,245 |

Source: Cashew Export Promotion Council, Cochin.

Until the introduction of canalisation of imports of raw cashewnuts in 1970 through the Cashew Corporation of India, a subsidiary of the State Trading Corporation (STC), the exporters were free to import their requirements from African countries or any other source of production in the world. The

indigenous production of rawnuts remaining stagnant, the industry was largely dependent on the imported rawnuts. As exports increased, the reliance on imports for bridging the gap in supplies became more pronounced. Against an annual average level of imports of 54,000 metric tonnes during the 1950s the average level of imports during the 60s was of the order of 100,000 metric tonnes. Imports during 1968 reached a record figure of 203,517 metric tonnes. Nearly 75 per cent of the industry's requirements was met by imports during the period.[7]

Apart from bridging the gap in supplies, imports proved very helpful to the industry as rawnuts were made available during December-March, the off-season period of the local crop. The differing crop seasons in East Africa and India was a matter of great advantage for the processing industry in meeting their requirements in a phased manner and providing employment for 6 to 8 months in a year.[8]

Canalisation of imports:

The 1970s witnessed a spurt in the world export of cashew kernels. However, India's pre-eminent position in the world market was lost as our share of world exports declined steadily. This was due to the emergence of mechanical processing capacity in the African countries. As the prices of imported raw nuts

7 Joseph, Z.K., "Sustenance of Cashew Industry in India on imported rawnuts", Proceedings of the Seminar on Cashew, Cochin, July 1977.

8 Ibid.

steadily increased, the net foreign exchange earnings from the export of cashew could not keep pace with the rising bill for the imported raw nuts. There was lot of unhealthy competition among the cashew exporters which escalated the prices of imported raw cashew nuts. Smaller exporters were not in a position to import raw nuts and consequently some of them had to go out of business. It was in these circumstances, that the government of India decided to canalise the import of raw cashew nuts through Cashew Corporation of India, a subsidiary of STC. The new policy of the government came into effect from 1st September 1970.[9]

Effect of Canalisation:

While taking this step, the government had in mind the objectives of eliminating the unhealthy competition among importers, achieving better bargaining power as bulk buyers and ensuring uninterrupted supplies at reasonable prices for sustaining and expanding the export of cashewnuts. The Cashew Corporation of India could operate successfully in the initial period. The post-canalisation period from 1971 to 1974 recorded improvement over the pre-canalisation level of imports. The average level of imports during the period 1971-74 was at 175,220 metric tonnes as against 170,244 during 1965-69.[10] However, this proved to be only a temporary phenomenon. The African countries which were watching the rise in kernel prices in the world market felt the

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9 Ibid.

10 Ibid.

need to improve the unit value realisation from their raw nut exports. Imports fell to 134,200 metric tonnes in 1975. It further slumped to 71,200 totric tonnes in 1976. The Cashew Corporation of India attributed this rapid shrinkage of imports to the administrative and political changes that had taken place in Tanzania and Mosambique. It was also pointed out that the poor performance of Cashew Corporation of India from 1975 onwards was accountable to the adverse climatic conditions in Mosambique which led to a drop in productioh. Besides, the changes introduced in the procurement system for raw cashewnuts in Tanzania was also responsible for the reduced availability of the produce.[11]

The trade's view of canalisation:

The cashew exporters were, however, critical about the performance of the Cement Corporation of India (CCI). While they did not dismiss some of the reasons put forward by the CCI for the dwindling imports, they felt that the main reason for the situation was inefficient handling of the operations by the bureaucrats who failed to take right decisions at the right time. As the CCI could bring in only meagre imports in 1979, 1980 and 1981, the export trade questioned the justification for the continuance of the canalising agency. They also represented to the government that the policy should be reversed and import of raw cashewnuts placed under Open General Licence.[12]

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11 Ibid.

12 Cashew Causerie, Address of the Chairman at the XXVI Annual General Body, Cashew Export Promotion Council, Cochin, 1981, p.7.

**Benefit of canalisation to Kerala:**

The policy of canalisation of imports had its beneficial effects on the cashew processing industry in Kerala as most of the eligible units were located here. The basis of allocation of imported nuts was the licenced labour strength of the cashew processing unit. However only such units which had made imports of their own during the pre-canalisation period were eligible for the quota of the imported nuts. This, in fact, was a blessing in disguise for the processing units in Kerala as they could get substantial portions of the imports. But as the imports dwindled the trend of migration of the industry from Kerala to Tamil Nadu gained momentum, as the advantage of lower cost of processing was too big to be ignored.

**Indigenous production of raw nuts:**

Till the year 1973-74 almost 75 per cent of the raw nut requirement of the processing industry was met from imports. From 1974-75 onwards there has been a steady increase in the percentage of indigenous raw nuts component of the total quantity of raw cashewnuts processed for export. (Refer Table 4.2) Though the production of raw cashewnuts in the country showed an upward trend, the sudden increase in the indigenous raw nuts component was more conspicuously the result of the drastic decline in the imports.[13] This once again brought home the truth that

[13] Krishnaswamy, L., "Production and Foreign Trade of Indian Cashew", Proceedings of the International Cashew Symposium, Cochin, March 1979, p.15.

it was imperative to increase indigenous crop production if the industry has to be sustained.

It has been estimated that a quantity of 5 lakh metric tonnes of raw cashewnuts have to be produced to maintain export of cashew kernels at a level of 65,000 metric tonnes and also to meet the internal demand of 15,000 metric tonnes of kernels.[14]

State-wise area and production of cashewnuts:

Of the area of 481,043 hectares under cashew in the country (1981-82), 36 per cent is in Kerala. The rest of the area is spread over Karnataka (58,299 hectares), Tamil Nadu (94770 hectares), Andhra Pradesh (57,279 hectares), Goa, West Bengal, Maharashtra and other states and Union territories. Table 4.4 presents data on the area and production of cashewnuts in the country from 1976-77 to 1981-82.[15]

The highest yield per hectare is in Kerala. However, it is seen that the yield varies from district to district in the state ranging from 974 kilogram per hectare in Quilon district to 1,949 kilogram per hectare in Malappuram district. It is possible to increase further the current levels of productivity through better agronomic practices and efficient crop management techniques.[16]

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[14] Ibid., p.16.

[15] Krishnaswamy, L., Cashew Consumer, Vol.8, Directorate of Cashew Development, Cochin.

[16] Kaleeswaran, N., 'Sustenance of cashew industry on indigenous rawnuts", Proceedings of the Seminar on Cashew, Cochin, July, 1977.

Table - 4.4

Statewise Area and Production of Cashewnuts

| | 1976-77 | | 1977-78 | | 1978-79 | | 1979-80 | | 1980-81 | | 1981-82 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | P | A | P | A | P | A | P | A | P | A | P |
| Kerala | 116660 | 107468 | 130393 | 108151 | 140748 | 110527 | 144113 | 116000 | 145211 | 117000 | 147363 | 118000 |
| Karnataka | 36534 | 15175 | 35975 | 15666 | 49935 | 16000 | 53171 | 16000 | 56274 | 16500 | 58299 | 18000 |
| Andhra Pradesh | 32400 | 12500 | 31113 | 13400 | 38200 | 14000 | 44300 | 16000 | 49696 | 16500 | 57279 | 20000 |
| Tamil Nadu | 92360 | 10150 | 92090 | 10240 | 91780 | 9960 | 94770 | 11000 | 94770 | 11000 | 94770 | 10500 |
| Goa | 39317 | 6568 | 42300 | 6568 | 41600 | 7118 | 41600 | 8000 | 42939 | 8000 | 44139 | 8500 |
| Maharashtra | 30023 | 4256 | 22692 | 4804 | 22692 | 7173 | 22692 | 6000 | 22692 | 8000 | 22692 | 10000 |
| Orissa | 23927 | 3912 | 26765 | 4027 | 26837 | 4343 | 38830 | 5000 | 44983 | 6000 | 48601 | 8000 |
| West Bengal | 3500 | 2200 | 3400 | 2200 | 6698 | 2421 | 6698 | 2000 | 6698 | 2000 | 6698 | 2500 |
| Pondicherry | 322 | 166 | 329 | 206 | 343 | 206 | 363 | 218 | 363 | 200 | 363 | 200 |
| Tripura | 859 | 62 | 838 | 61 | 859 | 69 | 839 | 48 | 839 | 50 | 839 | 30 |
| Total | 375702 | 162457 | 385895 | 165323 | 419692 | 171817 | 447376 | 180266 | 464465 | 185250 | 481043 | 195760 |

Source: Directorate of Cashewnut Development, Cochin.

The gap between the industry's requirement and availability could be filled up only through concerted efforts and purposeful programmes ensuring reasonable return on investment to the farmers.

Monopoly procurement of indigenous raw nuts by State agency:

When the imports shrank alarmingly, the government of Kerala introduced monopoly procurement of indigenous raw nuts in 1976, primarily to protect the interests of the public sector cashew processing undertaking, the Kerala State Cashew Development Corporation Ltd. (KSCDC). This move was very much welcomed in the beginning as it sought to eliminate unhealthy competition among the exporters for raw material which became dearer due to the limited imports. The farmers were also often denied a legitimate return on their investments. The Kerala State Co-operative Marketing Federation was designated as the State Agency for procurement of raw cashewnuts. The nuts procured were alloted to the exporters on the basis of the licenced labour strength and past export performances. The government also banned the movement of nuts outside the state. However, this proved to be only a partial success as, on an average a little over 50 per cent of the total raw nuts produced in the state could be procured for the consumption of the processing industry in Kerala. The rest of the quantity was invariably smuggled out of the state to feed the processing units in Tamil Nadu and Karnataka. However, this trend was not visibly felt in 1978 when the prices of raw nuts in Kerala were higher than the neighbouring states.

**Failures in the operation of the Scheme:**

As a result of the shifting of the raw material to outside the state the processing industry in Kerala could offer work only for 70-120 days in a year.[17] The government machinery responsible for checking smuggling of raw nuts from Kerala to the neighbouring states proved to be ineffective. The wage difference between Kerala and Tamil Nadu was conspicuously high and hence the processors in Tamil Nadu could always offer prices higher than the prevailing rates in Kerala and lure the raw nuts into their units.[18] This was indeed the major lacuna of the monopoly procurement system. The agency responsible for the procurement was not in a position to take any credit for the job entrusted to them as there were several instances of inferior quality material alloted to the processors, higher moisture content than permissible and also cases of 'switching the deliveries'. Good quality nuts invariably reached the private processors while the KSCDC being a public sector organisation received a large share of the substandard material as a result of the underhand dealings at different levels of procurement and distribution. All these contributed to the virtual collapse of the monopoly procurement system. The KSCDC units, for protecting whose interest the system was introduced, could work only for 70-120 days in a year. In certain years they could not even offer 70 days of work. In fact the mandays lost by KSCDC

17 "Holding Action in a tough year", The Hindu dated 31-3-1983.

18 Ibid.

amounted to an astronomical figure, even according to their own calculations. In the year 1978-79 the crash in the kernel market proved disastrous to the KSCMF, the procurement agency. The prices fixed by the government for the raw nuts were abnormally high in relation to the kernel market slump. Hence private processors declined to lift the raw nuts allotted to them.[19] More than 100 factories in Kerala remained closed and about 75,000 workers were left without employment and 60,000 tonnes of raw nuts procured by the KSCMF lay stockpiled in the warehouses. To save the situation the Kerala Government asked the KSCDC to run the factories for a year using the unlifted stock of raw nuts. The government, as a result of this operation, sustained a loss of about Rs. sixteen crores.

Abolition of Monopoly Procurement System:

In 1983 the Kerala Government revoked the monopoly procurement policy learning lessons from its experience in the past.[20] A floor price was fixed for the raw nuts to ensure that the farmers get a fair return on their investments. It was initially fixed at Rs.4/- per Kg. There was stiff resistance from the farmers lobby on the plea that the floor price was grossly inadequate and did not ensure a remunerative price for their proce. The floor price was later increased by the government as the prices which ruled in the free market were much higher than the floor price level.

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19 "Cashew in Kerala", Business India, March 29-April 11, 1982, p.83.

20 Cashew Bulletin, Vol.XX, No.9, Cashew Export Promotion Council, Cochin, p.16.

The return to free market proved to be successful as the processing units in Kerala could work for more number of days unlike during the monopoly procurement period. Though the trade union leaders initially attacked this policy change, they could witness the benefit the change had brought in for the cashew processing industry in Kerala. Smuggling of raw nuts from the State to the neighbouring states was reduced to a large extent and several of the processing units which were lying idle in Kerala for many years sprang to life as a visible impact of the restoration of free market trade of raw cashewnuts. The government, in view of the benefit which were in full evidence, decided to continue the policy in 1984 also.

The crisis of raw material shortage:

In its long history Indian cashew industry has suffered several crisis. However, the industry has come out of each crisis only to find itself in the grip of another. This is because the constraints in the development of exports of cashew re-appear in some shape or other as they are not eliminated altogether.

The raw material shortage is the most serious crisis faced by the industry. Until the import of raw nuts from African countries started dwindling, a large part of the processing industry's requirements was met from the shipments which reached us. There was no commensurate increase in the availability of indigenous raw nuts to compensate for the short fall in imports.[2]

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21 Ananth, K.C., "Cashew: a Case for Increasing Indigenous Production", Cashew Bulletin, Vol.XVI, No.12, p.

This pushed up the raw nut prices far beyond the level of parity with prevailing kernel prices in the world market. Inspite of the fact that right from 1964 when the first cashew seminar was organised under the auspices of the Cashew Export Promotion Council (CEPC) the imperative need to develop self-reliance on raw material for the industry was stressed emphatically, the government and trade were equally complacent about enhancing the industry's production of raw nuts until imports started dwindling from 1976.

De-stabilisation of the cashew industry in Kerala:

The monopoly procurement of the indigenous raw nuts unlike the policy of canalisation of imports did not help to stabilise the industry in Kerala. The CCI allotted raw nuts to the processing units on the basis of licenced labour strength and also on the fact whether the exporter had imported raw nuts in the previous years. As most of the units which had imported raw nuts earlier were situated in Kerala this indirectly helped to keep the factories in Kerala to get a major share of the imported raw nuts. When the import shrank this advantage diminished. As against this when the state government introduced monopoly procurement the raw nuts were smuggled across the borders to the neighbouring states as the processors could easily lure the raw nuts from Kerala into their units. The KSCMF could procure, on an average about 50 per cent of the state's total production, the rest going over to mainly Tamil Nadu and some quantity to Karnataka. This had a de-stabilising effect on the industry which was traditionally located in Kerala. The state government levied purchase

tax on cashews and did not take a pragmatic view of the situation which soon slipped out of hands.[22] Most of the state government's policies were arbitrary in nature and created unfavourable conditions in the state forcing the trade to take advantage of the lower cost of processing in Tamil Nadu.

Shortage of raw material; The vicious circle:

Cashew, being a low capital-intensive industry the raw material is the most critical of all the factors of production. This truth was not adequately understood by the policy makers of the state government. The monopoly procurement policy was introduced to protect the interest of the state owned KSCDC. The larger interests of the industry were not taken care of. The dwindling of imports had its brighter side, though it had created a crisis in the availability of raw nuts. As could be seen from table 4.2, from the year 1976 onwards, when imports fell steeply the net foreign exchange earnings from cashew exports started going up and also the component of indigenous raw nut production in the exports rose up steadily. In fact it was from 1973 the net export earnings from cashew started improving. Timely measures taken to increase indigenous production, would have definitely helped to realise more foreign exchange and also sustain India's share in the world market. In the absence any long term planning the industry found itself in the vicious circle of raw material shortage.

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[22] Cashew Bulletin, Vol.XX, No.9, p.17.

## TECHNOLOGICAL IMPROVEMENTS IN PROCESSING

### Situation in Kerala:

Processing technology employed in the cashew industry in Kerala has not undergone any significant change over the last several years. On the other hand, the African countries have adopted automatic mechanical processing system. There are socio-political constraints in the introduction of mechanical processing in Kerala which arise out of the apprehension of large-scale displacement of labour. The high cost of capital investment is also a deterrent against totally mechanised processing plants.

Though total mechanisation of cashew processing is not a feasible proposition at present, there is ample scope to adopt improved technology at the various stages of processing like shelling, heat treatment of shelled kernels and peeling.[23] Simple mechanical gadgets which improve the efficiency of the workers and increase productivity could also be introduced.

### Progress made by Karnataka:

Unlike in Kerala, the cashew processing industry in Karnataka had made considerable progress in processing technology. In Karnataka an improved method of treatment of raw nuts known as 'Steam Cooking' in place of hot oil bath roasting is employed now. The kernels obtained through this method are whiter in colour and the yield of white kernels is appreciably higher compared to the conventional method of roasting. The

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[23] Mathew, A.G., "Cashew Processing in India", Proceedings of the Seminar on Cashew, Cochin, July, 1977.

shelling gadget used in the processing units in Mangalore are more efficient with resultant higher productivity compared to the manual shelling employed in Kerala. Moreover, the shell liquid extracted from the shells obtained from this method has been found to be of superior quality.

Apathy of the Kerala Industrialists:

The processors in Kerala are disinclined to adopt even minimum improvements in the processing lines having no regard to the benefits which could be derived from improved technology. It was the persistent efforts of Export Inspection Agency who are responsible for the inspection and certification of cashew kernels meant for export which made the export trade adopt better sanitary and hygienic practices in the processing units. However, most of the units in Tamil Nadu and some units in Kerala do not still qualify to be rated as meeting the minimum requirements of ideal food processing units. Comprehensive legislation to introduce in-process quality control drills in the cashew processing units is now being planned by the Export Inspection Agency.

Need for improved technology:

The need to adopt improved technology at the various stages of processing is now increasingly felt in view of the fierce competition from African countries and Brazil.

India no more enjoys a monopolistic position in the world market for cashew kernels. This situation underlines the need for building up an image of quality consistency for the product

which along will help us to sustain and expand the exports in future. Price competitiveness is a very important factor in expanding the market share of Indian cashew kernels.

## CHANGE OVER FROM BULK EXPORTS TO CONSUMER PACKS

India has been exporting cashew kernels in bulk packs except for small quantities of salted and roasted cashew kernels in consumer packs. The retail markets in the U.S.A. and other developed countries hardly recognise cashew kernels as a product of India as the bulk packs imported from India are later converted into consumer packs after further processing by the salters and roasters in these countries.

The need to develop appropriate strategy for the introduction of consumer packs in the export market has now been increasingly felt.

The current price level of cashew exports from India is 40 per cent less than the peak prices in 1981, but the prices of consumer packs in the U.S. retail market still continue at the 1981 price level. This has been attributed to the very high cost of production of salted and roasted cashew kernels in retail packs which prevent the retailers from passing on to the consumers the benefit of low priced imports from India and other supplier countries.[24]

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[24] Chairman's address at the 28th Annual General Meeting of the Cashew Export Promotion Council, Cashew Bulletin, Vol.XX, No.9.

The Cashew Trade Delegation which visited U.S.A. in 1982 have also recommended the export of cashew in consumer packs to markets in the developed countries. It has been suggested that cashew exporters should explore the possibility of entering into tie-ups with multinational companies/super markets/chain stores in U.S.A., European Economic Community (EEC) countries, Australia etc. Indian entrepreneurs should establish units for salting and roasting cashew kernels and exporting them in consumer packs under the government of India scheme for 100 per cent export-oriented units.[25] It has already been announced by the Ministry of Commerce that the government would extend all possible assistance to such units as the policy of the government is to encourage the export of value-added items. This step will considerably help in our transition from the position of raw material suppliers to that of suppliers of direct consumer products. The ultimate consumer in the developed market would be in a position to recognise the distinct identity of the Indian product only when we export products in consumer packs. The low labour cost factor would help us to market products in consumer packs at competitive rates.

The Export Processing Zone at Cochin has already identified cashew in consumer packs as one of the industries to be set up in the Zone. As the units in the Export Processing Zone will have the distinct advantage of duty-free imports of machinery, equipments and packaging materials, we will be able to successfully penetrate the markets in the developed countries.

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25 Report of the Cashew Trade Delegation to USA/Canada, Cashew Export Promotion Council, 1983-84, pp.17-24.

The success of 20th Century Foods Private Ltd., a company established by a non-resident Keralite in Singapore should serve as an example in this direction.[26] The company has now captured a sizable market share of cashew kernels in retail packs. The advantage of low labour cost should help us to launch cashew kernels in consumer packs in the markets in developed countries. It will be possible to capture the retail market in developed countries through appropriate marketing strategies as we would be in a position to offer the product at competitive prices inspite of tariff barriers imposed by some countries.

COMPREHENSIVE PROGRAMME FOR PUBLICITY

A comprehensive programme for overseas publicity for Indian cashews in consumer packs should also be launched simultaneously as we have to penetrate the consumer market by competing with established brands.[27] The publicity efforts should be focussed on convincing the consumer about the high levels of hygiene and sanitation adopted during the processing of cashew kernels in this country. Efforts should also be made to increase the per capita consumption of cashew in the developed countries from the present levels. Thus the comprehensive publicity programme should aim at consolidating and expanding the existing markets and also creating new markets. Most importantly the price competitiveness of the Indian product which will be the single biggest factor of advantage should be kept up.

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26 Indian Cashew Journal, Vol.XV, No.4, Cashew Export Promotion Council, Cochin, pp.11-12.

27 Report of Cashew Trade Delegation to USA/Canada, 1983-84, Cashew Export Promotion Council, Cochin, p.20.

## DEVELOPMENT OF DOMESTIC MARKETS FOR CASHEW KERNELS

Domestic market for cashew kernels has been steadily growing over the years. Bombay, Delhi, Lucknow, Kanpur, Agra and other metropolitan cities in North India continue to be the major centres of consumption. With the increasing purchasing power of the urban and rural consumers, the sales turnover in the internal market has been growing fast. It is worthwhile to mention the crucial role played by the internal market in India which sustained the industry during the crisis created in 1982 by the complete withdrawal of U.S.S.R. from the export market. The internal market normally offers prices which are above the prevailing export market prices. Besides there is demand in internal market for brokens and other lower grades which do not have adequate overseas demand. However, the importance of developing Indian market for cashew kernels is not yet fully realised by the cashew processing industry in Kerala. It is largely the processors in Karnataka, Goa and other states who cater to the domestic market. The processors in Karnataka, Andhra Pradesh and Tamil Nadu have established their lines of supply to the internal markets, unlike the processors in Kerala who are more or less completely dependent on the export market. The per capita consumption of cashew kernels in India is indeed very low now.

### Programme to increase internal consumption:

There is considerable scope for increasing the level of consumption through publicity and promotional efforts. 'Agmark' graded economy packs of cashew kernels at the right price would

definitely expand the Indian consumer market. Publicity programmes could be jointly sponsored by the private as well as public sector processors as it will avoid unhealthy competition. New products could also be introduced in the markets with technical advice from Central Food Technological Research Institute (CFTRI) and other research institutions. Consumer packs with longer shelf life could be successfully marketed in the chain stores, departmental stores, super markets etc. The growing number of internal and foreign tourists will also cause further expansion of the consumer market for cashew kernels in India. A well developed internal market would serve as a buffer for the fluctuations in the export market.

## STRATEGY TO INCREASE INDIGENOUS PRODUCTION OF RAW NUTS

It is true that neither the government nor the cashew processing industry had made serious efforts to increase the indigenous production of raw cashewnuts until they were confronted with the problem of reduced availability of raw cashewnuts consequent on the decline of imports. The average cashew farmer did not, in fact, have any incentive to increase the production. He was always a victim of unpredictable market situations. Being disorganised, the farmers could not make any impact on the government. The cashew crop which was mostly raised on marginal and sub-marginal lands could not give yield at viable levels of productivity. The violent fluctuations in the price of raw nuts acted as a disincentive. The farmers were, therefore, tempted to switch over to rubber from cashew as the former offered a steady and assured return on investment. Besides, the subsidy

and other incentives for rubber cultivation also motivated the farmers to go in for rubber. Further to this, cashew plantations were not exempted from the purview of the Land Ceiling Act unlike rubber.[28] All these led to large-scale felling of cashew trees especially in the districts in Malabar.[29] The monopoly procurement scheme of raw nuts introduced by the government also did not bring in benefits to the farmers at the desired level in the absence of any provision to pass on a portion of the profit from the operations/benefits of later increase in price to the farmers.

The problem of multiplicity of developmental agencies:

There are now diverse agencies looking after the various aspects of cultivation, production, processing, export promotion and research. The Directorate of Cashewnut Development under the Ministry of Agriculture has been entrusted with the task of increasing cultivation and production of cashew. The various cashew research stations under the agricultural universities and also under the Central Plantation Crops Research Institute (CPCRI) undertake the work of producing high yielding varieties and also finding out optimum levels of fertiliser application and ideal agronomic practices. The Cashew Export Promotion Council is responsible for the promotion of exports through publicity, participation in trade fairs etc. and also acts as a forum

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28 Bavappa, K.V.A., "Strategy for Stabilising Cashew Industry in India", Proceedings of the International Cashew Symposium, Cochin, March 1979, p.11.

29 "Address by Chairman at the 28th Annual General Meeting of the CEPC", Cashew Bulletin, Vol.XX, No.9, p.17.

for building up rapport between the trade and the government. There is hardly any co-ordination between these agencies which leads to inefficiency in the execution of programmes. A central organisation to attend to the various functions should be established without further delay.[30] However, the central organisation (Cashew Board) should not think of taking up processing of cashew nut for export but should choose to play its role as a promotional, catalystic, financing, research and development organisation. It should create the right culture and climate for the industry and transfer the results of research to the farmers and the processors. This agency should be in a position to stabilise, expand and regulate all activities in the field.[31] A major function of the organisation will be to step up consumption of cashew kernels in the domestic market and also to explore new overseas markets.

In fact the setting up of a Cashew Board had been recommended at several seminars on cashew right from 1964.[32] But the government has not so far taken any steps to implement these recommendations. It could be observed that the well planned and well organised operations of the Rubber Board have resulted in considerable expansion of rubber cultivation in the country. The existence of multiple agencies in the field of cashew could be identified as a major reason for the shortfall in the targeted expansion of cultivation.

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30 Swaminathan, T.V., "Indian Cashew Industry", Souvenir Seminar on Exports, Mysore, 1973, pp.4-5. Also quoted in Natarajan, C.P "Status of Cashew Industry in India", Proceedings of the Seminar on Cashew, Cochin, July, 1977.

31 Balasubramanian, D., "Crisis in Cashew Industry", Proceedings of the Seminar on Cashew, Cochin, July, 1977.

Plantations in Corporate/Public Sector:

Another tangible plan to increase cashew production is to raise large-scale plantations in the public sector/corporate sector. The Plantation Corporation of Kerala has achieved tremendous success in the field of rubber cultivation. A scheme was drawn up by them to set up a subsidiary company for undertaking cashew plantation on similar lines.[33] But this did not receive support from the government or the industry. The Cashew Corporation of India, the canalising agency for import of rawnuts, which had generated surplus funds from their operations had proposed to invest these funds in a project for cashew cultivation. However, the proposal did not materialise. Large-scale public sector plantations could be raised with the aid from World Bank. Such public sector plantations, if managed successfully have several advantages such as planned harvesting of the produce, utilisation of cashew apple and also realisation of better price for the produce on account of larger production.

Need for pragmatic government policies:

The state government policies on cashew have often been restrictive. It is high time that the government took into account the imperative need to adopt pragmatic policies to encourage exports of cashew in view of the competition from other countries.

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33 Jacob, M.M., "Public Sector Plantations Answer to Raw Material Shortage", Proceedings of the Seminar on Cashew, Cochin, July 1977.

The importance of price competitiveness in the world market should also be recognised.[34] Escalation of cost of processing created by increase in cost of raw material, upward revision of wages and increase in cost of packaging materials, transportation, handling charges etc. should be taken into account. Subsidies should be given to exporters to enable them to withstand the market competition. The farmer should also be assured of a fair return on his investment through remunerative prices.

Price stability of raw nuts:

The price stability of raw material is a very important factor and to maintain this the farmers should be given the necessary inputs for production at subsidised rates. The procurement agency should have adequate infrastructure and should be able to function effectively. The productivity from the cashew plantations should be improved through scientific agronomic practices.[35] The benefits of using fertilisers and adopting plant protection measures should be effectively demonstrated to the farmers. A Crop Insurance Scheme should also be introduced to protect the farmers against loss of crop from unseasonal rains, pest attack etc. The Cashew Board should make available to the farmers high yielding planting material besides rendering extension service to them. The scheme implemented by the Rubber Board could be taken

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34 "Address by the Chairman, CEPC at the 28th Annual General Meeting", Cashew Bulletin, Vol.XX, No.9, p.17.

35 Nambiar, M.C., "Cashew Farming a Thankless Job", Proceedings of the Seminar on Cashew, Cochin, July, 1977.

as a model in this case where the farmers are given subsidies as well as loans for the cultivation of the crop.

Adoption of scientific harvest and post-harvest operations:

It has been estimated that the loss due to improper harvesting, absence of scientific grading and adequate storage is considerable.[36]

The farmers have a tendency to harvest immature nuts when prices rule high. The kernel output of immature nuts will be low and such nuts yield only lower grades. This practice could be effectively discouraged if a system of grading and assessment of quality of raw cashewnuts linking it to the price payable is introduced. Cutting test of samples drawn from different lots of raw nuts should invariably be done to assess the percentage of sound nuts. The central procurement agency should conduct cutting tests of raw cashewnuts drawing samples from each homogeneous lot. As the price is linked to the quality, this measure will curb the practice of harvesting immature nuts since better quality fetches higher price. Initial size grading of the nuts is also desirable as this will help the farmers to realise better price. Quality of raw cashewnuts should also be assessed with respect to moisture content, presence of foreign matter etc. The optimum level of 9 per cent moisture content prescribed should be

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[36] Natarajan, C.P., "Status of Cashew Industry in India", Proceedings of the Seminar on Cashew, Cochin, July 1977.

scrupulously enforced so that the tendency to sell nuts without proper drying will be contained. Scientific storage of raw nuts is often ignored by the farmers, procurement agencies as well as processors.

Enforcement of prophylactic measures:

Raw nut godowns should meet the minimum essential constructional requirements to prevent the entry of rodents and also damage through insect infestation, and seepage of rain water. It has been revealed during the inspection of imported raw cashewnuts that the landed consignments were severely infested with weevils.[37] When such raw cashewnuts are taken to the processing units without fumigation or other measures to render the produce free from infestation, the chances of cross infestation of the processed kernels are very high. Many such instances have been reported. Hence compulsory prophylactic measures should be taken before the raw nuts procured from the farmers are taken to the processing units. Gunny packing should be replaced by polythene sacks which will minimise incidence of infestation. Raw nut godowns should also have adequate monsoon protection. The procurement agency should arrange periodic fumigation and other prophylactic measures at the storage points.[38]

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[37] Muthu, M., et. al., "Insect Infestation Problem in Cashew Industry", Proceedings of the Seminar on Cashew, Cochin, July, 1977.

[38] Ibid.

## PROMOTION OF CASHEWNUT SHELL LIQUID (CNSL) UTILISATION

CNSL is an important bye-product of the cashew industry. In the early days of export of cashew, especially during the second world war, this product was in great demand due to its strategic importance in the manufacture of brake linings, insulation materials and many other products.[39] Consequently the processors in India switched over to oil bath processing of cashewnuts through which this valuable bye-product was recovered. The export of CNSL recorded impressive growth rate until recently when the demand from U.S.A., U.K. and other traditional markets declined. U.S.A. and U.K. could get CNSL from Brazil and African countries. Besides, automobile brake system in developed countries underwent revolutionary changes making brake liners obsolete.

While the supplies have increased the shrinkage in demand has created a very difficult situation for the industry to dispose of their production of CNSL. The alternative to improve this situation is to increase the indigenous consumption of CNSL. A host of products has been developed from the CNSL such as resins, varnishes, lacquers, paints, refractory materials and several other products. If we are in a position to fully exploit the industrial potential of this versatile bye-product, it will considerably increase the consumption of CNSL in India eliminating the need for complete dependence on export markets.

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[39] Ohler, J.G., Cashew, Royal Tropical Institute, Amsterdam, pp.16-17.

## JOINT PROJECTS WITH OTHER COUNTRIES

It has been proposed by a study team from the Indian Institute of Foreign Trade that India and Tanzania may plan a joint venture for production of raw cashewnuts. After making a feasibility study the team submitted its recommendations for a joint venture between the two countries. It has been envisaged in the project for the joint venture that India will provide inputs like planting material, equipment management, technical knowhow and part of infrastructure. Tanzania on the other hand will provide land, labour, buildings and the rest of the infrastructure. A part of the raw nut production from the plantations will be exported to India at an agreed price, a portion will be treated as assured export to India to meet its domestic requirements as repayment for investment in Tanzania. The rest of the production will go to feed the processing industry in Tanzania.[40]

The project apparently looks feasible. There are however, certain aspects which remain dormant now but can prove critical at a later stage. These are explained below.

1. It will be unwise to go in for a joint venture for cashew production as India has no dearth of suitable land for large scale cashew plantation.

2. Any political instability in Tanzania would prove fatal to the project. A new government in Tanzania can

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[40] Report of Indian Institute of Foreign Trade Study, Cashew Bulletin, Vol.XVI, No.10, October, 1979.

abrogate the agreement unilaterally. Tanzania could in a very short time increase its processing capacity manifold as their processing plants are fully automated.

3. It could be observed from the past experience that crop production in Tanzania is very much dependent on the vagaries of nature which makes the return on investment uncertain.

It will therefore be prudent on our part to drop the proposal at this stage.

Proposal for collaboration with Japan:

The inherent disadvantages of the proposal made by the Indian Institute of Foreign Trade (IIFT) study team for a joint venture with Tanzania for increasing production of cashew have been examined above.

The market survey conducted by International Trade Centre/UNCTAD has revealed that Japanese firms are participating in joint ventures with entrepreneurs in Brazil, Indonesia, Madagascar and Tanzania. Although the Japanese market shows marked preference for cashew kernels from India obtained through drum roasting process for reasons of white colour, taste and low moisture content, no attempt has so far been made by any Indian exporter to enter into a collaborative venture with any Japanese firm for production and/or marketing of cashews. The new development known as 'steam cooking of nuts' in place of the old method of hot oil bath roasting is likely to motivate joint ventures with Japanese firms as the kernels obtained from this method of processing are whiter in colour and better in taste.

Almond is the main competing nut for cashew in Japan. The California Almond Growers Exchange (CAGE) could promote the sale of almonds in Japan with active collaboration of the consuming industries in Japan.[41] A similar programme for promotion of cashew market in Japan could be operated by a group of exporters from India sponsored by the Export Promotion Council.

Confectionery industry and bakeries are the largest consumers of cashew kernels. When Almond prices go high cashews are used as substitutes and the demand consequently goes up. Conversely when almond prices come down below cashew price, the demand for cashews automatically shrinks. Demand for cashew in U.K. has proved to be price sensitive. In the retail markets cashews tend to get replaced by lower priced groundnuts while on the manufacturing side cashews replace higher priced almonds. The market outlook is largely dependent on the relative price movements among the different nuts which could be mutually substituted.

The market for cashews in Japan is also steadily growing though the present market size is small. Imports from India mainly consist of white wholes which are preferred for their colour, taste and low moisture content. Salted and roasted kernels are sold in the Japanese retail market, processing and repacking being done in Japan. Retail sales exhibit two marked seasonal peaks; October-December and March-May, the sales being more than double that of the remaining months of the year.

41 "Promotion and Sale of U.S. Almonds in Japan", Cashew Bulletin, Vol.XIV, /No.7 Cashew Export Promotion Council, Cochin, 1977, p.5.

India will be in a position to considerably increase the market in Japan for cashew kernels if we are in a position to supply the product taking into consideration their preference for specific quality characteristics and at the right price. Our efforts should be adequately supported by publicity and sales promotion drive to increase per capita consumption of cashew in Japan.

Relevance of cashew community:

It has also been recommended that a cashew community between cashew producing countries should be organised to sponsor joint promotional programme to derive collective bargaining power and also to curb unhealthy competition.[42] The experience from pepper community has not been very encouraging as some of the member countries did not fully conform to the code of practices adopted by the community. Any cartel or community has got a latent disadvantage of putting the consumer on the defensive. While enforcing discipline among the member countries of the community there should not be unreasonable or unjust tendency on the part of the community to exploit the consumer countries. There should also be perfect understanding and rapport among the member countries to act as a cohesive force for production and marketing of the product. The failure of any one of the

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[42] Bavappa, K.V.A., "Strategy for Stabilising Cashew Industry in India", Souvenir on International Cashew Symposium, Cochin, 1979, p.11.

member countries to comply with these requirements will bring in disastrous consequences. A cashew community of India, Brazil and African countries can bring in beneficial results if the above aspects are taken care of. Per capita consumption of cashew kernels in various consuming countries could be increased through joint programmes sponsored by the community which will bring down the cost of such programmes. New markets could also be explored with better success. Research and development could be undertaken at lesser cost deriving greater benefits by the member countries.[43]

## STATUS AND PROSPECTS OF EXPORT MARKETS

India has been exporting blanched cashew kernels in bulk packs to U.S.A., U.S.S.R., U.K., Japan, Canada and Federal Republic of Germany. Consequent on the withdrawal of U.S.S.R. from the cashew market in 1982 U.S.A. has re-emerged now as the biggest buyer of Indian cashews.

It has been estimated that over 80 per cent of the total volume of tree nuts imported into U.S.A. goes into direct house hold consumption. Practically all the nuts are imported in bulk and are processed and re-packed in the U.S. for retail. Nuts are also consumed by the industrial users, viz., confectionery industry and bakeries. The main retail market outlets

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43 Report of Cashew Trade Delegation to U.S.A./Canada 1983-84, Cashew Export Promotion Council, p.20.

are self-service stores, chain stores, supermarkets, confectionery outlets and vending machines installed at public places. The market outlook in the U.S. for cashew kernels is bright on account of the steady rise in direct consumer demand. However, the demand is price-sensitive and if prices of cashews go up the consumers turn to other cheaper nuts in the market.[44]

The United Kingdom is a major importer of Indian cashews. The market is price-sensitive and any increase in supply price is always reflected in consumer demand as costlier nuts get replaced by less expensive ones. U.K. also imports Almonds, Brazil nuts, Hazel nuts and Walnuts in larger quantities than cashews and any increase in the price of cashew will lead to a corresponding drop in demand as substitutes from the 'nut basket' will take its place on merits of economy. Nuts are usually imported in bulk and are repacked in retail packs in the U.K. More than 50 per cent of the total direct consumption has been estimated to take place in hotels, bars, cinemas, sports grounds and other places of outdoor entertainment.[45]

The per capita consumption of cashew kernels in the major importing countries in 1983 is given in table 4.5. It is evident from the table that considerable scope exists for increasing the levels of consumption in most of these countries especially in Japan, France, G.D.R., F.R.G and U.K. There were only negligible imports to U.S.S.R. in 1983. However, the country had a per capita consumption level of 73 grams in 1982.

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44 Major Markets for Edible Treenuts and Dried Fruits, ITC/UNCTAD/GATT, Geneva, 1973.

45 Ibid., p.114.

Table - 4.5

Per Capita Consumption of Cashew Kernels in Important Importing Countries (1983)

| Sl. No. | Name of country | Per capita consumption (in grams) |
|---|---|---|
| 1. | Australia | 180 |
| 2. | Belgium | 32 |
| 3. | Canada | 132 |
| 4. | France | 11 |
| 5. | G.D.R. | 19 |
| 6. | F.R.G. | 55 |
| 7. | Japan | 25 |
| 8. | New Zealand | 102 |
| 9. | Netherlands | 180 |
| 10. | U.K. | 54 |
| 11. | U.S.A. | 193 |

Source: Cashew Export Promotion Council, Cochin.

Effect of market fluctuations:

The kernel market is speculative in nature. The price depends on a combination of several factors like the relative price and production of other tree nuts such as almond, walnuts, brazilnuts, pistachios etc., the prices for cashew kernels offered by competitors like Brasil, Mosambique, Tanzania, Kenya and others, consumer reaction to the prices and also politico-economic reasons. The processors would always try to procure

raw material below parity if not at the parity price while the farmers would always want to get maximum return on investment. Any price of the kenel beyond the endurance limit of the ultimate consumer brings in resistance and fall in consumption resulting in demand recession. The conflict of interests between the farmers and the industry is a universal phenomenon and is very much visible in commodities like rubber, coffee and cocoa. Cashew is no exception to this.

## PARITY PRICE FOR RAW NUTS

The industry, of course, should get the raw material at a workable price while the farmers should be assured of remunerative price for their produce. The internal price of raw nuts depends upon the price of kernels in the international market, as the industry is export-oriented. Thus in a normal situation the raw nut prices in the country have direct correlation to the ruling kernel prices in the world market. The raw nut price in the country should be ideally above the parity price of the grower ($P_g$) which enables the grower to earn a reasonable return on investment but should be below the parity price of the processor-cum-exporter ($P_p$). Hence the total cost of marketing of raw nuts from the point of the grower to the point of the processor should be less than $P_p$ minus $P_g$.

The following equation will give the grower's parity price.[46]

$$P_g = (F + P + K + C) - A$$

Where

46 Krishnaswamy, L., Paper presented at the Kerala State Cashew Development Seminar, Quilon, July 25, 1976.

Where

$P_g$ = grower's parity price of raw nuts (Rs. per metric tonne

F = Cost of fertilisers (at the rate of $250_g$ N $125_g$ $P_2O5$ and $125_g K_2O$ per yielding tree)

P = Cost of plant protection chemicals

K = Other operational expenses

C = Contribution towards capital investment till break-even year

A = Average value of cashew apples

For the processor-cum-exporter the following equation will give the parity price:

$P_p$ = Q (K-T) - C

$P_p$ = Processor's parity price of rawnuts (Rs. per quintal)

K = Price of one quintal of kernels in New York market

T = Cost of transportation of one quintal of kernels

C = Cost of purchasing and processing one quintal of raw nuts

Q = Kernel content in one quintal of raw cashewnuts

The above analysis has been done with special reference to Kerala. If the market price of raw nuts falls below the grower's parity price it will be uneconomic for the farmer and if the market price goes above the processor-cum-exporter's parity price he will not be interested in purchasing the rawnuts as he would incur loss. Therefore, the level of support should be determined by taking into consideration the cost of cultivation and the parity price of the processing unit. The present analysis has been made based on the following assumptions:

1. Yield from cashew plantation will steadily increase from 100Kg./hectare to 1,000Kg./hectare towards the 10th year of the crop.

2. The trend in the international price of kernels will have a direct impact on the price of raw nuts.

The price of raw nut in the country as well as the price of kernels in the international market registered upward movement till 1974. However, in the subsequent year the price of raw nuts fell despite kernel price remaining more or less steady. The sudden increase in the cost of processing consequent on the upward revision of wages could be identified as the reason for the fall in price of raw nuts. This is because of the fact that when there is an increase in the fixed costs in the marketing system which can not be neutralised without a corresponding increase in kernel price the only alternative is to reduce the unit cost of production. As the wages of agricultural and industrial labour in Kerala are higher than in other states the parity price of raw nuts for the grower as well as the processor-cum-exporter are consequently higher. In fact, this was the single major reason for the migration of the cashew industry from Kerala to the neighbouring state of Tamil Nadu where the processors benefitted considerably from the significant difference in wages between the states. Table 4.6 gives a comparison of the wages for processing of cashewnut in Kerala and Tamil Nadu.[47] It could seen from the table that the mean wage in Tamil Nadu is only 38 per cent of that in Kerala.

[47] Kannan, K.P., Cashew Development in India - Potentials and Constraints, Agricole Publishing Academy, New Delhi, 1983, p.111.

Table - 4.6

Average Daily Earnings* for a standard day (8 hours) for different categories of workers in Kerala and Tamil Nadu

| | Category of work | | | | | | Av.wage (weighted average) |
|---|---|---|---|---|---|---|---|
| | Roasting | Shelling | Peeling | Grading | Handling | Other work | |
| Factory sector in Quilon (Kerala) A | 7.70 | 7.06 | 7.57 | 7.50 | 8.30 | 8.16 | 7.38 |
| Factory sector in Kanyakumari (Tamil Nadu) B | 5.50 | 2.31 | 2.83 | 2.64 | 5.50 | 7.83 | 2.82 |
| Percentage of B to A | 71 | 40 | 37 | 35 | 66 | 96 | 38 |

*Daily earnings include non-wage benefits also.

Source: Cashew Development in India: Potentialities and Constraints, Agricole Publishing Academy, New Delhi, 1983.

Price stabilisation:

As production of raw nuts in the country increases the quantity of raw nuts marketed also increases. If wide price fluctuations take place they create greater risks. This situation emphasises the importance of price stability. A processor will not be in a position to operate efficiently without stable and predictable prices.

Price support:

The level of support should be determined on the basis of the equilibrium price taking into account the cost of cultivation and the parity price of the processing unit. This price, while being remunerative to the farmer should also be below the processor's parity price.

Necessary arrangements should be made to supply various inputs to the farmers in time and to extend credit facilities. Regulated markets and co-operative marketing societies will help to make the marketing system more efficient. Schemes for subsidies and other incentives to the farmers should be worked out on the basis of the grower's parity price.

## TREND IN THE EXPORT OF CASHEWNUT SHELL LIQUID

Cashewnut shell liquid was a strategic raw material used for brake linings of motor vehicles and hence U.S. importers of cashew kernels stipulated a condition in 1943 that for every 1½ lb. of cashew kernels exported, the Indian exporter should supply 1 lb. of CNSL.[48]

After the second world war, world production and consumption of cashew kernels increased sharply. The demand for CNSL also grew steadily with the discovery of its many industrial applications. Besides India, Brazil, Mosambique and

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[48] Ohler, J.G., "Cashew - World Problems and Prospects", Souvenir, International Cashew Symposium, Cochin, 1979, p.1.

Tanzania export CNSL. With our monopoly position lost, India now faces stiff competition from other producing countries especially from Brazil and Mosambique.

Table - 4.7

World Export of Cashewnut Shell Liquid

| Year | India | Mosambique | Tanzania | Brazil |
|---|---|---|---|---|
| 1965 | 13,006 | 1,169 | - | 785 |
| 1966 | 11,582 | 2,051 | - | 1,603 |
| 1967 | 10,102 | 3,735 | - | 1,622 |
| 1968 | 10,266 | 6,994 | 629 | 3,609 |
| 1969 | 8,420 | 7,382 | 1,040 | 3,734 |
| 1970 | 7,519 | 5,021 | 660 | 4,774 |
| 1971 | 6,178 | 11,529 | 653 | 6,494 |
| 1972 | 5,013 | 12,165 | 414 | 7,280 |
| 1973 | 4,626 | 14,082 | 848 | 5,238 |
| 1974 | 6,300 | 12,791 | 658 | 7,179 |
| 1975 | 5,207 | 5,076 | 502 | 8,252 |
| 1976 | 6,024 | 8,276 | 1,714 | 10,680 |
| 1977 | 2,966 | 10,000 | 873 | 7,614 |
| 1978 | 5,001 | 7,900 | 1,025 | 10,660 |
| 1979 | 11,441 | 6,300 | 750 | 10,752 |
| 1980 | 10,699 | N.A | N.A | 7,955 |
| 1981 | 5,600 | N.A | N.A | N.A |

Source: Cashew Export Promotion Council, Cochin.

Table 4.7 shows data on world export of cashewnut shell liquid. India had a near monopoly in the export of CNSL till 1967. In the subsequent year Mosambique emerged as an important supplier as they developed considerable mechanical processing capacity. Exports from India had been consistently on the decline until 1979. Table 4.8 shows quantity, value and unit value of exports of cashewnut shell liquid from India from 1970 to 1983. In 1980 a quantity of 10,699 metrictonnes was exported but thereafter exports dropped steeply.[49] In 1983 the exports shrank to a quantity of 3,176 metric tonnes fetching a value of Rs.11,956.

Table - 4.8

Export of Cashewnut Shell Liquid from India

| Year | Quantity (Metric tonnes) | Value (Rs. '000) | Unit value (Rs./metric tonne) |
|---|---|---|---|
| 1970 | 7,519 | 8,557 | 1,138 |
| 1971 | 6,178 | 7,091 | 1,148 |
| 1972 | 5,013 | 5,911 | 1,179 |
| 1973 | 4,626 | 5,381 | 1,163 |
| 1974 | 6,300 | 14,923 | 2,369 |
| 1975 | 5,207 | 12,774 | 2,453 |
| 1976 | 6,024 | 12,802 | 2,125 |
| 1977 | 2,966 | 9,639 | 3,250 |
| 1978 | 5,014 | 35,168 | 7,014 |
| 1979 | 11,441 | 1,28,277 | 11,212 |
| 1980 | 10,699 | 94,309 | 8,815 |
| 1981 | 5,600 | 27,176 | 4,853 |
| 1982 | 5,797 | 17,463 | 3,012 |
| 1983 | 3,176 | 11,956 | 3,764 |

Source: Cashew Export Promotion Council, Cochin.

49 Cashew Statistics, Cashew Export Promotion Council, Cochin.

Japan, U.K., Korean Republic and U.S.A. are the major buyers of CNSL from India. Until 1966 U.S.A. was the single largest market for Indian CNSL. However, when Brazil and Mosambique developed their processing capacities the U.S. requirements were met by these countries. Brazil has the advantages of geographical proximity to U.S.A. and lower prices. The major use for CNSL in the importing countries is in the brake lining industry. The change in the automobile brake system in U.S.A., U.K. and Japan has affected the consumption of CNSL in these countries. However, CNSL continues to be used in the manufacture of paints and insulating varnishes, chemical resistant cements, oil tempered card boards, laminates, foundry core oil, water proofing compounds and many other products. In view of the changing pattern in the export of CNSL, efforts should be made to accelerate internal consumptions of CNSL. With multiple industrial applications of CNSL this is not difficult to achieve if prices are maintained at economic levels for the end-users in India.[50]

The expeller quality CNSL has a preference by the end users as it is of better quality. The new method of treating raw nuts known as 'steam cooking' has in fact revolutionised the roasting technique. 'Steam cooking' has proved beyond doubt to be superior to all conventional methods including hot oil bath roasting as the yield of white kernels in this method is higher. The steam cooking of the nuts takes less than 30 minutes. The cooked nuts are spread on the floor for 24 hours after which they are decorticated using the hand and leg operated cutting machines. Most of the units in Karnataka have switched over to

50 Production and Utilisation of Cashewnut shell liquid in India Survey Report by Regional Research Laboratory, Hyderabad, published by Cashew Export Promotion Council, Cochin, 1977, pp. 16-18.

this method of roasting in view of its distinct advantages. The shells after decortication of the nuts are sent to the expeller for extraction of CNSL. Small processors do not have expeller facilities and hence they sell the shells to expeller units. Unlike the hot oil bath roasting plant the capital investment for a steam plant is very low. A plant with a capacity to roast 20 bags per day will cost Rs.30,000/- approximately. The steam cooking of raw nuts has twin advantages. It results in increased yield of whiter kernels and eliminates the need for heavy capital investment as required in the case of hot oil bath method. Besides the quality of the CNSL obtained from the expeller method of extracting the shell liquid from the shells of steam cooked nuts is found to be superior in quality as it has less viscosity and lower carbon content and hence in good demand from overseas. This method could be successfully adopted in Kerala if the government and the trade unionists could convince the workers of the advantages, dispelling from their minds the apprehension of displacement of labour when simple cutting machines for shelling have to be introduced in the processing line where the steam cooking method is adopted. If this is done it will be possible to sell CNSL to the internal consumers at prices economical to them and consequently there will be an increase in consumption.

Another tangible step to accelerate the internal consumption of CNSL is to manufacture semi-finished products from the CNSL. A study conducted by the I.I.F.T. had recommended that CNSL based resins could be produced in view of the

preference shown by end users. The study had also revealed that the internal consumption of shell liquid could be considerably stepped up provided the CNSL and its semi-finished products are made available without quality variation at stable prices in sufficient quantities.[51]

There was a sudden spurt in the price of CNSL in 1978. It further went up in 1979 setting up an all time record of average unit value of Rs.11,212/metric tonne (refer table 4.7). Prices slided down in the succeeding year and further went down subsequently. During the period when export market prices were ruling high the internal market did not get their requirements. Some of the paint manufacturers in the country had to change their manufacturing methods to suit alternative materials. It is this undependable availability and unpredictable price of CNSL which hampered the growth of its internal consumption.

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51 Report of Study on Cashewnut Shell Liquid by Indian Institute of Foreign Trade, New Delhi, 1974, pp.30-44.

# CHAPTER V

# FISH AND FISHERY PRODUCTS

## Introduction

Seafood export industry made its humble beginning through the export of dried fish and dried prawns. In subsequent years the export of these items had to face a demand crisis as the traditional importing countries like Srilanka, Singapore and Burma reduced their off-take due to various reasons.[1]

With the diminished prospects of export of dried fish the need for exporting fish in frozen condition became apparent. Experiments with new techniques of preservation of seafood proved successful and in 1953 the first shipment of about half-a-ton of frozen shrimp was made from Cochin to USA. This event heralded the beginning of modern seafood industry. From its modest beginning 31 years ago it has emerged today as a major growth industry.

## Position of Kerala in Seafood Export Industry

Pioneer in the seafood processing industry, Kerala has been retaining its premier position with the largest share in the export of marine products from India. With the help of modern techniques of preservation of seafood like freezing and canning, the small scale entrepreneurs of Cochin could

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[1] Kurian, G.K., "Fish Product Development in India", Market Survey of Marine Products in the US and Canada, MPEDA/ITC Cochin/Geneva, 1978.

achieve remarkable progress in the field of seafood exports. The largest number of seafood processing units in the country are located in Kerala with a high concentration in the Cochin region from where it spread to the districts of Alleppey, Quilon, Calicut, Trivandrum and Cannanore. Today the seafood industry has got established in major fishing centres in the west coast as well as east coast.

Table 5.1 shows portwise share of marine products export from India.[2]

## STATUS AND PROSPECTS OF EXPORT MARKETS

Today India occupies the foremost position among the shrimp exporting countries in the world. From a meagre level of Rs.3.28crores in 1951, seafood exports achieved a record performance of exporting products for a value of Rs.362.32 crores in 1983.

Table 5.2 gives data on the export of marine products from India from the year 1970 to 1983.

A close analysis of the data on seafood exports from India would reveal certain important trends.

The year 1979 made a record of exporting the highest ever quantum of 92184 M. tonnes. From 1980 to 1982 there has been no appreciable change in the quantum of exports

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2. "Statistics of Marine Products Export "(1982) MPEDA, Cochin, p. 156.

## Table 5.1

## Port-Wise Share (%) in India's Marine Products Exports (1970-1982)

Q = Quantity
V = Value

| Year | | Cochin | Bombay | Madras | Calicut | Calcutta | Mangalore | Ratnagiri | Cuddalore |
|---|---|---|---|---|---|---|---|---|---|
| 1970 | Q | 64.53 | 8.21 | 1.96 | 0.24 | 0.40 | 3.78 | 1.85 | - |
| | V | 77.42 | 8.68 | 3.19 | 0.03 | 0.61 | 3.19 | 1.94 | - |
| 1971 | Q | 63.30 | 11.80 | 0.84 | 0.08 | 1.49 | 4.52 | 2.17 | - |
| | V | 76.98 | 9.82 | 1.18 | 0.01 | 2.76 | 4.22 | 1.96 | - |
| 1972 | Q | 66.54 | 11.29 | 1.34 | 0.14 | 2.83 | 6.32 | 2.39 | - |
| | V | 72.70 | 11.21 | 1.89 | 0.01 | 4.20 | 5.75 | 2.32 | - |
| 1973 | Q | 63.10 | 15.28 | 8.80 | 0.09 | 2.32 | 6.37 | 0.91 | - |
| | V | 67.96 | 12.11 | 6.18 | 0.01 | 3.20 | 6.26 | 1.05 | - |
| 1974 | Q | 51.93 | 20.93 | 6.85 | 0.68 | 2.50 | 9.76 | 2.83 | - |
| | V | 56.75 | 11.88 | 11.06 | 0.07 | 3.83 | 10.12 | 2.93 | - |
| 1975 | Q | 60.53 | 10.96 | 7.19 | 0.28 | 3.25 | 9.85 | 2.16 | - |
| | V | 57.45 | 11.01 | 12.05 | 0.03 | 5.55 | 8.35 | 2.21 | - |
| 1976 | Q | 49.92 | 20.10 | 7.49 | 0.21 | 4.74 | 5.67 | 0.83 | - |
| | V | 48.88 | 14.54 | 12.78 | 0.01 | 7.96 | 5.61 | 0.29 | - |
| 1977 | Q | 42.73 | 24.79 | 7.74 | 0.07 | 4.75 | 6.91 | 1.15 | - |
| | V | 41.54 | 16.57 | 12.47 | 0.01 | 9.15 | 6.50 | 1.08 | - |
| 1978 | Q | 40.61 | 18.39 | 7.89 | 0.26 | 3.66 | 5.01 | 1.03 | - |
| | V | 40.02 | 12.94 | 13.96 | 0.05 | 7.86 | 5.11 | 1.07 | - |
| 1979 | Q | 34.32 | 12.68 | 6.22 | 0.39 | 1.37 | 4.40 | 2.08 | - |
| | V | 41.85 | 12.38 | 11.42 | 0.07 | 2.96 | 6.48 | 2.77 | - |
| 1980 | Q | 37.75 | 15.78 | 4.72 | 0.46 | 4.06 | 6.69 | 1.46 | - |
| | V | 40.35 | 10.59 | 8.22 | 0.07 | 9.20 | 5.88 | 1.49 | - |
| 1981 | Q | 42.32 | 16.88 | 6.60 | 0.47 | 4.39 | 4.72 | 1.85 | 0.04 |
| | V | 43.35 | 11.51 | 10.11 | 0.05 | 7.85 | 4.44 | 1.93 | 0.05 |
| 1982 | Q | 43.85 | 12.43 | 5.22 | 0.41 | 6.40 | 5.01 | 1.60 | 0.04 |
| | V | 40.42 | 10.01 | 7.80 | 0.04 | 12.60 | 4.69 | 1.48 | 0.01 |

**Table 5.2**

**Marine Products Exports (1970-1982)**

**(Quantity, Value, Unit Value and Growth Rates)**

**(Base year 1970 = 100)**

| Year | Quantity (Tonnes) | Index of Growth | Value (Rs.Crores) | Index of Growth | Unit Value (Rs./Kg.) |
|---|---|---|---|---|---|
| 1970 | 31,175 | 100 | 35.54 | 100 | 9.56 |
| 1971 | 34,032 | 108.45 | 39.17 | 110.21 | 11.51 |
| 1972 | 38,271 | 102.91 | 58.13 | 164.04 | 15.19 |
| 1973 | 48,785 | 131.23 | 79.58 | 223.91 | 16.31 |
| 1974 | 46,629 | 125.43 | 76.31 | 214.71 | 16.37 |
| 1975 | 53,412 | 143.67 | 104.91 | 295.02 | 19.64 |
| 1976 | 62,151 | 167.18 | 179.56 | 506.07 | 28.94 |
| 1977 | 64,964 | 174.74 | 179.74 | 505.74 | 27.67 |
| 1978 | 77,946 | 209.67 | 212.16 | 596.96 | 27.22 |
| 1979 | 92,184 | 247.97 | 262.03 | 737.28 | 28.43 |
| 1980 | 74,592 | 200.51 | 218.88 | 615.86 | 29.36 |
| 1981 | 75,375 | 202.75 | 286.71 | 806.72 | 38.04 |
| 1982 | 75,136 | 202.11 | 342.24 | 962.97 | 45.55 |
| 1983 | 86,169 | | 362.32 | | 42.05 |

Source: Marine Products Development Authority, Cochin.

though the value of exports increased by 30.99% in 1981 and 19.37% in 1982. In 1983 there was significant increase in the quantum of export. However, in terms of value the increase was only about 5 per cent as a result of the decrease in unit value. In fact the significant growth in export earnings in recent years has been contributed by factors like attractive prices realised in the export market for frozen shrimps, lobsters, cuttle fish and squids and the strengthening of U.S. dollar.[3]

Composition of Exports

Table 5.3 gives the data on the compositional structure of marine products exports from India. The major portion of the seafood export from the country consists of frozen products: shrimps, lobster tails, cuttle fish and squids. Export of fresh frozen fish reached significant levels in 1979 sharing 26.17 per cent of the total quantity of seafood exports of the year. Canned and dried seafood items constitute only a small share of the total exports. In 1982 frozen shrimps alone accounted for 72.70% of the total exports in terms of quantity and 87.94% in terms of value.[4]

In the last fifteen years as many as 65 items figured in the export of marine products from India. However,

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3. "Marine Products Export Review' (1982) MPEDA, Cochin, p. 1.

4. Ibid p. 4.

Table - 5.3

## Structure of Marine Products Exports from India

(Share Percentage)

(1973–82)

Q. Quantity
V: Value

| Items | | 1973 % | 1974 % | 1975 % | 1976 % | 1977 % | 1978 % | 1979 % | 1980 % | 1981 % | 1982 % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Frozen Shrimp | Q: | 73.58 | 73.69 | 87.68 | 77.15 | 72.72 | 65.72 | 58.05 | 64.07 | 72.36 | 72.70 |
| | V: | 82.70 | 83.52 | 89.93 | 89.32 | 86.92 | 84·40 | 85.15 | 83.78 | 86.68 | 87.94 |
| 2. Frozen Froglegs | Q: | 5.53 | 3.12 | 2.47 | 5.10 | 4,36 | 4.58 | 4.08 | 4.15 | 5.80 | 3.02 |
| | V: | 5·65 | 3 75 | 2.67 | 4.33 | 3.67 | 3·97 | 3 33 | 3.34 | 4,17 | 1.62 |
| 3. Frozen Lobster Tails | Q: | 0.78 | 0.98 | 0 75 | 0 82 | 0.92 | 0.89 | 0 82 | 0.67 | 0 84 | 0.96 |
| | V: | 1.34 | 1.65 | 1.50 | 1.77 | 2.16 | 2.15 | 2.04 | 1.27 | 1.64 | 1.74 |
| 4. Fresh & Frozen Fish | Q: | 0.30 | 0.14 | 0.25 | 2.55 | 5·80 | 4.74 | 26 17 | 15.02 | 11.36 | 13.15 |
| | V: | 0.09 | 0.10 | 0.18 | 0.91 | 2.15 | 2.99 | 4.41 | 5.11 | 3.30 | 4.57 |
| 5. Canned Shrimp | Q: | 4.51 | 3.25 | 0.49 | 0·17 | 0.20 | 0.26 | 0.15 | 0.49 | 0.13 | 0.10 |
| | V: | 6.58 | 6.27 | 0 57 | 0.22 | 0.29 | 0.43 | 0.25 | 0.72 | 0.17 | 0.14 |
| 6. Dried Fish | Q: | 6.94 | 3.75 | 4·30 | 7.51 | 6.50 | 8.10 | 4.04 | 5.82 | 2.02 | 3.68 |
| | V: | 1.38 | 0.87 | 0.86 | 0.97 | 1.26 | 1.51 | 0.72 | 0.95 | 0.50 | 0.64 |
| 7. Shark Fins & Fish Maws | Q: | 0.52 | 0.56 | 0.57 | 0.43 | 0.44 | 0.54 | 0 40 | 0.45 | 0.54 | 0.22 |
| | V: | 0.83 | 1.11 | 0.94 | 0.85 | 1.25 | 1.63 | 1.12 | 1,49 | 1.35 | 0.59 |
| 8. Others | Q: | 7.84 | 14.51 | 3.49 | 6.27 | 9,06 | 15.17 | 6.29 | 9.33 | 6.95 | 6.17 |
| | V: | 1.43 | 2.73 | 3.35 | 1.63 | 2.30 | 2·92 | 2.98 | 3.34 | 2.19 | 2.76 |
| All | Q: | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| | V: | 100.00 | 100.00 | 100 00 | 100.00 | 100·00 | 100.00 | 100 00 | 100.00 | 100.00 | 100.00 |
| Actual Exports (Qty. Tonnes) | Q: | 48,785 | 46 629 | 53.412 | 62,151 | 64,964 | 77,946 | 92.184 | 74,542 | 75 375 | 75,136 |
| Actual Exports (Value Rs. Lakhs) | V: | 7957.63 | 7631.27 | 10490,63 | 17986.20 | 17973.74 | 21215.74 | 26202.92 | 21887.56 | 28671.28 | 34224.29 |

Source: Marine Products Export Development Authority, Cochin.

only 8 items constitute the bulk of the exports of which frozen shrimps, frozen lobster tails, fresh/frozen fish and frozen froglegs constitute more than 90 per cent of the total quantity of marine products exported.[5]

The important fish and fishery products exported from Kerala are shrimps, froglegs, ponifrets, seer and other fish, cuttle fish, squids, clamis, crab meat and other miscellaneous items.

Direction of Exports

Though India exports marine products to several countries in the world Japan and USA are the major markets which together account for more than 70% of the total quantity exported. In terms of value the exports to these countries constitute more than 84% of the total value of seafood exports from India. This position has remained almost consistent from the year 1973 onwards except for minor fluctuations. The USA was the principal buyer of our frozen seafoods for a long time but after 1970-'71 Japan emerged as our leading buyer pushing the USA to the second position. Japan continues to be the biggest buyer of Indian marine products who bought 53.6% of our seafood exports in 1982 equivalent to 71.5% of the value of exports in the year. The USA, occupying the position of the second

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5. "A Compendium on Indian Fisheries and Seafood Export Industry", MPEDA, Cochin.

largest buyer bought 16.7% of the quantity exported equivalent to 12.9% of the total value in the year. While the US off-take has been steadily declining from 1973 onwards the Japanese purchases have correspondingly increased during the period.[6] Table 5.4 shows directional pattern of marine products exports from India from 1971.

## SHARE OF KERALA IN SEAFOOD EXPORTS

Kerala's share in the seafood exports from the country has steadily decreased consequent on the development of the industry in other coastal states. The fall in the expert of frozen froglegs and canned shrimps both of which were mainly exported from the state also contributed to the decline in quantum of exports.

A study of the state-wise annual marine landings from 1972 to 1982 indicates a declining trend in respect of Kerala (Tables 5.5 and 5.6). In 1977 Kerala had a total landing 3,45,037 M. tonnes of marine fish which decreased to 2,74,395 in 1982. The states of Tamilnadu, Karnataka, Gujarat and Maharashtra have either improved their position or remained steady during the period. The unique phenomenon of 'chakara' (mud bank) which leads to windfall catches of shrimps in Kerala was conspicuously

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6. "Statistics of Marine Products Export" (1982), MPEDA, Cochin, p. 11.

## Table 5.4

### Major Importers of Indian Marine Products And Their Share in Our Exports (1971-'82)

Q = Quantity
V = Value
(in percentage)

| Major Importers | | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Japan | Q | 34.3 | 34.0 | 47.8 | 42.1 | 58.6 | 44.9 | 42.1 | 43.5 | 41.4 | 49.96 | 55.47 | 53.61 |
| | V | 52.7 | 48.0 | 58.7 | 51.6 | 68.1 | 64.6 | 61.0 | 66.7 | 68.2 | 69.65 | 71.25 | 71.47 |
| 2. U.S.A. | Q | 34.1 | 44.1 | 27.7 | 31.4 | 27.5 | 33.7 | 31.6 | 22.9 | 15.9 | 10.35 | 13.99 | 16.70 |
| | V | 29.6 | 39.1 | 25.2 | 32.1 | 21.7 | 25.8 | 25.8 | 18.2 | 15.3 | 9.17 | 11.69 | 12.91 |
| Sub Total | Q | 68.4 | 79.1 | 75.5 | 72.5 | 86.1 | 78.6 | 73.7 | 66.4 | 57.3 | 60.31 | 69.46 | 70.31 |
| | V | 77.2 | 87.1 | 83.9 | 83.7 | 89.8 | 90.3 | 86.8 | 84.9 | 83.5 | 78.82 | 82.94 | 84.38 |
| 3. France | Q | 2.0 | 2.3 | 2.0 | 0.7 | 1.8 | 5.1 | 4.4 | 7.2 | 3.9 | 3.21 | 2.64 | 2.64 |
| | V | 2.0 | 2.9 | 2.1 | 1.0 | 1.9 | 4.1 | 3.9 | 5.5 | 3.2 | 2.65 | 1.67 | 1.65 |
| 4. Netherlands | Q | 0.2 | 0.3 | 0.4 | 0.3 | 0.2 | 0.1 | 0.9 | 1.5 | 2.5 | 4.07 | 3.18 | 2.38 |
| | V | 0.2 | 0.3 | 0.4 | 3.6 | 0.2 | 0.1 | 0.8 | 1.2 | 2.6 | 3.74 | 2.53 | 1.74 |
| 5. U.K. | Q | 2.0 | 1.9 | 3.4 | 1.9 | 0.4 | 0.4 | 0.5 | 0.5 | 1.7 | 2.33 | 4.00 | 3.94 |
| | V | 2.7 | 2.4 | 4.2 | 3.6 | 0.3 | 0.4 | 0.6 | 0.6 | 2.2 | 2.61 | 3.52 | 3.52 |
| 6. Australia | Q | 2.3 | 2.1 | 2.0 | 2.1 | 2.3 | 1.3 | 0.9 | 0.4 | 0.5 | 0.65 | 0.61 | 0.55 |
| | V | 2.7 | 2.2 | 2.3 | 2.4 | 2.6 | 1.2 | 1.2 | 0.6 | 0.9 | 0.87 | 0.73 | 0.67 |
| 7. Belgium | Q | 0.4 | 0.2 | 1.6 | 2.0 | 1.0 | 0.7 | 1.1 | 0.6 | 0.6 | 1.57 | 1.13 | 1.08 |
| | V | 0.5 | 0.2 | 1.6 | 2.0 | 0.8 | 0.6 | 1.1 | 0.6 | 0.7 | 1.09 | 0.99 | 0.80 |
| 8. Srilanka | Q | 16.9 | 8.2 | 7.4 | 4.5 | 3.7 | 6.7 | 6.2 | 7.6 | 3.7 | 5.47 | 1.14 | 3.78 |
| | V | 3.3 | 1.1 | 1.2 | 0.8 | 0.5 | 0.8 | 1.2 | 1.3 | 0.6 | 0.84 | 0.16 | 0.55 |
| 9. Others | Q | 7.8 | 5.0 | 7.7 | 16.0 | 4.5 | 7.1 | 12.3 | 16.9 | 29.8 | 22.39 | 17.84 | 15.82 |
| | V | 6.3 | 3.3 | 4.3 | 2.9 | 3.9 | 2.4 | 4.4 | 5.4 | 5.3 | 9.38 | 7.46 | 5.69 |
| Total Exports | Q | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100 | 100.00 | 100 | 100.00 | 100.00 | 100.00 |
| | V | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100 | 100.00 | 100 | 100.00 | 100.00 | 100.00 |

Source: Marine Products Export Development Authority, Cochin.

## Table - 5.5

State-Wise Annual Marine Fish Landings in India

(1972-1982)

(Figures in Tonnes)

| States | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West Bengal-and Orissa | 15,330 (1.56%) | 22,736 (1.86%) | 26,092 (2.14%) | 45,761 (3.22%) | 55,234 (4.08%) | 21,761 (1.73%) | 52,426 (3.73%) | 62,552 (4.51%) | 45,472 (3.64%) | 55,762 (4.05%) | 61,206 (4.31%) |
| Andhra Pradesh | 84,480 (8.62%) | 99,544 (8.16%) | 1,58,818 (13.04%) | 1,55,638 (10.94%) | 1,31,321 (9.11%) | 1,00,756 (8.00%) | 82,116 (5.85%) | 91,426 (6.59%) | 1,16,013 (9.28%) | 1,16,143 (8.42%) | 1,18,034 (8.31%) |
| Tamil Nadu | 1,55,153 (15.83%) | 1,82,419 (14.95%) | 1,75,713 (14.43%) | 2,21,215 (15.55%) | 2,26,078 (16.71%) | 2,06,046 (16.36%) | 2,12,899 (15.17%) | 2,35,008 (16.93%) | 2,17,394 (17.39%) | 2,21,296 (16.05%) | 2,45,961 (17.31%) |
| Pondicherry | 9,980 (0.92%) | 8,662 (0.71%) | 7,698 (0.63%) | 8,150 (0.57%) | 10,123 (0.75%) | 6,462 (0.51%) | 6,828 (0.49%) | 10,068 (0.73%) | 9,390 (0.75%) | 10,755 (0.78%) | 12,058 (0.85%) |
| Kerala | 2,95,618 (30.16%) | 4,48,269 (36.74%) | 4,20,257 (34.51%) | 4,20,836 (29.58%) | 3,31,047 (24.47%) | 3,45,037 (27.37%) | 3,73,339 (26.60%) | 3,30,509 (23.80%) | 2,79,543 (22 38%) | 2,74,395 (19.90%) | 3,25,795 (22.93%) |
| Karnataka | 92,676 (9.46%) | 91,489 (7.50%) | 76,263 (6.26%) | 87,494 (6.15%) | 95,283 (7.04%) | 97,152 (7.71%) | 1,52,860 (10.89%) | 1,26,384 (9.10%) | 1,15,322 (9·23%) | 1,53,349 (11.12%) | 1,54,836 (10.90%) |
| Maharashtra | 2,20,002 (22.45%) | 2,26,696 (18 58%) | 1,84,961 (15.19%) | 2,56,619 (18.04%) | 2,93,601 (21·70%) | 2,64,452 (20.99%) | 2,84,244 (20.25%) | 2,93,326 (21·12%) | 2,31,763 (18.54%) | 2,72,587 (19 77%) | 2,53,429 (17.84%) |
| Gujarat | 75,846 (7.74%) | 1,21,963 (9.99%) | 1,45,309 (11.93%) | 1,93,775 (13.62%) | 1,71,294 (12.66%) | 1,89,638 (15.05%) | 2,01,929 (14.39%) | 1,91,312 (13.78%) | 2,03,494 (16.28%) | 2,34,510 (17.01%) | 2,07,204 (14.58%) |
| Andamans | 780 (0.08%) | 854 (0.07%) | 920 (0.08%) | 1,104 (0.08%) | 1,334 (0.10%) | 1,532 (0.12%) | 7,077 (C.50%) | 1,721 (0.12%) | 1,803 (0.14%) | 1,862 (0.14%) | 3,859 (0 27%) |
| Lakshadeep | 1,080 (0.11%) | 1,853 (0.15%) | 2 232 (0 18%) | 2,931 (0.20%) | 2,572 (0.19%) | 2,215 (0.16%) | 2,780 (0.20%) | 3,846 (0.28%) | 2,909 (0.23%) | 3,300 (0.24%) | 4,201 (0.30%) |
| Goa | 39,104 (3.07%) | 15,740 (1.29%) | 19,534 (1.61%) | 29,170 (2.05%) | 34,968 (2,59%) | 24,731 (1.96%) | 27,111 (1.93%) | 25,388 (1.83%) | 24,490 (1.96%) | 34,498 (2.50%) | 34,041 (2.40%) |
| Private Trawlers | — | — | — | — | — | — | — | 16,840 (1.21%) | 2,244 (0.18%) | — | — |
| Total | 9,80,049 (100.00%) | 12,20,240 (100.00%) | 12,17,797 (100.00%) | 14,22,693 (100.00%) | 13,52,855 (100.00%) | 12,59,782 (100.00%) | 14,03,607 (100.00%) | 13,88'380 (100.00%) | 12,49,837 (100.00%) | 13,78,457 (100.00%) | 14,20,624 (100 00%) |

**Source:** Central Marine Fisheries Research Institute, Cochin.

## Table - 5.6

State-Wise Share in India's Shrimp Landings

(1972–1982)

(Figures in Tonnes)

| States | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| West Bengal and Orissa | 1,471 (0.90%) | 3,051 (1.50%) | 3,487 (20.5%) | 5,707 (2.58%) | 5,635 (2.94%) | 1,690 (0.99%) | 3,879 (2.16%) | 3,588 (2.02%) | 1,304 (0·76%) | 2,878 (1.98) | 3,501 (2.16%) |
| Andhra Pradesh | 5,582 (3.41%) | 8,839 (4.34%) | 12,699 (7.46%) | 10,675 (4.84%) | 11,108 (5.80%) | 11,375 (6.67%) | 9,563 (5.32%) | 11,814 (6.65%) | 10,006 (5.86%) | 8,335 (5.75%) | 14,529 (8.97) |
| Tamil Nadu | 5,033 (3.07%) | 5,787 (2.85%) | 8,106 (4.76%) | 12,033 (5.45%) | 9,033 (4.72%) | 8,356 (4.90%) | 13,912 (7.73%) | 11,119 (6.26%) | 10,028 (5·87%) | 14,252 (9.83%) | 14,462 (8.93%) |
| Pondicherry | 182 (0.11%) | 38 (0·02%) | 29 (0.02) | 64 (0.03%) | 93 (0.05%) | 105 (0.06%) | 316 (0.18%) | 604 (0.34%) | 527 (0.31%) | 389 (0.27%) | 320 (1.20%) |
| Kerala | 36,577 (22.32%) | 85,751 (42.14%) | 69,829 (35·75%) | 77,962 (35.32%) | 34,533 (18.04%) | 40,324 (23.68%) | 45,428 (25.26%) | 29,597 (16.67%) | 54,375 (31.85%) | 22,428 (15.47%) | 26,773 (16.53%) |
| Karnataka | 8,075 (4.93%) | 8,236 (4.05%) | 12,696 (7.46%) | 3,074 (1.39%) | 2,594 (1.35%) | 3,335 (1.96%) | 8,440 (4.69%) | 4,660 (2.62%) | 3,226 (1.89%) | 4,126 (2.85%) | 7,698 (4.75%) |
| Maharashtra | 1·04,125 (63.55%) | 80,349 (39.49%) | 64,737 (38.04%) | 93,665 (42·43%1) | 1,04,474 (54.58%) | 93,653 (54.94%) | 85,346 (47.45%) | 1,01,846 (57.35%) | 70,742 (41.43%) | 74,571 (51.44%) | 74,723 (46.14%) |
| Gujarat | 2,231 (1.36%) | 10,620 (5.22%) | 6,119 (3.59%) | 15,781 (7.15%) | 19,275 (10.07%) | 10,121 (5.94%) | 11,034 (6.13%) | 11,953 (6.73%) | 18,590 (10.89%) | 15,727 (10.85%) | 16,385 (10.12%) |
| Andamans | 12 (0·01) | 8 ( ) | 28 (0.02%) | 28 (0.01%) | 39 (0.02%) | 45 (0.03%) | 265 (0.15%) | 64 (0.04%) | 54 (0.03%) | 26 (0.02%) | 63 (0.04%) |
| Goa | 561 (0.34%) | 785 (0.39%) | 1,448 (0.85%) | 1,762 (0.80%) | 4,643 (2.43%) | 1,460 (0.85%) | 1,673 (0.93%) | 1,594 (0.90%) | 1,853 (1.09%) | 2,237 (1.54%) | 3,491 (2.16%) |
| Private Trawlers | — — | — — | — — | — — | — — | — — | — — | 743 (0.42%) | 3 (0.02%) | — — | — — |
| Total Shrimp - Landings | 1,63,849 (100.00%) | 2,03,469 (100.00%) | 170,78 (100.00%) | 2,20,751 (100.00%) | 1,91,427 (100.00%) | 1,70,464 (100.00%) | 1,79,856 (100.00%) | 1,77,582 (100.00%) | 1,70,737 (100.00%) | 1.44,969 (100.00%) | 1,61,945 (100.00%) |

Source: Central Marine Fisheries Research Institute, Cochin.

absent for successive years from 1976 onwards.[7] All these contributed to the decline in the state's share of seafood exports.

## FAILURE OF PUBLIC SECTOR FISHERIES CORPORATION

The Government of Kerala established in 1966 a public sector company under the name 'Kerala Fisheries Corporation' with an authorised capital of Rs.5 crores. The declared objectives of the Corporation were

1. fishing and processing of seafood for domestic and export markets
2. development of seafood industry by providing infrastructural facilities
3. production and marketing of fish meal by converting trash fish and fish waste and
4. adoption of modern technological developments in the fishing and fish processing industry.[8]

Contrary to the expectations, the Corporation's performance has so far been a dismal failure. It has been recently announced by the Government of Kerala that the Corporation would be liquidated in view of its poor viability and huge accumulated loss. The Corporation has five processing and freezing plants in different parts of the

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7. Ibid p. 243.
8. Information collected through personal discussions.

state besides 2 fish meal plants and a nylon net knitting factory. The huge loss sustained by the Corporation indicates its inefficient management and bureaucratic delays which proved to be fatal.

## FISHERIES RESOURCE POTENTIAL OF KERALA

After the declaration of the 200 mile Exclusive Economic Zone, India's seafood resources potential has been estimated. The state-wise estimates are given at Table 5.7 along with particulars of present levels of exploitation at Table 5.8.

Kerala has a coast line of 560 Kms. and an area of Exclusive Economic Zone of 147740 Sq.Km. The total resources potential from this area has been estimated at 656368 Tonnes.[9] In 1981 the state could exploit only less than 50% of the exploitable resources. This reveals the vast untapped resources in the Exclusive Economic Zone along the Kerala coast.

The marine fish landings in Kerala show a declining trrend from the year 1973 onwards.[10]

### Socio-Economic Problems

The growth of seafood industry over the years has been impressive but the conditions of fishermen did not

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9. Bhat Tushar, "Fish Exploitation Strategy", Business Standard, 7th May 1982.
10. Statistics of Marine Products Export, (1982) MPEDA, Cochin, p. 243.

Table 5.7

Statewise Resource Potential of Indian EEZ

| Sl. No. | Name of the States and Union Territories | Length of coast-line (km) | Area of Economic Zone in Sq.Km. | Yield estimated in ton per $km^2$ in different zones from shore upto | | | Total resource potential in tonnes |
|---|---|---|---|---|---|---|---|
| | | | | Upto 40km. | 40 to 160 kms. | 160kms 320kms | |
| 1. | Gujarat | 1663 | 314060 | 5 | 4 | 2 | 650150 |
| 2. | Maharashtra | 720 | 131680 | 5.2 | 4.3 | 2 | 488068 |
| 3. | Goa | 163 | 43500 | 5.2 | 4.3 | 2 | 128544 |
| 4. | Karnataka | 300 | 87080 | 8.4 | 4.2 | 3 | 425140 |
| 5. | Kerala | 560 | 147740 | 9 | 4.4 | 2 | 656368 |
| 6. | Tamil Nadu | 1000 | 197120 | 4 | 4 | 2 | 698224 |
| 7. | Andhra Pradesh | 982 | 139580 | 4.2 | 4.2 | 2 | 447268 |
| 8. | Orissa | 480 | 97720 | 5 | 5 | 2.5 | 286100 |
| 9. | West Bengal | 64 | 32320 | 5 | 5 | 2.5 | 115100 |
| 10. | Pondicherry | .. | 1440 | 4 | . | . | 20040 |
| 11. | Andaman & Nicobar Islands | .. | 519590 | 2.8 | 2.8 | 1 | 821108 |
| 12. | Lakshadweep | .. | 178666 | 9 | 4.4 | 2 | 620511 |

Source: CMFRI, Cochin.

Table 5.8

Present Level of Exploitable And Exploited Resources (Statewise)

| States/Union Territories | Total Exploitable potential (Tonne) | 1979 Production (Tonne) | Balance Available for future exploitation (tonne) |
|---|---|---|---|
| Gujarat | 65015 | 203436 | 446714 |
| Maharashtra | 488068 | 310589 | 177479 |
| Goa | 128544 | 38683 | 89861 |
| Karnataka | 425140 | 202813 | 222327 |
| Kerala | 656368 | 330450 | 325918 |
| Tamil Nadu | 598224 | 206956 | 391268 |
| Andhra Pradesh | 447268 | 91182 | 356086 |
| Orissa | 285100 | 32000 | 253100 |
| West Bengal | 115100 | 60000 | 55100 |
| Pondicherry | 20040 | 13179 | 6861 |
| Andaman & Nicobar Islands | 821108 | 1721 | 819387 |
| Lakshadweep | 620511 | 3846 | 616665 |

Source: Central Marine Fisheries Research Institute, Cochin.

make commensurate improvement. This situation has created discontent among the fishermen community. As more and a more mechanised fishing boats go into operation the traditional fishermen develop a feeling of insecurity because of the apprehension that their 'area of activity' is being encroached upon. The sharp decline in the monsoon prawn fishery yields has also worsened the situation.

The commencement of commercial purse-seine fishing in 1979 in Kerala was opposed by the artisanal fishermen. Purse seining in traditional grounds led to clashes between the artisanal fishermen and the purse seine operators which created tension on many occasions.[11]

In 1980 the Government of Kerala enacted the Marine Fishing Regulation Act with a view to minimising the tension between the mechanised and the non-mechanised sectors of fishermen and for the better management of pelagic fishery resources of Kerala. As per provision contained in the above act the area of operation of each type of vessel is demarcated. No mechanised craft is permitted to fish upto 8 fathoms. Country crafts and catamarans fitted with outboard motors can operate from 8 fathoms. Mechanised boats of less than 35 gross tonnage are restricted to operate between 10 and 20 fathoms and purse seine boats are permitted to fish

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11. Nair, Somasekharan, K.V. et al, Clash between Purse Seine and Artisanal Fishermen at Cochin (1983), Marine Fisheries Information Service, CMFRI, Cochin, Vol.49, p. 14.

only beyond 22 fathoms. Purse seine boats if caught fishing in banned water can be fined upto Rs.5,000/- or the catch confiscated and the fine increased to five times the cost of catch.[12]

Even after the introduction of the Marine Fisheries Regulation Act, the purse seine fishermen who held the view that the restrictions imposed for purse seine fishing were unjustifiable, violated the boundaries on several occasions leading to clashes. The purse seine boat owners' association moved a writ petition at the High Court of Kerala against the provisions of the Act. The court ordered that purse seine boats could operate beyond 10 Kms. which made the limit fixed by the Act invalid. This directive from the High Court infuriated the artisanal fishermen and created a volatile situation along the coast. They organised statewide agitations and massive demonstrations with the active support of religious and political forces. The government has now appointed an expert committee to study the whole issue and also examine the controversies regarding the proposal to ban fishing during the monsoon months as a measure of conservation.

The whole issue has now assumed political complexion which makes an amicable solution far difficult.

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12. Ibid.

Kerala has the highest fishermen population in India as revealed by the 'All India Census of Marine Fishermen Craft and Gear 1980' conducted by the Central Marine Fisheries Research Institute. The state has a total fishermen population of 6,39,872 persons including children. There are 304 fishing villages in the state. The fishermen own about 980 mechanised crafts while the total number of non-mechanised crafts owned by them exceeds 26,000. Out of which catamarans comprise of 44% dug out canoes 40% and plank built boats 16%.[13]

Dug-out canoes, catamarans and other country crafts are now increasingly fitted with outboard motors which have proved to be more efficient than manually operated crafts as they could reach the fishing grounds faster and operate for longer periods. However only a fraction of the country crafts have been so far powered by outboard engines as these engines which are imported involve high cost.

The continuing confrontation between the mechanised and non-mechanised sectors in the fishing industry will adversely affect the exports from the state, eventually forcing the fish processing units in the state to shift their locations to areas of better environment.

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13. All India Census of Marine Fishermen Craft and Gear, 1980, Fishery Resources Assessment Division, CMFRI, Marine Fisheries Information Service, (1981) CMFRI, Cochin, Vol. 30, p. 4 - 5.

While reviewing the demarcation of areas for the operation of various types of crafts the imperative need to combat the problem of economic overfishing of prawn and other species of fishes through appropriate measures of conservation should be recognised.[14]

Regulation of number of purse seines which should operate from one base, prevention of frequent shifting of base of operation of fishing boats, mesh regulation of gear and restriction on the size of species in the fishing, introduction of minimum legal size of different species of fishes, delimitation of areas and periods for operation of purse seine for a specific resources control on the basis of annual or seasonal catch quota to be fixed for fishery at specified base and closed season for purse seine fishery during the periods of spawning of pelagic fisheries are the important measures which have to be considered while formulating a statutory schedule for fishing operations in the state.[15]

Fishing being a seasonal occupation the fishermen do not have employment throughout the year. The state government have already introduced several welfare schemes

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14. George M.J. et al, Monsoon Prawn Fishery of Neendakara Coast, Kerala - a Critical Study, Marine Fisheries Information Service (1983) CMFRI, Cochin, Vol. 51, p.7.

15. Silas, E.G. et al, Purse Seine Fishery - Imperative Need for Regulation, Marine Fisheries Information Service (1980) Vol. 24, p.7.

for the fishermen with a view to ensuring their social security and improving living conditions.

The seafood export industry in Kerala should realise its social obligations towards improving the living conditions of the fishermen which will help to improve their productivity. The future of the fishing industry as well as that of the seafood export industry in Kerala will very much depend upon the plight of the fishermen who are the backbone of the industry.

## MIGRATION OF THE SEAFOOD PROCESSING UNITS FROM KERALA

In recent years, many seafood processing units in Kerala closed down their operations for various reasons and moved to Tamilnadu, Andhra Pradesh, Orissa and Karnataka. This migration has been caused mainly by the declining levels of production of prawns and other fishes with export demand.

It is interesting to observe that in majority of the fish processing units set up in other states, women labour from Kerala constitute the work force which could be attributed to their dexterity. Another factor for the large scale employment of women labour from Kerala is their 'easy dispensability' after the fish processing season.

The women workers from Kerala are employed in the fish processing units in Karnataka, Goa, Ratnagiri, Veraval, Bombay and also in the processing centres on the east coast. These workers are often paid meagre wages and

they are forced to live under sub-standard living conditions. It is high time that the Government of India took appropriate steps to improve the lot of these migrant work force.

Pattern and Structure of Seafood Exports

For more than a decade now, frozen shrimps exceeded a share of 70 per cent of the seafood exports from India in terms of quantity equivalent to more than 80% of the value of exports of the item. The over dependence on shrimps is an unhealthy market phenomenon which could prove disastrous. Increased supplies from any competing source can alter our present status in seafood exports.[16]

Another disturbing feature is the limited direction of our exports. Our exports are now mainly confined to Japan and USA. The USA was the principal buyer of our frozen seafoods for a very long time but after 1970-'71 Japan emerged as our leading importer, pushing the USA to the second position. Japan and USA together lifted 70.31 per cent of our exports in terms of quantity, equivalent to 84.38 per cent in terms of value in 1982.[17]

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16. "Statistics of Marine Products Export", MPEDA (1982) pp. 12-13.

17. "Report of the Task Force on Marine Products" (1982) New Delhi, Ministry of Commerce, Govt. of India, p. 29.

Share in Exports - 1982 (In Percentage)

| | Quantity | Value |
|---|---|---|
| Japan | 53.61 | 71.47 |
| U.S.A. | 16.70 | 12.91 |

Source: MPEDA, Cochin.

Over the last one decade the directional pattern of our exports has not undergone any significant change. This limited directional trend of our exports is a matter of disadvantage as any fluctuation or reversal in these major markets would drastically affect our exports.

Diversification of products for export and expansion of the directional spectrum are essential to develop the seafood industry on sound marketing principles.

Product Diversification

Frozen shrimps - a single item - formed about 73 per cent of our marine products export in 1982. For the last one decade the share of this single product in our seafood exports has remained constant with only marginal fluctuations. Fresh/frozen fish occupied the second position in the structure of marine products export with a share of 13.15 per cent in quantity of the total exports in 1982. Among the other frozen products exported froglegs occupied the next position with a share of 3.02 per cent in the year. Frozen froglegs

were relegated to the third position in the marine products exported from the country in 1977 when fresh/frozen fish emerged as the second largest item of exports. The remaining portion of marine products export - 11.13 per cent - was constituted by frozen lobsters, frozen cuttle fish and squids, frozen clam, frozen crab meat, canned shrimps, canned crab meat, canned clam, canned tuna, canned sardines, dried shrimps, dried fish, dried shark fins, fish maws and other minor items.[18]

The major constraints which operate against the diversification of marine products for export are:

1. the high unit value realisation for shrimps export which induces concentration on shrimp alone.
2. for exportable varieties of fish like pomfrets there is already a very good domestic market.
3. other producing countries offer us stiff competition in the export of frozen fish like mackerel, sardines, perches, cat fish etc. on account of freight advantage.
4. we are yet to develop specialised fishing efforts for squids, tuna etc.[19]

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18. "Statistics of Marine Products Export" (1982) p.4.
19. "Report of the Task Force on Marine Products" (1982) New Delhi, Ministry of Commerce, Govt. of India, p.90.

However, planned exploitation of our resources and appropriate marketing strategies could considerably change the present stagnant position.

Kerala has significant resource potential for developing export of items like crab meat, clams (frozen and canned), cuttle fish, squids and fish like pomfrets besides mackerels and sardines.

Product Modification

Frozen shrimps from India are exported in institutional packs ( 2 Kg. x 10 ). A good portion of imports are repacked into retail packs under the importer's brand name. Hence the consumers do not identify the product as of Indian origin. The consumer packs are priced very high with better unit value realisation.[20]

Innovative techniques like 'individual quick freezing' and 'accelerated freeze drying' are suitable for packing shrimps in consumer packs. Small consignments of shrimps packed as IQF/AFD are now being shipped from Cochin. It is likely that the demand for them would improve in due course. Though shrimps packed under IQF would fetch higher unit value certain constraints limit the proppects of growth

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20 "Report of the Task Force on Marine Products", Ministry of Commerce, Govt. of India, New Delhi, 1982, p.89.

of exports. Finished IQF product is more susceptible to breakage in transit which would mean higher packing cost than in the case of block frozen shrimps. The IQF product would take up greater volume per Kilogram than the block frozen form. Besides, they are more likely to be affected by temperature fluctuations.[21]

Accelerated freeze dried shrimps would not have texture and intrinsic quality comparable to block frozen or IQF product. However AFD shrimps will be of appeal for a specific market segment. The greatest advantage of IQF and AFD methods of processing is the product identity/ brand image which they would build up in the overseas market.[22]

Improvement of Product Image

The image of Indian Marine products in the overseas market can not be rated as good, especially in the USA and Australia. Our exports to these two markets suffered a set-back due to inconsistencies in quality. Export of frozen shrimps and frozen froglegs to USA declined in the recent past as a result of the U.S. Food and Drug Administration (USFDA) detentions of some of the consignments shipped from India. Our exports of cooked and peeled

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21 Market Survey of Marine Products in US and Canada, MPEDA/ITC Cochin/Geneva, 1978, p. 67.

22 Mammen, T.A., The Market for Indian Marine Products in Australia, MPEDA, Cochin, 1978, p.61.

shrimps to Australia also dwindled as the importers found that the quality of the product was unreliable. Besides, Malaysia and Singapore were able to effect supplies to Australia at competitive prices affecting our prospects.[23]

An image of quality consistency is of crucial importance in sustaining and developing the export market. With the recent amendment to the Export (Quality Control and Inspection) Act which stipulates severe punitive action on those exporters who violate the provisions of the Act, there will now be more effective enforcement of compulsory quality control and preshipment inspection of seafood exports. It has also to be ensured that the processing units conform to international standards in hygiene and sanitation.

Improvement in Packaging

Even though India is the single largest producer and supplier of shrimps to the world market we are yet to achieve any significant status in the packaging or marketing of the product. The conventional pack of 2 Kg. (5 lbs) blocks of frozen shrimps has been in vogue for the past two decades, undergoing very little change during the period. Our competitors, on the contrary, have achieved

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23 Ibid.

considerable progress in the packaging of the product in cartons of improved strength characteristics and appeal.[24]

The method adopted now is to freese shrimps in blocks of 2 Kg. or 5 lbs. and after freezing and glazing to pack them in waxed cartons. Ten such cartons with a total weight of 20 Kg. (50 lbs.) are packed into a master carton which is the unit for export. The strength, durability and attractiveness of the waxed cartons are quite important from the marketing angle. The quality of the duplex boards used for making waxed cartons needs to be improved. In the process of transport from factories and subsequent loading into ships the master cartons are subjected to severe strain and stress. Consequently, goods from India reach their destination with varying degrees of damage to the packages giving a very poor appearance. In fact, poor packaging is one of reasons for Indian shrimps fetching relatively lower prices in the export market.

The facilities for handling and loading the packages to the ships should considerably improve at our ports. Mandatory standards should be laid down for inner and outer cartons, the conformity of which could be verified at the time of pre-shipment inspection of the cargo.[25]

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24 "Report of the Task Force on Marine Products", Ministry of Commerce, Govt. of India, New Delhi, 1982, p.85.

25 Ibid.

## STORAGE AND SHIPPING FACILITIES

The facilities for storing frozen cargo at the port of Cochin has now been augmented with the commissioning of a 500 M. Tonnes capacity cold storage, built and managed by the MPEDA. However, it would be necessary to provide additional storage capacity of at least 500 Tonnes to meet the increasing demand for space on seafood cargo from neighbouring states which also reach Cochin for shipment.

At the various landing centres and fishing harbours in the state adequate facilities for the storage of landed fish do not exist now. This results in avoidable wastage caused by deterioration in quality. A chain of cold storage along the entire coast serving all important landing centres would eliminate the situation. The facilities should be made available to the fishermen at nominal charges.[26]

## SUBSIDIES AND INCENTIVES TO THE FISHING INDUSTRY

The major fishing countries in the world extend liberal patronage to their fishing industry. Storage facilities, price support and subsidy on fuel are some of the measures adopted by Australia, Japan, USA etc. As a result, seafood industry has developed considerably in those countries.

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26 Mammen, T.A., Op. cit.

Eventhough the seafood industry in Kerala had made several representations for the supply of diesel oil to the fishing boats at subsidised rates, the government has not so far considered the proposal. The purchase tax which the State Government has imposed on marine products is a great disincentive. In this context it is worth mentioning that West Bengal, Gujarat and Maharashtra do not levy purchase tax on marine products. It is time that the government abolished this tax in view of the long term interest of the industry. The tax incidence at present is 5.5% which has a negative impact on the competitiveness of our products in the overseas market. The central government through a legislation in 1976, had exempted export commodities from the purview of sales/purchase tax with the specific objective of helping the overall development of the export trade.[27] The action of the State Government has in fact, negated the beneficial effects contemplated under the central legislation Kerala may lose its position as the premier state in the seafood export trade unless the State Government realises the importance of stabilising the seafood processing industry in Kerala.

## DEVELOPMENT OF CULTURE FISHERIES

The steady decrease in the annual catches of exportable marine fishes in Kerala is a disturbing phenomenon.

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27 "Report of the Task Force on Marine Products," Ministry of Commerce, Govt. of India, New Delhi, 1982, p.106.

Table 5.6 gives the data on marine fish landings (exclusively for species with export demand).[28]

The wide seasonal and annual fluctuations in catches create problems in maintaining supply levels in the export market. Hence there is a basic need to ensure steady supply of raw material to the industry.

The state-wise distribution of brackish water area with potential for culture is given in table 5.9.[29]

**Table 5.9**

**State-wise Distribution of Brackish Water Area**

**(Potential Area for Culture and Current Area under Culture)**

| State | Potential area '000 hectare | Currently under Fish/Prawn culture |
|---|---|---|
| Gujarat | 376 | 88 |
| Maharashtra | 81 | |
| Karnataka | 80 | 4800 |
| Kerala | 243 | 5117 |
| Tamil Nadu | 80 | |
| Andhra Pradesh | 200 | |
| Orissa | 299 | |
| West Bengal | 405 | 20000 |

28 "Statistics of Marine Products Export", MPEDA, Cochin, 1982, p.233.

29 "Report of the Task Force on Marine Products", Ministry of Commerce, Govt. of India, New Delhi, 1982, p. 61.

Kerala with a potential of 2,43,000 hectares of brackish water area has put to use only 5,117 hectares. The Central Marine Fisheries Research Institute, Cochin has been rendering commendable service in transferring the technology for prawn culture to the fishermen/farmers. The Krishi Vigyan Kendra of CMFRI at Narakal has been imparting training in the techniques of prawn culture. However, only a little over than one fifth of the total brackish water area in the state suitable for prawn culture has so far been utilised.

The phenomenon of monsoon prawn fishery along the Neendakara coast is now on the decline. It has also been observed that economic overfishing is taking place in the coastal fishing grounds especially in the Neendakara belt. This indicates that the stock of prawns in the fishing grounds has really gone down. Measures have to be taken on an urgent basis to arrest the further decline in the prawn fishing in the state.[30] In this context, development of culture fisheries assumes greater relevance. As a strategy for future we have to necessarily integrate culture fisheries with capture fisheries to increase our exports.

Development of culture fisheries has manifold advantages. Besides augmenting seafood production and

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[30] George, M.J., et. al., "A Case of Overfishing - Depletion of Shrimp Resources Along Neendakara Coast, Kerala", Marine Fisheries Information Service, No.18, CMFRI, Cochin, 1980.

export through selective culture it helps to increase the income of the fishermen and ensure their longer periods of employment during the year. The harvest of the culture fisheries could also be planned to suit the demand from the processing industry, who would be getting raw material in a fresh condition as the time lag between harvest and delivery at the processing plant would be the minimum.

Special Drive for Developing Culture Fisheries

The CMFRI and the State Fisheries Department have made some beginning in the development of prawn culture farms. However, the government has not fully realised the vast potential of culture fisheries and its crucial role in the development of seafood export industry in the State. Though the exploitable resources of the Exclusive Economic Zone of the Kerala coast are above the present level of exploitation, it is a matter of observation that the exportable fishery species are in a state of economic over exploitation. This situation brings out the importance of developing culture fisheries on a large scale.

The CMFRI has organised a pilot project for prawn farming to extend scientific techniques of culture to the farmers. The Kerala Agricultural University has also set up 'demonstration farms' in the brackish water areas in Ernakulam and adjoining places. It has been found to

reach a yield rate of 1000-1500 Kg. per hectare per year using the technology available at present in India. However, Taiwan is reported to have reached an impressive yield of 7.5 M. Tonnes per hectare per year under intensive culture.[31]

Restrictive Effect of Land Reforms

While the efforts of CMFRI and Kerala Agricultural University have considerably helped in developing scientific acuaculture only a little over than one-fifth of the potential brackish water area in Kerala has so far been utilised.

The main factor which limits the development of acquaculture in the state is the restrictive land reform laws. Lands where fish/prawn culture is carried out simultaneously/alternatively with paddy cultivation are classified as single crop wet land with a ceiling of 10 standard hectare per family. Under the Kerala land utilisation order, paddy lands can not be converted for any other uses including acquaculture without approval from revenue authorities.[32]

The ceiling on the extent of paddy-cum-prawn culture lands has rendered prawn farming economically unviable. The State Government has to take steps to conduct a survey of land suitable for aquaculture and classify them

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31 "Report of the Task Force on Marine Products", Ministry of Commerce, Govt. of India, New Delhi, 1982, p. 62.

32 Ibid., pp. 63-64.

as 'acquaculture lands' exempting from ceiling limits. Paddy lands suitable for prawn culture during certain seasons of the year should be liberally permitted to be used for prawn culture.

Brackish water areas under government possession suitable for aquaculture should be leased out to private entrepreneurs. The new scheme announced by the Government of India to encourage hundred per cent export-oriented farms exempt from land ceiling regulations should help remove the present constraints on prawn/fish culture. Under the scheme large prawn farms could be set up since the entire production from them would be exported.[33]

Assistance to Traditional Prawn Farmers

Traditional prawn farming in Kerala has not undergone significant changes. The yield from the traditional prawn farms remains low in the absence of scientific management. It is essential that quality prawn seeds and technical guidance are provided to the farmers to convert traditional fields into selective culture farms.

More extensive field demonstrations should be organised. Steps should be taken to provide input subsidy, training to farm operatives and prawn seeds from hatcheries

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33 "Export Farms" (Editorial) Economic Times, Bombay, 20-3-1984.

to increase production from the existing fields. It is also essential to extend the facility of 'crop insurance' to the prawn farms also.

Poaching has recently become a serious menace to successful prawn farming. As the unit value of the produce is high there is constant threat from poachers. The state police department has to deploy special patrolling squads alsong the farm boundaries.

The Task Force on Marine Products has recommended that a phased programme should be drawn up by the MPEDA in consultation with the Ministry of Agriculture for conversion of traditional culture areas into selective culture farms.

## PREVENTION OF AQUATIC POLLUTION

The aquatic resources of Kerala now face the problem of pollution from industrial wastes and effluents harmful to biological organisms. Industrial units located on the banks of rivers and estuaries discharge effluents into the adjoining water systems.

It has been reported that large scale fish mortality occurred in the Chaliyar river near Calicut into which untreated waste water from the adjacent Rayon pulp factory was discharged.[34] The water in the Periyar river

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[34] "Pollution and Fish Mortality in Chaliyar River, Mavoor", Marine Fisheries Information Service, No.7, CMFRI,Cochin, 1979.

has been found to contain toxic chemicals beyond tolerance limits as the industrial units in the Eloor-Edayar region discharge their effluents into this river. The Muvattupusha river flowing close by the Newsprint factory in Velloor, Kottayam District is also found to be contaminated by toxic waste products emptied into it from the plants. The effluents from the Cochin refineries which flow into the nearby estuaries has been affecting the aquatic life in them. It has also been reported that the effluents from Travancore Titanium Products, Trivandrum cause pollution of marine waters in the areas adjoining the unit.

The State Pollution Control,Board has initiated steps to monitor the levels of pollution at the various industrial centres. There has to be strict enforcement of pollution control laws. Industries either in the private or public sector should not be allowed to function without ensuring that effective pollution control measures have been adopted. A social consciousness has to be created about the gravity of pollution problem. Unless steps are taken now to prevent water pollution of the rivers and estuaries of Kerala they may soon become unfit for aquatic life and affect the prospects of culture fisheries in the state. The government may have to adopt a policy to discourage chemical industries in the state in view of its unique features like limited land area, high

density of population and the large number of rivers and estuaries.

## DEVELOPMENT OF DEEP SEA FISHING

With the declaration of 200 nautical mile Exclusive Economic Zone India's deep sea fishery resources extend over more than 2 million square kilometres of area. Kerala has a share of 1,47,740 sq.kms. of the EEZ. While this extensive area presents greater opportunities it simultaneously brings in new challenges. The resources potential of exploitable fisheries from the EEZ along the Kerala coast has been estimated at 6,58,388 tonnes.[35]

The fishery resources available in the EEZ should be exploited at the optimum level keeping a balance between the exploitation and growth of fish resources. There are three distinct sectors involved in fishing activities; the artisanal/traditional fishermen, the mechanised boats sector and the deep sea fishing vessels. There have been conflicts between these sectors, adversely affecting the seafood export industry in Kerala. The clash between the artisanal fishermen and the purse-seine operators had assumed the shape of a crisis. The issue has now been settled but any recurrence could be avoided

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35 Bhat Tushar, Op. cit.

only through surveillance by coastal guards and fishery departments personnel.

By virtue of the vastness of the EEZ either the traditional fishermen or the mechanised fishing boats sector would not be in a position to effectively exploit the fishery resources in the Zone. Hence it becomes imperative that deep sea trawlers and fishing vessels are introduced. Deep sea fishing could be successfully developed only if processing and marketing facilities are simultaneously developed.

Government of India has accepted the necessity for foreign participation in deep sea fishing. Tie-ups with multinationals in deep sea fishing would have the benefit of a ready export market for the catch in the collaborating country. The government of Kerala should design a programme for deep sea fishing as outlined by the central government envisaging liberal foreign participation. Tamil Nadu has made considerable progress in this direction.[36] Southern Sea Crafts, Madras has now been given permission to set up a hundred per cent export-oriented deep sea fishing project. The company would enter into technical collaboration with Australia to acquire fourth generation fishing vessels. These vessels would be equipped to catch, process and pack fish

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36 Seafood Export Journal, Vol.XVI, No.12, Sea Food Exporters' Association of India, Cochin, 1984, p.27.

on board and bring to shore ready-to-market product. The vessels would also have instrumentation facilities to locate fishery resources in deep sea. Being a hundred per cent export-oriented project the entire catch would be marketed overseas under arrangement with the collaborators.

The Kerala Fisheries Corporation has announced their plans to charter deep sea fishing vessels. It would be wiser to drop the idea at this stage as the organisation has a very poor track record. On the contrary, private entrepreneurs should be encouraged into the field of deep sea fishing as they would be in a better position to enter into joint ventures with overseas collaborators. The State Government should extend liberal help to such ventures through finance, subsidies and incentives, relief in taxes and duties and support.

The foreign collaboration in deep sea fishing should be at least for a period of five years with permission for extension for a suitable period if found necessary. It is also important to have effective surveillance of the EEZ to prevent poaching by foreign flag vessels.[37]

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[37] Proceedings of the National Seminar on Fishery Development, organised by IIMA and the Indian Society of Agricultural Economics, New Delhi.

Joint ventures for exploiting the fishery resources in EEZ by chartering fishing vessels would have multiple advantages. Such projects would have comparatively low investment, the Indian Company would enjoy option to buy any of the chartered vessels during the charter period besides having the advantage of ready export market and the facility to train the personnel in specialised and diversified fishing operations.[38]

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38 Ibid.

## FROGLEGS

Exports of froglegs from country had shown more or less a trend of growth both in terms of quantity and value until 1981. On an average Kerala accounted for 50 per cent of the export of froglegs from the country. In 1981 the exports of froglegs from the country reached a quantity of 4,368 metric tonnes fetching a value of Rs.11.96 crores setting up the highest record of performance both in quantity and value. However, in 1982 the quantity fell down to 2,271 metric tonnes realising a value of only Rs.5.54 crores. Table 4.9 presents the quantum and value of exports of froglegs from the country for the period from 1972-1982.

Table - 5.10

Export of Froglegs from India (1972-'82)

| Year | Quantity (Metric tonnes) | Value (Rs. in crores) |
|---|---|---|
| 1972 | 1,823 | 2.17 |
| 1973 | 2,698 | 4.50 |
| 1974 | 1,454 | 2.87 |
| 1975 | 1,317 | 2.80 |
| 1976 | 3,170 | 7.80 |
| 1977 | 2,834 | 6.60 |
| 1978 | 3,570 | 8.43 |
| 1979 | 3,764 | 8.71 |
| 1980 | 3,098 | 7.32 |
| 1981 | 4,368 | 11.96 |
| 1982 | 2,271 | 5.54 |

Source: MPEDA, Cochin.

The restrictions imposed on catching of frogs, the system of registration of export orders with the Marine Products Export Development Authority for export of froglegs and the inconsistant quality of the product have resulted in the fall in exports of the item. However, the restrictions of catching of frogs has to be continued for the long term interests of the industry and country at large. In the past, frogs were being indiscriminately caught and the legs were processed in unhygeinic surroundings. In fact our market for froglegs in U.S.A. was lost due to the incidence of bacterial contamination (Salmonella) in several of the signments sent from here.

In view of the market potential for froglegs the conservation measures have to be continued while taking steps to set up frog farms. The Central Inland Fisheries Research Institute (CIFRI), Barrackpore have successfully developed the method of induced breeding of frogs. Processing of froglegs should be done only under hygenic conditions. We would be able to expand froglegs exports considerably if these measures are adopted. The FFMP (1982) have recommended that a centre for frog seed production and frog breeding should be set up in Kerala which accounts for more than 50 per cent of the exports of froglegs from the country.

# CHAPTER - VI

# SPICES

## HISTORICAL BACKGROUND

The spices trade in Kerala has a long history of more than 3,500 years. Congenial agro-climatic conditions prevailing in the country made Kerala the natural home of a variety of spices: black pepper, cardamom, ginger, turmeric, clove, nutmeg, mace, cinnamon etc.

Spices have had a profound influence on the course of history and civilisation. It was the lure of the spices which attracted explorers and invaders to this country in the ancient past. Ancient Kerala was known as the 'land of spices'. The pre-eminent position of the state in the history of spices trade has been examined in detail under Chapter-I. Pepper was the most important spice produced in the state and hence the Kerala coast was known as the 'pepper coast'.

## PRESENT POSITION

Kerala today occupies the foremost position in India's spices export. The important spices produced and exported from the state are (1) pepper, (2) cardamom, (3) ginger, and (4) turmeric.

Table 6.1 shows the estimated area and production of the important spice crops in the state during 1982-83.

Table - 6.1

Estimated Area and Production of Important Spice Crops in Kerala during 1982-83

| Name of crop | Area in '000 hectares | Production in '000 tonnes |
|---|---|---|
| Pepper | 107.74 | 27.78 |
| Cardamom | 54.0 | 3.10 |
| Ginger | 12.36 | 30.48 |
| Turmeric | 3.2 | 5.8 |

Source: Directorate of Cocoa, Arecanut and Spices Development.

The unique agro-climatic and eco-geographical conditions of the state have helped Kerala to gain the pre-eminent position in spices production and exports of the country.

REVIEW OF SPICES EXPORTS FROM INDIA

Table 6.2 shows export of spices from India along with annual growth rate from 1970-71 to 1982-83. It could be observed from the data that while the value of exports continuously went up after 1972-73 upto 1979-80 the quantities exported during the period showed an unsteady pattern, except from 1976-77 to 1979-80. After 1979-80 the exports started declining both in quantum and value. But the year 1982-83 showed a trend of recovery from the previous year's level.

Table - 6.2

Export of Spices (excluding cardamom small) from India

| Year | Quantity (Metric tonnes) | Annual variation (percentage) | Value (Rs.crores) | Annual variation (percentage) |
|---|---|---|---|---|
| 1970-71 | 46,201 | - | 27.60 | - |
| 1971-72 | 65,720 | +42 | 28.57 | +3.5 |
| 1972-73 | 50,278 | -23.5 | 23.71 | -17 |
| 1973-74 | 60,980 | +21 | 44.05 | +86 |
| 1974-75 | 52,980 | -13 | 49.27 | +12 |
| 1975-76 | 60,011 | +13 | 53.34 | + 8 |
| 1976-77 | 60,113 | +0.2 | 63.07 | +18 |
| 1977-78 | 178,492 | +31 | 96.38 | +53 |
| 1978-79 | 101,985 | +30 | 99.48 | + 3 |
| 1979-80 | 112,322 | +10 | 107.02 | + 7.6 |
| 1980-81 | 90,164 | -19.7 | 82.01 | -23.4 |
| 1981-82 | 65,995 | -26.8 | 62.14 | 24.2 |
| 1982-83 | 74,012 | +12.1 | 76.29 | +22.8 |

Source: Spices, Export Promotion Council, Cochin.

The erratic trend observed in the quantum of exports during the period from 1970-71 to 1982-83 could be attributed to various factors like weather conditions, incidence of pests and diseases and fluctuation in prices. A high degree of year-to-year variability in the prices of a commodity has a direct impact on the producers' income. One of the leading characteristics of exports of primary produce has been their persistant tendency to

undergo large fluctuations both in value and volume. It has been observed that a high degree of variation in the prices of agricultural crops would bring an element of risk to the producer upsetting the pattern of consistent growth in the production of the crop.[1]

A major constraint in planning the production of spices in the country is the absence of reliable data on area, production and productivity of the different spice crops in the country. This makes it difficult to prepare correct and realistic projections on a long term basis. The Spices Export Promotion Council and the Directorate of Cocoa, Arecanut & Spices Development are considerably handicapped due to the non-availability of a reliable data base on the production, area under cultivation, productivity and domestic consumption of individual spices.

Wide fluctuations in the prices are especially noticed in annual crops like ginger, turmeric and most other minor spices. The reasons for such fluctuations could be identified as

1) crop failure due to weather conditions,
2) cyclical fluctuations on account of good demand in previous season and consequent over production leading to lesser demand and lower prices.[2]

By and large, India has been able to maintain its position in international spices market despite unfavourable

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1 "Impact of Pepper Prices on Pepper Development", Report of the International Seminar on Pepper, Spices Export Promotion Council, Cochin, 1978, pp.83-85.

2 Export of Spices; Strategy and Plan for 1980s, Spices Export Promotion Council, Cochin.

conditions. However, the fierce competition from other producing countries in respect of certain spices has posed serious threat to our position. The internal demand for spices in India has also grown considerably during the past years. In the absence of adequate exportable surplus the trade would find it difficult to enter into export commitments. The prices in such situations tend to increase much against our advantage in the export market.

## DETAILED STUDY OF IMPORTANT SPICES PRODUCED IN KERALA

### 1. PEPPER

Pepper is the most important spice crop grown in Kerala. An estimated area of 107,740 hectares is under pepper cultivation in the state with an annual production of 27,780 metric tonnes. Kerala accounts for 95 per cent of the estimated total area under pepper cultivation in India and about 95 per cent of the total production of pepper in the country.[3] It is remarkable that Kerala has been maintaining its leading position in pepper production for several centuries now.

#### Exports

The trend of exports of pepper from India during the last six years has been unsteady as revealed by table 6.3.

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[3] Estimates of area and production, Directorate of Cocoa, Arecanut and Spices Development, Calicut.

**Table - 6.3**

**Exports of Pepper from India**

| Year | Quantity (Metric tonnes) | Value (Rs. '000) | FOB value (Rs. per kg.) |
|---|---|---|---|
| 1977-78 | 24,677.5 | 4,95,080.00 | 20.06 |
| 1978-79 | 15,719.38 | 2,01,172.24 | 18.52 |
| 1979-80 | 20,898.45 | 3,35,224.80 | 16.00 |
| 1980-81 | 26,363.74 | 3,89,487.43 | 14.77 |
| 1981-82 | 20,607.90 | 2,79,837.03 | 13.58 |
| 1982-83 | 22,591.77 | 2,93,870.40 | 13.01 |

Source: Spices Export Promotion Council, Cochin.

While the decrease in the quantity of pepper exported during the period from 1977-78 to 1982-83 was not much significant, the decline in the value of exports during the period was markedly conspicuous. This was caused by the regression in unit value of exports from Rs.20.06 per Kg. in 1977-78 to Rs.13.01/Kg. in 1982-83.

World trade in pepper during the last five years has shown an upward trend. But India's share declined steeply from 23.3 per cent in 1977 to 14 per cent in 1981. The Food and Agriculture Organisation in its Commodity Review for 1981-82 has analysed the trends in world production and prices of pepper. Though world pepper production and trade expanded substantially in 1981-82 (170,000 metric tonnes), export

earnings increased only marginally as the benefit of higher volume was nearly offset by lower export unit value. The increase in world pepper production was mainly due to the bumper crop in Brazil which amounted to 62,000 metric tonnes - an increase of 25 per cent over the previous year's production. Indonesian pepper production also recovered during the period while production in India and Malaysia fell slightly below the output of 1979-80.[4] Food and Agriculture Organisation (FAO) estimates do not foresee any significant change in the demand and supply situation in the immediate future.

Pepper production in India:

According to the study conducted by the International Pepper Community, India's pepper crop has the lowest yield per hectare after Sri Lanka. Table 6.4 shows the relative position of the pepper producing countries in the world. With respect to area under cultivation, production and yeild rate.

Though India has the largest share - 55 per cent - of the world area under pepper this advantage is offset by low productivity levels. While India had a yield rate of 230Kg./hectare in 1977 Brazil recorded the highest yield rate in the world by producing 3,068 Kg./hectare. It clearly showed the immense scope and the urgent need to increase the production

[4] Commodity Review and Outlook - 1981-82, Food and Agriculture Organisation, Rome, pp.33-34.

Table - 6.4

World Pepper Production (Countrywise data) 1977

| Country | Area ('000 hectare) | Percentage of total world area | Production ('000 tonnes) | Percentage of total world production | Yield (Kg./ hectare) |
|---|---|---|---|---|---|
| India | 111.97 | 55.5 | 25.62 | 20.5 | 230 |
| Indonesia | 55.50 | 27.5 | 29.70 | 22.7 | 535 |
| Malaysia | 10.57 | 5.2 | 28.02 | 22.4 | 2651 |
| Sri Lanka | 6.50 | 3.2 | 1.0 | 0.8 | 154 |
| Madagascar | 5.50 | 2.7 | 5.10 | 4.0 | 927 |
| Brazil | 11.70 | 5.9 | 35.90 | 28.6 | 3068 |
| Total | 201.74 | 100.00 | 125.34 | 100.0 | 621 |

Source: International Pepper Community quoted in Pepper Statistics published by the Spices Export Promotion Council, Cochin.

levels of pepper in India. It is distressing to note that the yield rate of pepper in India went down further since 1977. Table 6.5 gives the data on production and area of the crop in India from 1977-78 to 1982-83.

It could be seen from table 6.5 that there has been no significant change in the area under the crop during the period, production declined from 34,010 metric tonnes in 1977-78 to 28,520 metric tonnes in 1982-83. The shortfall in production was attributed to factors like crop failure due to weather changes, incidence of pests and diseases and absence of scientific agronomic practices.

Table - 6.5

Area and Production of Pepper in India*

| Year | Area in '000 hectares | Production ('000 metric tonnes) |
|---|---|---|
| 1977-78 | 111.97 | 34.01 |
| 1978-79 | 84.57 | 21.50 |
| 1979-80 | 110.72 | 27.70 |
| 1980-81 | 109.29 | 27.49 |
| 1981-82 | 111.02 | 29.23 |
| 1982-83 | 110.85 | 28.52 |

* 95% of the area is in Kerala.

Source: Pepper Statistics (1984), Spices Export Promotion Council, Cochin.

Direction of exports:

At present East European countries are the biggest market for Indian pepper. In 1978-79 out of the total exports of 15,719 metric tonnes from India, a quantity of 12,188 metric tonnes was exported to these countries equivalent to 75.9 per cent of the total exports of pepper from the country. In the subsequent two years, their share decreased marginally but again in 1981-82 it went up to 78.1 per cent. Further, in 1982-83 the offtake of East European countries was equivalent to 66.8 per cent of the total exports of pepper from the country. U.S.S.R. is the most important single buyer in the East European zone.[5]

[5] Mathur, H.G., et. al., "Producti

The directional pattern of pepper exports from India during the first half of 1950's was entirely different from the present. U.S.A., U.S.S.R., Italy, Canada, Czechoslovakia, Yugoslavia and Poland were the major markets. The exports to U.S.A. accounted for 53 per cent of our total exports of pepper. However, during the latter half of the fifties the U.S. offtake from India started declining and exports to East European zone including U.S.S.R. increased to 39 per cent of total exports. During the 1960's the American zone had an average annual offtake of 24 per cent of our total exports of pepper while the average share of East European countries during the period went upto 53.3 per cent.[6] During the decade of 1970's our exports to East European countries further improved and that to the American zone stagnated India's share in the world marked also declined during the past decades. In 1981 India accounted for only 14 per cent of the world trade in pepper.

We were not in a position to regain the market in the American zone as new producing countries especially Brazil could establish very well in the region who had the advantage of competitive prices. They could outprice Indian pepper in the U.S. market. It is a distressing fact that India heavily depends upon East European market which has its inherent instability. As the exports to these countries take place on rupee payment bilateral agreements we realise higher prices than from exports

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[6] Mathur, H.G., et. al., "Production and Export of Indian Black Pepper - A Review", Report of the International Seminar on Pepper, Cochin, 1976, pp.34-37.

to general currency areas. This factor has very much limited our prospects of developing a multi-directional pattern of exports for pepper. Another reason for the dwindling exports to U.S.A. is the regulations imposed by the Food and Drug Administration which banned the import of pepper treated with mineral oil. The negotiations between representatives of Indian pepper trade and U.S. importers on this question has not helped reach an accord. The alternative to mineral oil treatment (refined white oil) of the berries suggested by the American Spices Trade Association has not been found acceptable to the Indian exporters and a stalemate has now developed resulting in the stoppage of export to U.S.

The question of developing a suitable substitute to white oil had been engaging the attention of the industry for quite some time. White oil cleaning is done to give a glossy appearance to the berries and also prevent mold growth.[8] It is a major lapse that we did not evolve a suitable alternative method in place of white oil treatment when the Food and Drug Administration imposed a ban on it for reasons of health hazard.

## STATUS AND PROSPECTS OF IMPORTANT EXPORT MARKETS FOR PEPPER

The major markets for pepper, in their order of importance, are U.S.A., U.S.S.R., France, Federal Republic of Germany, Saudi Arabia, Japan, United Kingdom, Italy, Morocco and

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[7] Mathew, A.G. et. al., Proceedings of the National Seminar on Pepper, Calicut, 1977, p.37.

Canada. Singapore which is an entrepot centre, trades in a substantial quantity of pepper and a major portion is re-exported to other countries.

U.S.A.

The U.S.A. which is the world's largest consumer of black pepper imported a quantity of 32,849 metric tonnes in 1980. which was equivalent to 40 per cent of the total imports of spices into that country.[8] Indonesia, Brazil, Malaysia and India are the main sources of supply of pepper into the United States. LAMPONG variety from Indonesia and Indian Malabar variety are preferred by the meat processing industry. However, Brazilian pepper in recent times gained much favour because of its ready availability and competent prices.

The market survey of spices conducted by the International Trade Centre (ITC) Geneva in 1982 revealed that consumption of ground and unground pepper in the U.S. appeared to be static. The reason for the stagnation has been identified as the increasing use of pepper oleoresins in the food processing industry. Another important factor which affects the consumption of pepper is price. It is observed that if prices go beyond a certain limit consumption is affected. It is because of the uncompetitive prices India lost its once dominant position in the U.S. market to other producing countries.

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8 Spices - A Survey of the World Market, Vol.II, International Trade Centre, Geneva, (1982, p.11.

The market for green pepper in the U.S. has been estimated at 30-40 metric tonnes per annum. Madagascar and Brazil are the main suppliers. Brazilian green pepper is imported in the freeze-dried form. India has also started supplying green pepper products to the U.S. It is felt that the demand for green pepper may steadily grow over the years.

The survey conducted by the International Trade Centre, Geneva, in 1982 has estimated an annual consumption of 230-250 metric tonnes of pepper oleoresins in the U.S. The meat industry is the principal end-user of oleoresins and now renewed interest is evident among convenience and fast food industry. The market for oleoresins is expected to grow further in the coming years by 10-15 per cent annually.[9]

An important aspect to be observed is the stringent application of United States Food and Drug Administration regulations. Hence, market prospects for producing and exporting countries will depend heavily on the quality of their spice exports. The American Spice Trade Association (ASTA) has reported that the consumption of spices in the country was continuing to increase faster than the growth rate of population. While the increased use of spice oleoresins reflected an expansion of the spice and flavour business they were not being used as substitutes for ground and whole spices as it was previously believed.

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[9] Ibid., pp.28-29.

**Japan**

Japan is the world's third largest importer of spices. About 20 per cent of the total annual imports of spices consist of pepper. In 1980 the country imported a quantity of 4,630 metric tonnes of pepper. Malaysia is the most important supplier of pepper to Japan followed by Indonesia and India.

There have been significant changes in the food habits of Japanese consumers after the second world war. Despite a high growth rate in imports during the last decade, the per capita consumption of spices in Japan is still low compared to other spice importing countries which offers opportunity for further expansion of market.

The estimated apparent consumption of oleoresins is 30-40 metric tonnes annually and almost the entire quantity is imported. It is unlikely that Japan will try to produce oleoresins and essential oils in the country from imported raw materials as the cost of handling and processing have become prohibitively high. The main suppliers of oleoresins are U.S.A. followed by Singapore, the Netherlands, the United Kingdom and India. The principal end-users of oleoresins in Japan are the food processing and manufacturing industry. Japan also imports large quantities of spice essential oils.[10] The growth potential for oleoresins appears to be large. India can make use of the opportunity by adopting appropriate promotional strategies.

[10] Ibid., p.100.

However, the most important factor which would help to penetrate the market is the supply of products conforming strictly to the Japanese specifications and import regulations.

Canada

Canada is a sizeable and growing market for spices since domestic production is limited, requirements are mostly met from imports. In terms of both volume and value pepper is the most important spice imported. The average imports of pepper during the period 1976-80 were about 2,300 metric tonnes with a share of 26 per cent of the volume of total spice imports. A distinct preference for the Indian Malabar varieties (Tellicherry and Cochin) has been observed. India has a good share of the Canadian pepper market.[11]

Until recently most of the Canadian requirements for oils and oleoresins were met by local production, but the development of extraction plants in spices producing countries like India has changed the situation. The high cost of labour in Canada and the high incidence of freight on raw materials would render the expansion of oleoresins/spice oils extraction industry in the country very difficult.

Singapore, U.S.A. and India are the main sources of external supply of oleoresins to Canada. Pepper oleoresins account for about 50 per cent of the total quantity consumed. Oleoresins are increasingly being used in the food processing and in the fast food industry for reasons of convenience and easiness for hygienic handling.

11 Ibid., p.41.

In view of the large immigrant population in Canada and the increasing trend towards specialised and exotic foods the growth in consumption of spices would apparently continue. A rapid growth in consumption of oleoresins is expected. To penetrate the Canadian market India should explore the possibility of establishing joint marketing and technical collaboration arrangements with existing Canadian manufacturers. This situation opens up considerable scope for us to plan our strategies for export of pepper and oleoresins to Canada.

The Middle East

Saudi Arabia, Iran and Kuwait are the important markets for pepper in the Middle East.

Imports of pepper averaged 3,205 metric tonnes per annum during 1976-80. The rising consumption in pepper could be attributed to the general increase in the consumption of spices consequent on the improvement in the standard of living and the increasing immigrant population and the buoyancy in the economy. Singapore and India supply pepper to Saudi Arabia. The demand for pepper along with other spices would increase in Saudi Arabia which is the key market in the Middle East. Indian exporters should plan an appropriate marketing strategy for the whole gulf region and offer a wide range of spices to fully exploit the potential growth in demand.[12]

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[12] Ibid., pp.149-150.

Major part of the imports of pepper to Iran is from Singapore (Sarawak pepper). India is the next important supplier. The average annual imports of pepper during 1975-80 was 1,084 metric tonnes.

Kuwait is an important market for spices in the Middle East. Though the imports of black pepper into Kuwait has not reached significant levels there is good scope for growth in trade as the country is an important entrepot centre in the Middle East with wide trade connections in the region. In view of the rapid development of co-operatives and super-markets opportunities for selling spices in consumer packs are bright. Exporters from India can make use of the situation by taking up selective promotional programmes.

## PROBLEMS OF PEPPER EXPORTS

### Declining share of India in the world market:

During the last decade world trade in pepper recorded impressive growth. But India was not able to take any benefit out of the expanding trade in pepper. Brazil, a new entrant into the field of pepper production and also Malaysia could make effective use of the opportunity. Indonesia also could derive benefit from the increased world trade as pepper production in the country recovered from the earlier set back.[13]

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13 Commodity Review and Outlook, Food and Agriculture Organisation, Rome, 1982, pp.33-37.

Area under pepper cultivation in India has remained more or less static with stagnant yield rates. Because of low productivity Indian pepper increasingly become uncompetitive in the world market. Consequently India's export to the traditionally established markets like the U.S.A. declined steeply and Brazil and Malaysia captured India's share of these markets. India was thus forced to heavily depend bilateral trade to East European countries. There is an imperative need for India to recapture its lost market share in the general currency areas by maintaining price competativeness and adopting appropriate marketing strategies. This can only be achieved by stepping up pepper production to significant levels. It will not be feasible to make any further increase in the area under pepper cultivation in Kerala which accounts for 95 per cent of the area under the crop in the country. Pepper production can be increased considerably by improving the current yield rates which is one of the lowest in the world. If the productivity of the pepper plantations in Kerala is doubled from the present level of 230 Kg. per hectare Indian pepper production would reach an appreciable level of 50,000 metric tonnes annually which would take care of the increasing domestic consumption and generate sufficient exportable surplus. If Brazil could succeed in indreasing its production levels creating a world record, India should also be able to achieve it by adopting suitable agro-techniques and propagating high yielding varieties.

Limited Direction of Exports:

There are now about 35 countries importing pepper with varying shares of the total world trade in the commodity. Of these 12 countries import substantial quantities while the others have lower levels of offtake. During the last decade India's export of pepper have shown a reduced range of direction while other producing countries were able to develop multidirectional trade. The factors responsible for this trend have been explained in detail under 'Direction of exports'.

During the period from 1978-79 to 1982-83 75% of India's exports of pepper went to East European countries with which bilateral trade agreements existed. Though conscious of the inherent risk of over dependence on a particular group of countries, India could not succeed in making significant exports to other destinations. This was mainly due to the fact that prices in the General Currency areas were often lower than those offered by the East European countries.[14]

It is worth recalling that cashew exports from Kerala suffered a setback due to over dependence on the U.S.S.R. market. When Russia stopped importing cashew kernel from India in the year 1983 it created a grave crisis threatening the survival of the industry. However, the situation could be overcome with the support of a well developed internal market for

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14 Commodity Notes, Spices Export Promotion Council, Cochin, 1984, p.25.

cashew kernels and also through the successful efforts in reactivating the U.S. market.

A similar situation could develop in the field of pepper exports from Kerala with serious consequences. As a long term strategy concerted efforts have to be made to expand the directional spectrum of our pepper exports to obviate possible demand crisis.

Fluctuation in prices:

Majority of the pepper growers in Kerala are small and marginal farmers for whom better prices are the best incentive.[15] Hence when prices become attractive production levels improve. On the other hand, unremunerative prices lead to fall in production. The farmers always want to realise higher unit value for their produce to compensate for the low level of productivity. Any shortfall in production results in higher internal market prices as about 15,000 tonnes of pepper are consumed within the country. As the internal and export prices are inter-related and influence each other, a rise in domestic prices for pepper makes the commodity uncompetitive in the world market when the exporter's parity price and the farmer's parity price are at divergent points.

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15 Report of the International Seminar on Pepper, Spices Export Promotion Council, Cochin, 1976, p.98.

The only way to ensure remunerative prices to the farmer while keeping export prices competitive is to increase the yield rates of the crop. But this could be achieved over a period of time through appropriate production plans and agro-techniques. During the interim period till our productivity reaches desired levels the government would have to extend fiscal support to the farmers through subsidies and suitable price support schemes. Once increased productivity levels are achieved, prices will tend to become stable ensuring adequate return on investment to the farmers.

The International Pepper Community, Bangkok while considering the issues in regional co-operation for pepper have outlined the adverse impact of price fluctuation on pepper production.[16] Pepper economy is often subject to the influences of price fluctuations, speculative practices, low yields, plant diseases and other problems of cultivations. The government policies in the producing countries certainly affect production to a considerable extent. The pepper community has, after a critical evaluation of the various aspects of pepper production and marketing, observed that if adequate incentives are provided to the farmers by way of technical assistance and other inputs for production along with concessional credit facility, the productivity and production of pepper could be increased. Some of

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[16] Commodity Notes, Spices Export Promotion Council, Cochin, 1984, pp.26-27.

the member countries of the Pepper Community including India have initiated action on these lines through institutional framework.

The commodity review made by the Food and Agriculture Organisation, Rome has commended the remarkable recovery in pepper production made by Indonesia after the devastation of their pepper crop due to diseases.[17]

A further impetus to production could arise if the proposal of the pepper community to introduce minimum export prices for pepper is ratified by member governments. The proposed prices are U.S. cents 70 per pound for Black ASTA for Brazil and Malaysia and 72 cents per pound for India and Indonesia. If the proposal is implemented India would considerably benefit from it as it will avoid unhealthy competition in the world market.

Absence of Co-ordination in Production and Marketing:

At present multiple agencies are looking after the various aspects of production, marketing, research, export promotion etc. of pepper. The absence of a unified agency and an integrated approach has proved to be a major constraint in maximising the efforts on development of production and exports of pepper.

The Directorate of Cocoa, Arecanut and Spices Development attend to the development programmes for pepper, while the Kerala Agricultural University undertake research on the various

[17] Speech delivered by the Chairman, Spices Export Development Council, Cochin at the 21st Annual General meeting on 1981.

aspects of the crop. The Spices Export Promotion Council are responsible for promotion of exports of pepper and look after the interests of the pepper export trade. Besides, research on product development and processing technology is being undertaken by the Central Food Technological Research Institute and the Regional Research Laboratory. Research on developing new strains with high yield and disease-resistance and the various agronomic aspects of the crop is also being conducted at the Central Plantation Crops Research Institute. Such multiplicity of agencies would create much confusion as their areas of operation after overlap. It is also not possible to have effective co-ordination between them as they are under the administrative control of different ministries and institutions.

Rubber Board is an outstanding example of how development and research efforts could be successfully co-ordinated under an integrated programme. The proposal to set up a Spices Board on the pattern of Rubber Board is a welcome step which will help remove the present disorganised situation in the field of pepper development.

Restrictive effect of Taxes Imposed by the State Government:

As outlined earlier Indian pepper suffers from the disadvantage of uncompetitive prices in the world market. However, the Kerala State Government has imposed sales/purchase tax on pepper to the extent of 7 per cent. While the Government of India have amended the Central Sales Tax Act to exempt agricultural

commodities for export from the levy of sales tax as a measure to improve their competitiveness in the world market, the imposition of sales tax by the State Government nullified the benefit. Thus the sales tax element which is reflected in the prices quoted by the exporters of pepper from the state makes our prices uncompetitive compared to other producing countries like Malaysia, Indonesia and Brazil.[18]

The Spices Export Promotion Council have taken up the matter with the State Government authorities on several occasions. However, no positive step has so far been taken by the government to drop the sales tax on pepper. A similar situation was observed in tea exports from Kerala where the differential in sales tax levied by Tamil Nadu and Kerala proved disadvantageous to the State as a good portion of the tea auctions shifted to Coimbatore to take advantage of the situation. The pepper export trade has identified the imposition of sales tax as one of the reasons for the decline in the export of pepper.[19]

The State Government has to review the position and drop the levy of sales tax as a measure to improve the competitiveness of the commodity in the world market.

Absence of Comprehensive Publicity Programmes:

At present promotional efforts for pepper undertaken by the Spices Export Promotion Council confine to participation

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18 Speech Delivered by the Chairman, Spices Export Promotion Council, Cochin, 21st Annual General Meeting, 1981.

19 Ibid.

in international trade fairs and publicity through literature. As pepper production in the country during the last decade was erratic, the need for organised systematic promotional programme was not consciously felt by the trade. Besides, as bulk of the exports of pepper limit to East European Countries which purchases are made through government import organisations on bilateral trade terms the question of any market promotion in these countries did not arise.

With the recognition of the need to develop new markets, recaptive old markets and expand the existing ones it has now become more apparent that comprehensive promotion programmes will have to be organised systematically. It is more relevant in the context of increasing world production of pepper and a rapidly shrinking market share for India.

It has been recognised that one of the main objectives of the International Pepper Community would be to develop programmes for increasing consumption in traditional and new markets. Joint efforts by producing countries for generic promotion of pepper would help increase the per capita consumption of pepper in the importing countries and also create new markets for the product. India's own efforts for promotion of pepper has to be effectively linked up with international programmes.[20]

As product diversification in pepper has been largely successful, market studies may have to be taken up to identify

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20 Report of the International Seminar on Pepper (1976), Spices Export Promotion Council, Cochin, 1976, p.83.

consumer preferences and assess the demand potential. New products like canned green pepper, dehydrated green pepper, white pepper, pepper powder, pepper oil and oleoresins etc. need carefully planned strategies to develop markets. In the absence of comprehensive programmes for publicity desired results are seldom achieved.

## 2. CARDAMOM

### Historical background

Cardamom which is known as the 'Queen of Spices' has been occupying a place of eminence right from the days of the earliest trade contacts which Kerala had with the countries of the world. Historical references about cardamom have been given in detail under Chapter-I (Foreign Trade of Kerala: Historical background).

Cardamom cultivation in India has been concentrated mainly in these regions which form the natural habitat of the species. The eco-geographical conditions of the Western Ghats north of Thamraparni river especially in the Cardamom Hills of Travancore are ideally suited for smaller type cardamom.[21]

Right from the ancient past, Kerala has been maintaining the monopoly position in the production of small cardamom which is considered as the most superior variety.

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21 South Indian Cardamom and their Agricultural Value, Bulletin No.79, Indian Council of Agricultural Research, New Delhi, 1958, p.1.

**Present position**

In 1982-83 Kerala had a total registered area of 54,388 hectares under cardamom equivalent 63 per cent of the total area in the country under the crop. The state accounted for 65.52 per cent of the total production of cardamom in India (vide Table 6.6).[22]

**Table-6.6**

**State-wise Area and Production of Cardamom (1982-83)**

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| State | Total registered area (Hectares) | % share | Total production (metric tonnes) | % share |
|---|---|---|---|---|
| Kerala | 54,388 | 63 | 1,900 | 65.52 |
| Karnataka | 24,977 | 29 | 800 | 27.59 |
| Tamil Nadu | 7,086 | 8 | 200 | 6.89 |
| Total | 86,451 | 100 | 2,900 | 100.00 |

Source: Cardamom Board, Cochin.

Production of cardamom is subject to wide annual fluctuations on account of vagaries of monsoon, cyclical phenomenon, incidence of drought and diseases and pests. A review of the production of the crop over the past one decade indicates erratic trends in production due to various external factors which are beyond the control of the growers of the crop. The unpredictable production levels result in violent variations in the market prices of cardamom.

22 Current Cardamom Statistics (1982-83), Cardamom Board, Cochin, p.5.

23 Sundaram, S.G., Cardamom - The Triumph of a bold strategy, A Note prepared for Cardamom Board, Cochin, 1981, p.4.

A review of the production of cardamom in India during the period from 1970-71 to 1982-83 has shown that the share of Kerala ranged from 74 to 62 per cent. The highest level was recorded in 1977-78 and the lowest in 1976-77.[24] A cyclical pattern of production could be observed from the trends during the last one decade.

Review of exports

India occupied the position as the largest cardamom producing and exporting country in the world until 1982-83 when Guatemala emerged as a powerful rival pushing us to the second position.[25] This was caused by the increased output in Guatemala which synchronised with India's short-fall in production. However, the situation might change as a cumulative result of the expected recovery in our production performance and our accelerated efforts to increase output.

Table 6.7 shows quantity of cardamom exported, value of exports and unit export price for the period from 1970-71 to 1982-83. The table also gives the percentage of annual variation in quantity and value of exports during the period.

It could be seen from the table that the quantity and value of exports during the period were subject to wide fluctuations. A direct positive correlation existed between the total production of cardamom and the quantity exported until Guatemala achieved substantial levels of production in 1979-80 which created a situation of higher world supply. The unit value of cardamom exported also increased steadily from Rs.37.41/Kg. in

24 Cardamom Statistics 1981-82, Cardamom Board, Cochin, p.1.
25 Current Cardamom Statistics 1982-83, p.22.

Table - 6.7

Quantity of Cardamom Exported, Value of Exports, Unit export Price and Variation in Quantum and Value of Exports

| Year | Quantity | Annual variation (percentage) | Value | Annual variation (%) | Average f.o.b export price Rs./Kg. |
|---|---|---|---|---|---|
| 1970-71 | 1,705 | — | 11.2 | — | 65.78 |
| 1971-72 | 2,147 | +25.9 | 8.0 | -28.5 | 37.41 |
| 1972-73 | 1,384 | -35.5 | 6.8 | -15.0 | 49.45 |
| 1973-74 | 1,813 | +31.0 | 11.5 | +68.6 | 63.71 |
| 1974-75 | 1,626 | -10.3 | 13.3 | +15.5 | 81.92 |
| 1975-76 | 1,941 | +19.4 | 19.4 | +45.5 | 99.88 |
| 1976-77 | 893 | -54.0 | 14.0 | -27.6 | 157.17 |
| 1977-78 | 2,763 | +209.4 | 48.4 | +245.3 | 175.28 |
| 1978-79 | 2,876 | +4.1 | 58.3 | +20.5 | 202.92 |
| 1979-80 | 2,636 | -8.3 | 48.6 | -17.1 | 184.23 |
| 1980-81 | 2,345 | -11.0 | 34.7 | -25.2 | 148.18 |
| 1981-82 | 2,325 | -0.9 | 30.2 | -13.0 | 129.87 |
| 1982-83 | 1,032 | -55.6 | 16.4 | -45.7 | 158.60 |

Source: Cardamom Statistics 1981-82, Cardamom Board, Cochin.

1971-72 to Rs.99.88 in 1975-76. There was a sudden spurt in the prices of cardamom in the subsequent year and the buoyant trend continued until 1979-80 when it got reversed. The declining trend continued until the export unit price reached Rs.129.87/Kg. in 1981-82. Later in 1982-83 the prices, however, reached Rs.158.60/Kg. registering an improvement as a result of the short-fall in production and the consequent increased demand in export.

Kerala's export performance in cardamom is evidently dependent upon two major factors.

1. The levels of production in the state which widely fluctuate due to drought and other vagaries of nature.

2. The increasing production levels in Guatemala.

Table 6.8 gives the data on production, exports and percentage of production exported for the period from 1970-71 to 1982-83. The growth indices for quantum and value of exports are also shown in the table. It could be seen that there was a sudden jump in the quantum and value of exports of cardamom in 1977-78. It was the cumulative result of a carefully planned production programme supported by a sound marketing strategy. Production and productivity could be improved and stabilised which corresponded with good export performance for the next three years. However, in 1981-82 the declining trend re-appeared affecting both production and exports. It was caused by the competition from Guatemalan cardamom which was conspicuously felt in the world market. In 1982-83 production of cardamom in Kerala fell further as a result of the cyclical phenomenon, lower than the base year level of 3,170 metric tonnes.

The unprecedented buoyancy in prices coupled with increased levels of production beginning from 1977-78 came to an abrupt end in 1981-82. It was a curious occurance that a fall in production of cardamom in the country coincided with declining unit export value. This was caused by the substantial increase in production achieved by Guatemala who emerged as a forceful competitor to us.

**Table - 6.8**

**Production and Exports of Cardamom (1970-71 to 1982-83)**

| Year | Production (metric tonnes) | Exports metric tonnes | Exports as per-centages of produc-tion | Value of exports (Rs. crores) | Growth in quantum of exports (1970-71 base year = 100) | Growth in value of exports (1970-71 as base year = 100) |
|---|---|---|---|---|---|---|
| 1970-71 | 3170 | 1705 | 53.79 | 11.2 | 100 | 100 |
| 1971-72 | 3785 | 2147 | 56.7 | 8.0 | 126 | 71 |
| 1972-73 | 2670 | 1384 | 51.84 | 6.8 | 81 | 61 |
| 1973-74 | 2780 | 1813 | 65.21 | 11.5 | 106 | 103 |
| 1974-75 | 2900 | 1626 | 56.06 | 13.3 | 95 | 119 |
| 1975-76 | 3000 | 1941 | 64.7 | 19.4 | 114 | 173 |
| 1976-77 | 2400 | 893 | 37.2 | 14.0 | 52 | 125 |
| 1977-78 | 3900 | 2763 | 70.85 | 48.4 | 162 | 432 |
| 1978-79 | 4000 | 2876 | 71.9 | 58.3 | 169 | 520 |
| 1979-80 | 4500 | 2636 | 58.58 | 48.6 | 155 | 434 |
| 1980-81 | 4400 | 2345 | 53.3 | 34.7 | 138 | 310 |
| 1981-82 | 4100 | 2325 | 56.7 | 30.2 | 136 | 270 |
| 1982-83 | 2900 | 1032 | 35.59 | 16.4 | 60 | 146 |

Source: Compiled from the data collected from Cardamom Board, Cochin. Indices of growth have been computed by the researcher.

A study of the trend of production and exports during the period under review, reveals that an intricate relationship existed between production, productivity and unit export price.[26] A record production of 4,500 metric tonnes was achieved in 1979-80. Better price proved to be the best incentive to the farmers. However, other variables like vagaries of monsoon, incidence of pests and diseases, cyclical fluctuations have an equally conspicuous influence on production levels. The decline in production in 1982-83 was caused by these factors. To stabilise production and productivity it is imperative to insulate the crop against the influence of these variables to the best possible extent.

Direction of exports

The Middle East countries comprising of Kuwait, Saudi Arabia, Quatar, United Arab Emirates, Oman, Bahrain, South Yemen, Iran, Iraq, Libya, Egypt etc. form the prime markets for cardamom. During the last five years Kuwait and Saudi Arabia had a share of 36 per cent and 30 per cent respectively of the total exports of cardamom from India.[27]

The second level markets for cardamom from India are U.S.S.R., Japan, German Democratic Republic, Singapore and United Kingdom. The prime markets in the Middle East and the

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26 Sundaram, S.G., op. cit., p.10.

27 Cardamom Statistics 1981-82, Cardamom Board, Cochin, pp.30-31.

second level markets in the non-Middle East countries together account for 99 per cent of the exports of Cardamom from the country.[28]

Table 6.9 shows percentage distribution of annual exports of Indian Cardamom to the different markets from 1970-'71 to 1982-'83.

Table 6.9

Exports of Cardamom (Regionwise Share in Percentage)

| Year | Middle-East Markets (Per cent) | Important non-Middle East Markets (Per cent) | Others (Per cent) | Total |
|---|---|---|---|---|
| 1970-'71 | 77 | 14 | 9 | 100 |
| 1971-'72 | 79 | 12 | 9 | 100 |
| 1972-'73 | 72 | 21 | 7 | 100 |
| 1973-'74 | 84 | 12 | 4 | 100 |
| 1974-'75 | 63 | 34 | 3 | 100 |
| 1975-'76 | 83 | 14 | 3 | 100 |
| 1976-'77 | 67 | 29 | 4 | 100 |
| 1977-'78 | 90 | 7 | 3 | 100 |
| 1978-'79 | 86 | 11 | 3 | 100 |
| 1979-'80 | 84 | 15 | 1 | 100 |
| 1980-'81 | 84 | 15 | 1 | 100 |
| 1981-'82 | 77 | 22 | 1 | 100 |
| 1982-'83 | 61 | 37 | 2 | 100 |

Source: Cardamom Statistics 1981-'82, Cardamom Board, Cochin.

Table 6.9 indicates that the Middle-East markets had an average of 75 per cent of the total exports of Cardamom from India during the period of 7 years from 1970-'71 to 1976-'77. During the subsequent 5 years the share went upto 84 per cent. However, after 1979-'80 the quantum and value of exports started declining as a consequence of the increased world supply of Cardamom.

Apart from the prime markets and the second level markets mentioned above, there are other markets to which Cardamom is exported from India in smaller quantities. These include U.S.A., Canada, Mozambique, Czechoslovakia, France, Italy etc.

The share of important non-Middle-East countries ranged from 7 to 37 per cent with an average of 18.6 per cent during the last 13 years. In view of the competition from Guatemala we have to organise effective market promotional programmes synchronising with our efforts to increase production of Cardamom in the country.

Status and Prospects of Export Markets

Kuwait

Kuwait and Saudi Arabia are the most important prime markets for Indian Cardamom. Though Saudi Arabia is the world's largest consumer of Cardamom, Kuwait is the largest individual market for Indian Cardamom. It is the major trading centre in the Middle-East which re-exports Cardamom to other consuming countries in the neighbourhood.

During the 5 year period from 1978-79 to 1982-83 Kuwait had an annual average share of 35.6 per cent of the total quantity of cardamom exports from India.

The convenient geographical location of Kuwait in the Gulf region and its proximity to the Eastern part of Saudi Arabia have made it an important trade centre in the Middle East with considerable volume of re-exports of cardamom and other commodities to neighbouring countries.

Cardamom is the most important spice consumed in Kuwait. An estimated 80 per cent of the cardamom consumption in the country is in the preparation of Gahwa — an infusion of roasted ground coffee and lightly roasted ground cardamom and hot water, prepared in a traditional tall narrow-waisted metal pot. Gahwa is served very frequently in traditional Arab house-holds. Cardamom content of Gahwa coffee would vary from 10 to 50 per cent by weight depending upon the method of preparation. It is symobic of Arab hospitality to offer Gahwa to the visitors.[29]

In retail outlets cardamom is usually sold loose in polythene bags as the consumers generally would like to see and touch cardamom before they buy it. While Guatemalan cardamom is known for its parrot green colour and clean appearance, the cardamom from Kerala is favoured in Kuwait for its flavour and aroma.

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[29] Spices - A Survey of World Markets, International Trade Centre UNCTAD/GATT, Geneva, 1982, p.175.

There are about 200 traditional retail outlets for cardamom in the country. However, a change in food retailing system has taken place in Kuwait with the emergence of supermarket complexes. A large number of the supermarkets are in the co-operative sector. The future pattern of retail marketing in the country will be increasingly centered around the co-operative stores.

Assuming no change in the present trading patterns, the anticipated growth in demand for cardamom in Kuwait will be around 5 to 10 per cent per annum on a base volume of 1,000 tonnes. This estimate is inclusive of the re-exports from Kuwait to Saudi Arabia and other neighbouring countries in the Middle-East.[30]

Appropriate promotion strategies and price competitiveness are essential for sustaining and increasing the share of our cardamom in the growing market in Kuwait. The packing of cardamom in traditional 'Muda' gunny bags need be changed to attractive and convenient hard card board boxes as from Guatemala.[31]

Saudi Arabia

Saudi Arabia is the largest individual market for cardamom in the world. Demand from Saudi Arabia is considered to be the principal determinant factor on world prices for cardamom.

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30 Market Survey of Cardamom in Selected Middle East and West European Markets, Cardamom Board/ITC, 1978, p.54.

31 Sales-cum-study delegation of Cardamom to Saudi Arabia, Kuwait and Dubai, Cardamom Board, Cochin, 1983, p.5.

During the period from 1978-79 to 1982-83 (five years) Saudi Arabia imported on an average 723.4 metric tonnes of cardamom from India annually which accounted for 31.8 per cent of our annual average total exports. However, exports to Saudi Arabia which stood at 1,165 metric tonnes in 1978-79 steadily declined to 299 metric tonnes in 1982-83. The shortfall in exports was caused by decreased crop production in India which reduced the quantum of exportable surplus and the increased availability of Guaremalan cardamom in the world market.

The total imports of cardamom into Saudi Arabia comprises of direct imports from producing countries and re-exports from trading centres. Guatemala and India are the major producer countries which supply cardamom to Saudi Arabia. Substantial quantities of the commodity reach the country through re-exports from Kuwait, Bahrain and Jordan. However, no reliable data is available on the quantity of cardamom arriving the country by re-exports. The market survey conducted by the International Trade Centre, Geneva in 1982 had estimated that the annual consumption of cardamom in Saudi Arabia would range between 4,000 to 4,500 metric tonnes.[32]

The main usage of cardamom in Saudi Arabia is in the preparation of Gahwa -- cardamom coffee. Consumption levels of cardamom coffee vary from place to place in Saudi Arabia. In the west region around Jeddah consumption of gahwa is lower

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[32] Spices - A Survey of World Markets (1982), op. cit., p.152.

but in places like Mecca and Medina where traditional altitudes dominate, consumption levels are high. It is highest in Eastern and Central regions where some households use high cardamom concentration ġahwa. More than 90 per cent of the imported cardamom is used in gahwa preparation while the balance is consumed in culinary preparations.[33]

Demand for cardamom in Saudi Arabia has remained buoyant. In addition to domestic consumption there is considerable institutional demand from government departments, army and municipalities. Intake of cardamom coffee has become a ritualistic habit to the Arabian citizens. It is believed to cool the blood and aid digestion. Though consumption of gahwa is an year-round occurance, the peak consumption levels are reached during Ramzan month.[34]

The increasing consumption trend in volume is characterised by the demand for higher quality cardamom. There is conspicuous increase in demand for Alleppey Green Cardamom of grades AGEB and AGB. Price was not a barrier till recently when Guatemala cardamom of comparable quality became available at lower prices. This has seriously affected our market share. During the last few years Guatemalan cardamom improved in colour and size while the prices remained lower than our

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33 Market Survey for Cardamom in Selected Middle East and West European Countries, Cardamom Board/ITC, 1978, p.37.

34 Ibid., p.38.

supplies. Besides our cardamom exporters were not able to keep quality consistency which also prompted the Saudi Arabian importers to turn to Guatemala increasingly for supplies.[35] While Guatemalan shipments arrive in attractive and strong card board boxes, our cardamom still reach them in the traditional 'Muda' packing in gunny bags which have now become outmoded.

To regain our position in Saudi Arabia we have to adopt suitable strategies to make cardamom competitive in prices and consistent in quality. It is imperative that we improve the packaging to make it attractive and functionally efficient. Publicity and promotional programmes have to be organised projecting the positive aspects of our cardamom as the threat from Guatemala has become strong and real penetrating into our share of the Saudi Arabian market.

OTHER MARKETS IN MIDDLE EAST

While Kuwait and Saudi Arabia are the most important prime markets for our cardamom in the Middle East the lesser markets in the region which comprise of Bahrain, United Arab Emirates, Qatar, Iran, Libya, Egypt and Jordan are significant by virtue of their growing levels of income and potential for increased per capita consumption of cardamom.

Bahrain is an important entrepot centre in the Gulf region. However, a good part of the cardamom imported into the country is used indigenously. The major use of

cardamom in Bahrain, like in other important Middle East countries, is for the preparation of Gahwa. Despite westernisation, Bahrain retains its traditional customs which are an integral part of their social life.

Guatemala and India are the principal suppliers of cardamom to Bahrain. Traditionally we were the major suppliers. However, our market share was eroded when Guatemala emerged as an important supplier of cardamom. Bahrain market had in the past shown distinct preference for Alleppey Green Cardamom from Kerala. However, when Guatemala could supply material of comparable quality with price advantage it proved to be a very unfavourable market situation for us.[36] Quality inconsistency of our cardamom has often been cited by the importers as a major factor against us.

Promotional strategies in Bahrain have to be planned to restore the reputation of our cardamom.

The seven states of the United Arab Emirates which comprise of Dubai, Abu Dhabi, Sharjah, Umm-al-Quwain, Ajman, Fujairah and Ras-al-Khaimah are a growing market for cardamom. Dubai and Abu Dhabi are the important importing centres for UAE.

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36 Market Survey for Cardamom in Selected Middle East and West European Countries, Cardamom Board/ITC, 1978, pp. 64-66.

Major use of the cardamom in UAE is in the preparation of Gahwa. However, the concentration of cardamom in gahwa is lower than in other Gulf countries. Hence this has led to an increased use of Gautemalan cardamom which is found to serve the purpose. Unless prices are kept competitive we will not be in a position to re-capture our market share in United Arab Emirates.

Qatar is the smallest of the prime cardamom markets in the Middle East importing on an average 60-70 metric tonnes of cardamom every year. It has a per capita consumption of 800 grams of cardamom which is the highest in the world. India is the major supplier of cardamom to Qatar and the balance of imports arrives from entrepot centres like Bahrain, Kuwait and Dubai through re-exports.[37]

Like in other Arab countries, the principal use of cardamom in Qatar is in the preparation of Gahwa. The bold Alleppey Green variety from Kerala had enjoyed a strong consumer preference until Guatemalan cardamom of comparable quality became available at competitive prices. The import trade in Qatar had also expressed concern about the inconsistency in the quality of cardamom imported from India affecting the image of the country as a reliable source of supply. To overcome such problems the Government of Qatar have plans to import their entire requirements of cardamom through a single source of supply.

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[37] Ibid., pp. 80-81.

Iran, primarily is a market for bleached cardamom which is used in the manufacture of confectionary and pastries. Industrial users and retail consumers prefer bleached cardamom. It is also an essential ingredient in the making of 'gaz' - a white sweetmeat prepared from milk, sugar and cardamom.[38] A small quantity of cardamom is used in the preparation of beverages, home-produced confectionery etc. Consumption of cardamom has remained static over the years. Imports from India have decreased and the shortage is made up by re-exports from Dubai.

The main strategy of promotion which we have to adopt in Iran is to extend the use of cardamom into other non-conventional areas.

Libya, Egypt and Jordan are also growing markets for cardamom in the Middle East region. We export only small quantities of cardamom to Libya at a discontinuous frequency. The traditional cardamom coffee - gahwa - is prevalent in use in the country but the cardamom content of the coffee is much lower. The use of cardamom is expected to go up with the increasing purchasing power of the citizens. Only government agencies are authorised to purchase cardamom and distribute to supermarkets and retail stores. We should

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38 Spices - a Survey of the World Market, 1982, op. cit., p. 148.

plan strategies for market promotion of cardamom in Libya keeping in view the propspects for increased consumption.[39]

Inspite of its large population the consumption of cardamom in Egypt has not reached significant levels. The use of cardamom is not expected to grow steadily as in other consuming countries. The main sources of supply are Sri Lanka, Tanzania, India and Singapore. The main use of cardamom is for the flavouring of meat preparations. Cardamom coffee is not popular and is limited to occasions like funeral. At present Egypt pruchases only lower quality cardamom as the prices are lower for such varieties.[40]

Jordan is a potential market for cardamom. Imports for domestic consumption as well as for purposes of re-exports take place. Use of cardamom is well-known and a good part of the domestic consumption goes for the preparation of gahwa.[41] Jordan has not been buying cardamom from us for several years now. As the importance of Jordan is increasing as an entrepot centre in the Middle East, efforts have to be made by us to penetrate the market. However, the most important criteria for successful marketing of Indian cardamom in Jordan would be quality consistency and price competitiveness.

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39 Report on Cardamom Sales-cum-Study Delegation to Libya, Egypt and Jordan, Cardamom Board, Cochin, 1981, pp. 3-5.

40 Ibid., pp. 9-10

41 Ibid., pp. 18-19.

Second Level Markets for Cardamom

Sweden, Finland, Norway, Denmark and Federal Republic of Germany constitute the main second level markets for Cardamom.

In these markets cardamom is consumed in bakery products mainly in ground form. Besides to a limited extent it is used in the processed food instry.

Sweeden is the largest individual market for cardamom in Europe. The principal use of cardamom is in the bakery industry in the baking of 'coffee cake'. Cardamom is also consumed for domestic baking in households. Guatemala and Tanzania are the major source of supply followed by India. Our share in the Swedish market for cardamom has remained at an insignificant level for the last several years. Promotional strategy to regain the share of market has to aim at offering appropriate grades of cardamom of coexistent quality at competitive prices.[42]

Finland is the second largest market for cardamom in Europe. Finland was an important market for our cardamom till 1965 when India accounted for 75.7 per cent of the total annual imports of cardamom into the country. However our share dropped to 6.7 per cent by 1974. Today Guatemala and

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[42] Market Survey for Cardamom in Selected Middle East and West European Countries..., 1978, p. 109.

Tanzania are the important suppliers of cardamom to Finland. The main usage of cardamom in Finland is in the preparation of 'coffee cake'. Industrial usage is in the ground form while the domestic consumers buy cardamom preferably in the seed form to be ground for use at home. If we want to regain the lost market in Finland systematic efforts have to be made keeping in view the importance of conformity to accepted quality standard and shipping schedules.

Federal Republic of Germany is an important centre of international trading in cardamom. Importers in Federal Republic of Germany often supply cardamom to buyers in Saudi Arabia, Bahrain, Kuwait and to lesser markets in the Middle East. FRG is the only market in West Europe which has shown a growth trend for cardamom. At present the major sources supplying cardamom to FRG are Guatemala and Tanzania. Our market share reached negligible levels due to competition from these sources of supply.[43]

Efforts by our exporters to penetrate the West German market and re-capture the market share would depend upon how best they can refurbish the poor reputation for the supplies of inconsistent quality. The health authorities of FRG are now increasingly conscious about the harmful

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[43] Ibid., p. 123.

effects of the residual pesticides in the food products imported from India. These aspects have been taken into account while deciding strategies to regain the market.

Norway is a relatively small market for cardamom. The principal source of supply is Guatemala and the main usage is in the manufacture of 'coffee cake'. The demand for cardamom in Norway is likely to remain static.

Our share of the Norwegian market declined from 24.3 per cent of imports in 1971 to 3.2 per cent in 1975, when Guatemala emerged as the major supplier.[44] Our share further declined in the subsequent years. To re-capture the market share efforts will have to be made by our exporters to improve the reputation of our cardamom among the traders in Norway.

Cardamom Products

World production of cardamom which stood at stagnant levels some years ago has increased appreciably leading to a situation of abundant supply. In the coming years, the production of cardamom in the different producing countries would further go up as a result of improved agro-techniques and other development programmes being undertaken. Thus, availability of cardamom is likely to increase at an annual average rate of 11-12 per cent over the next three years

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44 Ibid., p. 134.

while the market for cardamom is expected to grow at an annual rate of 4-5 per cent only.[45] As a consequence, cardamom which has so far been in the sellers' market would be increasingly moving to the buyers' market. It is imperative in this context to develop new markets, increase share of the existing markets, find out new uses for cardamom and develop new products with market potential.

Cardamom oil and cardamom oleoresin are two important products from cardamom which are currently marketed by us in small quantities. Considering the export growth potential for these items we have to plan future strategies on appropriate lines.

We began to export cardamom oil in significant quantities from 1977-'78 only. In the subsequent year we set a record by exporting a quantity of 1468 Kg. of cardamom oil realising the highest unit value of Rs.2354 for a Kilogramme.[46] However, the quantum of export of cardamom oil from the country declined steadily thereafter. Consequent to the rise in domestic prices of cardamom the cost of production of cardamom oil went up which made the prices of our cardamom oil uncompetitive in the world markets. Cardamom oil is also produced in Sri Lanka, Guatemala, U.K., France,

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45 Prospects for New End Uses of Indian Cardamom, Cardamom Board/ITC, 1983, p.8.

46 Cardamom Statistics 1981-'82, Cardamom Board, Cochin, p.82.

The major use of cardamom oil is in the flavour and fragrance industries. As part of the product diversification strategy to expand the market for cardamom we have to develop new markets for cardamom oil while keeping the prices competitive.

In 1983-84 India made a modest beginning in the export of cardamom oleoresin by exporting a quantity of 50Kg. of the product to Federal Republic of Germany. It has been estimated by the market survey conducted by the International Trade Centre, Geneva that oleoresins have tremendous growth potential in developed countries. Usage of oleoresins in the various food processing industries in the U.S.A., Canada, Japan, United Kingdom and other developed countries is steadily going up and is expected to grow at the rate of 10-15 per cent annually in major consuming countries like the U.S.A.[47]

Canada used to import raw spices for the extraction of oleoresins. As India and other spice producing countries started extraction of oleoresins the situation changed and Canada has increasingly switched over to import of oleoresins. The trade sources in Canada have indicated that the local oleoresin extraction industry would not be in a position to expand or sustain production on account of the high cost of labour and the increasing freight on raw materials. This opens up bright prospects for our exporters and manufacturers of

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[47] Spices - A Survey of the World Markets, I.T.C., 1982, p.29.

oleoresins. While the developed countries use a wide range of spice oleoresins, the share of cardamom oleoresin could definitely be increased through effective promotional programmes. Joint marketing and technical collaboration with existing Canadian manufacturers would considerably help us to penetrate into the market and capture a good share of it.

Japan has good growth potential for oleoresins as the current consumption levels are low. The major end-users of oleoresins are ham and sausage industry, canned food, frozen foods and other food processing industry besides pharmaceutical industry. The scope for increased usage of oleoresins is apparently bright.[48]

Other cardamom products like ground cardamom, cardamom seed etc. could also be promoted in markets with latent and potential demand for the items.

## 3. GINGER

India is the largest producer of ginger in the world and Kerala accounts for about 60 per cent of the total production in the country. Almost the entire quantity of exportable dry ginger is produced in Kerala.

Present position:

Major portion of the ginger produced in India is consumed within the country itself. There is an increasing domestic

48 Ibid., p.100.

demand for fresh ginger. Dry ginger consumption has also gone up considérably. Production pattern of ginger in the country is highly influenced by price trends. When there is good demand prices go up leading to increased production in the subsequent year. Over production causes price decline which in turn reduces cultivation of the crop in the ensuing season. This low production and high prices alternate with over production and low prices creating an erratic pattern.

Review of exports:

Table 6.10 illustrates the quantity, value and unit value of exports of ginger from India during the period from 1977-78 to 1982-83. The declining trend in the quantum and value of exports was conspicuous until 1981-82. In the subsequent year the unit value increased to Rs.14.88 per Kg. as against Rs.8.38 which prevailed in the previous year.[49]

China, Nigeria, Pakistan, Sierra Leone etc. are the other countries exporting ginger. Besides, Brazil has also emerged as an important producer of ginger.

The prices of Indian ginger are generally higher than prevailing international prices. China has been supplying ginger to the U.S. market at considerably lower prices.

China is the main competitor for Indian ginger and it could be apparent that this position will continue. Our efforts for developing exports of ginger have to be planned taking into account the reality of the continuing competition from China.

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[49] Commodity Notes, Spices Export Promotion Council, Cochin, 1984, p.34.

Table - 6.10

Exports of Ginger from India

| Year | Quantity (Metric tonnes) | Value ('000 Rs.) | Unit price (FOB) Rs. per Kg. |
|---|---|---|---|
| 1977-78 | 9,761.8 | 1,36,898.7 | 14.02 |
| 1978-79 | 14,514.55 | 1,43,172.38 | 9.86 |
| 1979-80 | 11,485.98 | 72,696.09 | 6.33 |
| 1980-81 | 6,810.90 | 36,797.00 | 5.40 |
| 1981-82 | 4,717.80 | 39,522.70 | 8.38 |
| 1982-83 | 3,954.71 | 58,849.14 | 14.88 |

Source: Spices Export Promotion Council, Cochin.

The major markets for ginger are the U.S.A., U.K., Saudi Arabia, Japan, Federal Republic of Germany and the Netherlands.

STRATEGIES FOR DEVELOPING EXPORTS

Price competitiveness is a matter of prime importance while planning any strategy for the development of exports of ginger from our country. This could be achieved only through increased production and productivity. The phenomenon of cyclical increase and decrease in production should be overcome by corrective actions at government level.

The farmers should be assured of a remmerative price for their produce despite any fluctuation in the export market. This could be achieved through a system of minimum support price.

Any surplus production should be procured through government agencies and a buffer stock built up to be released for export or domestic consumption as required.

Crop productivity has to be increased through agro-techniques and better input utilisation.

There are quite a number of products which could be manufactured from ginger and marketed successfully both in the internal and export markets. Ginger oil, oleoresins and ginger essence have multiple applications in the food processing and pharmaceutical industries. Ginger is also being used in the preparation of beverages, ginger candy, lime-ginger pickles and in many other products which have latent growth potential. These uses of ginger could be further accelerated by effective promotional programmes. Confectionery and bakery industries in the developed countries would increase their consumption if market promotional efforts are made.

## 4. TURMERIC

India is the leading producer of turmeric in the world. Other important producers are China, Pakistan, Thailand, Taiwan and Burmah.

### Present position

During the last five years annual turmeric production in the country ranged between 110,000 metric tonnes and 235,000 metric tonnes. About 90 per cent of the turmeric produced in

India is consumed within the country itself.[50] This is because turmeric is a versatile product with multiple applications in our daily life. It has uses as a flavouring and colouring agent besides its preservative and medicinal properties which account for the substantial internal consumption.[51]

Review of exports:

Table 6.11 gives data on exports of turmeric from India during the period from 1977-78 to 1982-83.

Table - 6.11

Exports of Turmeric from India

| Year | Quantity (Metric tonnes) | Value ('000 Rs.) | Unit price (FOB) Rs. per Kg. |
|---|---|---|---|
| 1977-78 | 11,253.00 | 82,994.2 | 7.38 |
| 1978-79 | 11,977.50 | 1,24,124.13 | 10.36 |
| 1979-80 | 26,609.84 | 1,98,061.01 | 7.44 |
| 1980-81 | 14,517.15 | 78,824.34 | 5.43 |
| 1981-82 | 11,985.51 | 51,742.67 | 4.32 |
| 1982-83 | 7,594.76 | 42,354.25 | 5.58 |

Source: Spices Export Promotion Council, Cochin.

50 Ibid., pp.39-40.

51 Indian Spices, Vol.VI, No.2, Spices Export Promotion Council, Cochin, 1969, p.4.

It could be seen from the table that while our exports of turmeric averaged 11,500 metric tonnes annually, the peak performance was in 1979-80 when the exports reached a quantity of 26,609.84 metric tonnes. The average unit export price of turmeric was subject to wide fluctuations during the period. The highest unit export price of Rs.10.36 was recorded in 1978-79 while the lowest price was Rs.4.32 during 1981-82.[52]

The important buyers of turmeric in the world market are the U.S.A., Japan, Iran, United Kingdom, Saudi Arabia, Federal Republic of Germany, France, Canada and the United Arab Emirates.

Prices of our turmeric are often uncompetitive in the world market and other producing countries take benefit out of this situation and capture our share of the market. Production of turmeric in the country is subject to cyclical fluctuations on account of the low price - low production high price - large production phenomenon which alternates. This situation creates an erratic trend in quantum of production and prices. Exportable surplus could be generated only through increased production and productivity as internal demand for turmeric is highly dominant.

STRATEGIES FOR DEVELOPMENT OF EXPORTS

In view of the high levels of internal consumption, efforts to increase exports would bring in results only if

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[52] Commodity Notes, op. cit., pp.40-41.

if production is substantially increased. This could be achieved through extensive cultivation and simultaneous action to enhance the production from unit area under the crop.

Increased production and productivity would help to stabilise prices and make our turmeric prices competitive in world markets. Special efforts also have to be taken to improve production of varities with specific export demand. Alleppey Turmeric produced in Kerala has a good demand in the U.S.A. as it contains higher percentage of curcumin.

The cyclical phenomenon of production is caused by fluctuation in prices. This could be avoided only by appropriate action at government level to stabilise prices while ensuring that such prices are remunerative to the farmers. This could be achieved through a system of minimum support price to the cultivators. Arrangements have also to be made to procure surplus production through government agencies and build a buffer stock to be released for export or domestic consumption as required.

In the major importing countries like the U.S.A. turmeric is mainly used as an ingredient in curry powder, pickles and spice mixes. In Japan turmeric is used as a colouring in a broad range of foods including curry powder, salad dressing, bakery products pickles, juices and beverages. The use of turmeric can be further popularised in the countries which currently import the product besides developing new markets.

At present turmeric is used in a variety of pharmaceutical, cosmetic and food preparations. Research on developing new products and new uses should be organised considering the versatile applications of turmeric. A long term strategy to export value-added products from turmeric has also be evolved.

## 5. MINOR SPICES

The congenial agro-climatic and eco-geographical conditions prevalent in Kerala make it ideally suited for the cultivation of a variety of minor spices of commercial importance. Cloves, nutmeg, cinnamon and cassia are now grown successfully in the state. Of these cloves and cinnamon were in existence in the Malabar coast for several centuries past. However, the commercial scale cultivation of these crops in the state was initiated by the British planters in 1767.

Today Kerala has the largest area in the country under cloves, cinnamon and nutmeg. The Directorate of Cocoa, Arecanut and spices development do not have up-to-date data on the area and production of these crops. The absence of a reliable data base is a major constraint in planning the future production programmes for these crops.

The current production of cloves and cinnamon is hardly sufficient to meet the domestic demand for these spices. It is therefore, essential that the current production levels are

increased to meet the internal demand fully to avoid the imports of these spices into the country. The production levels could be steadily increased to generate sufficient surplus for exports also.

Vanilla is another spice crop which has considerable potential for development in the State. It is a tropical climbing orchid grown for its pleasant aromatic essence. Kerala has been identified as one of the states with potential for successful cultivation of vanilla.[53] There has been no organised effort so far to grow vanilla on a commercial scale in the state. The current demand for vanilla in the country is met by synthetic substitutes and if vanilla production could be undertaken successfully the prospects of exporting vanilla after meeting the internal demand would become a reality. The state Department of Agriculture should organise a comprehensive programme with all necessary inputs for increasing the production of minor spices in the state considering the economic significance and future export potential.

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[53] Dr. George, C.K.,"World Vanilla Industry", Indian Spices, Vol.XXI, No.1, 1984, pp.4-8.

# C H A P T E R - VII

# C O I R

## HISTORY OF COIR EXPORTS

Coir had occupied a place of prominence even during the period of India's ancient trade. Marco Polo, the famed traveller-historian, had mentioned in his writings about the importance of coir in the trade between India and the kingdoms of Greece, Arabia and Rome.[1]

U.S.A. was the first market for coir manufactures from India. In later years the market expanded to U.K., Australia and New Zealand. However, there was a sudden decline of exports to U.S.A. after 1896 consequent on the imposition of high tariffs on coir imports to U.S.A.[2]

It was only after 1908 that direct shipments to U.S.A. and U.K. could be resumed. The trend of steady growth continued till 1914. The first shipment of coir mats took place in 1912-1913 but exports fell sharply during the first world war period.[3]

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1 Unnithan Bhaskaran, K., Coir Industry in India with Special Reference to Marketing and Trade, Coir Board, Cochin, 1970, p.169.

2 Ibid.

3 Ibid.

After the decline during 1914-1918, the exports averaged about, 34,100 tonnes during the five year period from 1919-20 to 1923-24.[4]

The coir mats and mattings industry of the country suffered a severe set back during the Second World War. The markets in U.K. and U.S.A. declined drastically as these countries got involved in the world war. After the end of the war shipments from the ports of Cochin and Alleppey steadily picked up. However, after 1951 the exports suffered a demand crisis due to slump in the markets.[5] However, export of coir and coir products showed recovery after 1954.

Evolution of coir industry in Kerala

The modern coir industry in Kerala is only over a century old. Coir industry in Kerala was started at the initiative of foreign capital during the period of British rule. It was in 1859 that Mr. James Darrah, an English businessman, established the first coir weaving factory in Alleppey which marked the beginning of modern coir industry in Kerala. As the products enjoyed very good market in Europe several foreign companies established their manufacturing units in Alleppey which had

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[4] Report of Committee on Coir Mats and Mattings, Government of Travancore-Cochin, 1955, p.7.

[5] Annual Reports of Coir Board, Cochin, 1954-55, 1955-56.

the advantages of plentiful availability of raw material, natural facilities for retting of husk, cheap water transportation system and proximity to seaports besides the long association of the place with European tradesmen.[6]

The export market was controlled by the foreign companies who owned large factories. The primary sector which consisted of retting of husk, extraction of fibre and spinning was in an unorganised state with small scale units doing the various operations. By early twentieth century small scale sector began to expand their activities organising all the processing operations on single unit basis. Spinning was, however, done by women at home and they were paid conversion charges.

During the second world war period Indian entrepreneurs emerged stronger and could offer stiff resistance to the large foreign owned companies who dominated the manufacturing and exporting field.

After independence, the European companies in India adopted a policy of disposing their units in India to the local entrepreneurs. Subsequently they set up mechanised manufacturing units in Holland, U.K., West Germany and other countries in the continent and started importing fibre and yarn from India for making value-added products at their new mechanised facilities. As a result of this the pattern of exports from India underwent a rapid change with low-value items like yarn and fibre gaining dominance over finished products. The large

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[6] Janardhanan, E.P., "Structure of Coir Industry and State Policies - Need for a New Approach", Economic Times, Bombay dated 23-1-1984.

Indian companies which replaced their European predecessors had to depend upon the manufacturers in Europe for marketing their products. The product mix and the price structure were controlled by the overseas manufacturers/importers.

An analysis of the trend of coir exports during the period indicates that majority of the items exported was meant to meet the need of the manufacturing units in Europe. Consequently the large manufacturing units in India were forced to curtail their activities and entrust the work to worker-entrepreneurs or workers' co-operatives. It was a blessing in disguise to the large units as they could, under the new system, minimise capital risks and liabilities while retaining control over trading and export.

The workers' co-operatives, in the primary as well as the manufacturing sectors of the industry, were neither in a position to mobilise enough capital for technological improvements nor were equipped to meet the emerging challenges in the world market. This situation created a stagnation in the coir industry.

The wage cost in the coir floor covering manufacturing industry in Europe went up very high which forced many of the units to discontinue their operations. The competition from alternative natural fibres and synthetics which became available at lower costs also hastened them to eventually withdraw from the field of manufacturing coir products.[7]

[7] Ibid.

At this juncture, the coir products manufacturers in West Europe disclosed their willingness to sell their machinery to Indian counterparts and also transfer the technology of production. They would, however, offer to market the products from India.[8] Taking advantage of this situation a Kerala based exporter has already set up a large scale automatic powerloom in Tamil Nadu as he could not set up the unit in Kerala due to resistance to mechanisation. The workers and small-scale entrepreneurs in the state continue to vehemently oppose mechanisation which they fear, would result in labour displacement besides rendering their products obsolete.

The stalemate created by the decline in exports was partially overcome by an improved internal market. The coir industry has now dispersed to other coconut growing states in India. However, Kerala continues to retain the pre-eminent position as almost the entire quantity of 'white fibre'* is produced in the state.

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8 Ibid.

* White fibre which is golden yellow in colour is considered to be superior in quality. This is extracted after retting the husks for which other states have only limited facilities. The fibre extracted from dry/semi-dry coconut husk through mechanical process is known as brown fibre.

COMPOSITION OF EXPORTS

Coir is exported from India in the form of fibre, yarn, mats, mattings, rugs and carpets, ropes, curled coir and rubberised coir. Among these, the major items of export are coir yarn, coir mats and mattings , rugs and carpets. On an average, coir yarn constituted about 54 per cent of the quantity and 40 per cent of the value of the total exports of coir items from India during the past five years. Coir mats constituted about 26 per cent of the quantity and 33 per cent of the value of the total export of coir items during the period. Coir mattings, rugs and carpets had a share of 20 per cent of the quantity and 26 per cent of the value of the total exports.[9]

A few decades ago, coir industry was predominently export-oriented as about 75 - 80 per cent of its production used to be exported to more than hundred countries in the world. Over the last thirty years, the quantum of annual exports declined from 75,000 metric tonnes to the current level of approximately 30,000 metric tonnes.

The West European countries used to import large quantities of coir yarn from India, a major portion of which was used

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9 Coir Board, Background papers II - Indo-EEC Workshop on Coir, Cochin, 1984, p.5.

for conversion into floor coverings on sophisticated powerlooms. Coir yarn was a major item in the range of coir and coir products exported from the country. This pattern, however, underwent drastic transformation over the past years.[10]

The continuous fall in the quantum of export of coir yarn could be seen from table 7.1.

Table - 7.1

Trend in Export of Coir Yarn

| Period | | Average Export of Coir Yarn | |
|---|---|---|---|
| From | To | Quantity in tonnes | Value in Rs. lakhs |
| 1955-56 | 1959-60 | 56,168 | 559.82 |
| 1960-61 | 1964-65 | 54,560 | 731.32 |
| 1965-66 | 1969-70 | 43,603 | 805.22 |
| 1970-71 | 1974-75 | 29,956 | 791.22 |
| 1975-76 | 1979-80 | 24,317 | 1,106.72 |
| First 4 years of 1980 | | 15,841 | 1,052.77 |

Source: Coir Board, Cochin.

The fall in quantity was about 72 per cent over the past two decades while in terms of value the export recorded an increase of 88 per cent. The increase in value realisation was due to continuous increase in the unit value of exports of coir yarn over the years.[11]

10 Coir Industry in India, A background note prepared by Coir Board, Cochin for Indo-EEC Workshop, Cochin, p.5.

11 Ibid., p.6.

The export of coir products during the same period; however, did not suffer to the extent as that of coir yarn. Table 7.2 illustrates the position.

Table 7.2

Trend in Export of Coir Products

| Period | | Average Export of Coir Products | |
|---|---|---|---|
| From | To | Quantity in tonnes | Value in Rs.lakhs |
| 1955-56 | 1959-60 | 14,676 | 227.60 |
| 1960-61 | 1964-65 | 16,905 | 326.99 |
| 1965-66 | 1969-70 | 17,208 | 492.02 |
| 1970-71 | 1974-75 | 17,386 | 727.22 |
| 1975-76 | 1979-80 | 17,631 | 1,452.14 |
| First 4 years of 1980 | | 13,173 | 1,513.92 |

Source: Coir Board, Cochin.

The data on the total export of coir and coir products (inclusive of all items) given in table 7.3 show the general trend in exports.

The unit value of coir exports showed a consistent rising trend right from the early 70's. The increase was more noticeable in 1979-80 when it rose to Rs.7,877/metric tonne compared to Rs.5,991/metric tonne a year ago. Quantity-wise a declining trend has been noticed continuously from early 70's.

Coir yarn, mats and mattings together have the largest share of exports (over 90% of the total). The range of products exported include rugs and carpets, ropes, curled coir,

Table 7.3

EXPORTS OF COIR AND COIR PRODUCTS FROM INDIA
(Quantity, Value and Unit Value)

| Year (April-March) | Quantity (Tonnes) | Value (Rs. Millions) | Unit Value (Rs./tonne) |
|---|---|---|---|
| 1970-'71 | 52,208 | 138.71 | 2,662 |
| 1971-'72 | 52,312 | 148.59 | 2,867 |
| 1972-'73 | 49,480 | 149.30 | 3,032 |
| 1973-'74 | 46,759 | 155.82 | 3,336 |
| 1974-'75 | 41,834 | 175.36 | 4,183 |
| 1975-'76 | 37,284 | 139.52 | 5,203 |
| 1976-'77 | 44,357 | 227.75 | 5,140 |
| 1977-'78 | 42,444 | 239.18 | 5,631 |
| 1978-'79 | 43,066 | 257.93 | 5,991 |
| 1979-'80 | 47,224 | 372.10 | 7,879 |
| 1980-'81 | 28,610 | 255.46 | 8,929 |
| 1981-'82 | 30,079 | 269.37 | 8,955 |
| 1982-'83 | 30,134 | 261.69 | 8,684 |

Source: Coir Board, Cochin.

rubberised coir, fibre etc. which exhibit wide fluctuations in quantum and value from year to year.[12] Table 7.4 illustrates the trends.

DIRECTIONAL PATTERN OF EXPORTS

The main markets for coir yarn are the U.S.A., France, Netherlands, Italy, Federal Republic of Germany, Portugal, Poland Turkey, G.D.R., Belgium and the U.K. Over the past five years export of coir yarn to all the major markets declined substantially in quantity.

Countries in the West Europe continue to be the main importers of coir and coir products from India. During the year 1982-83 West Europe accounted for about 60 per cent of the quantity and 62 per cent of the value of exports of coir and coir products from the country. The second important market was the American region which accounted for nearly 18 per cent of the quantity and 16 per cent of the value of the exports during the period.[13]

East European countries which accounted for 9 per cent of the value and quantity of the total exports of coir and coir products from India during the same period constitute the third important market. Further, East Asian region accounted for 7 per cent of the quantity and value while West Asian countries had a

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12 Mukhopadhyaya, B.K., "Bridging Technology Gaps", Industrial Times, Vol.XXIV, No.17, Bombay, p.12.

13 India's Production, Exports and Internal Consumption of Coir, Coir Board, Cochin, 1983, p.6.

## Table - 7.4

## Exports of Coir and Coir Products from India (Itemwise)

V = Value in Rs. lakhs

| ITEM | 1978-79 | | 1979-80 | | 1980-81 | | 1981-82 | | 1982-83 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q | V | Q | V | Q | V | Q | V | Q | V |
| Coir fibre | 35 | 1.17 | 37 | 1.20 | 164 | 5.72 | 1 | 0.06 | 1 | 0.07 |
| Coir yarn | 23,536 | 1012.75 | 25,873 | 1555.42 | 13,486 | 873.06 | 15,837 | 1048.16 | 18011 | 1207.09 |
| Coir mats | 10,954 | 904.78 | 11,715 | 1191.26 | 7,403 | 823.30 | 8,143 | 920.59 | 7302 | 821.37 |
| Coir mattings rugs and carpets | 8,050 | 648.71 | 9,277 | 962.77 | 7,330 | 843.26 | 5,980 | 718.49 | 4690 | 581.62 |
| Coir rope | 72 | 2.65 | 81 | 4.31 | 78 | 4.72 | 93 | 5.89 | 80 | 5.39 |
| Curled coir | 412 | 8.35 | 240 | 5.46 | 148 | 4.42 | 25 | 0.56 | 50 | 1.37 |
| Rubberised coir | 7 | 0.90 | 2 | 0.54 | 1 | 0.18 | -- | - | -- | - |
| Total | 43,066 | 2579.31 | 47,225 | 3721.01 | 28,610 | 2554.66 | 30,079 | 2693.75 | 30134 | 2616.91 |

Source: Coir Board, Cochin.

share of 6 per cent (both quantity and value) of the total exports of coir and coir products from India during the period. South Asia accounted for less than 1 per cent of the quantum and value along with the African countries who occupied the same position.

The main importing countries in West Europe are France, West Germany, the U.K., Italy, Netherlands, Denmark and Belgium all of which are members of the European Economic Community (EEC). The member countries of EEC accounted for 54 per cent of the quantity and 56 per cent of the value of the total exports of coir and coir products from India during the year 1982-83, while the other countries in West Europe - Switzerland, Portugal, Spain, Turkey and Sweden - accounted for only 6 per cent.

In the American region the two main countries importing coir items from India are the U.S.A. and Canada who together accounted for 96 per cent of the quantity and 98 per cent of the value of the total export to that region, the balance being shared by ten countries in the region. During the year 1982-83, the main importers of coir and coir products from India in the East European sector included U.S.S.R., Poland, G.D.R., Hungary and Yugoslavia while in the East Asian region Australia, Burma, Japan and Newzealand were the importers. In West Asia the most important importing countries were Saudi Arabia, the U.A.E., Morocco and Iraq.

Table 7.5 shows the regionwise share of coir export from India for the last five years.

Table - 7.5

Regionwise Share of Coir Exports from India

| Region | 1978-79 | | 1979-80 | | 1980-81 | | 1981-82 | | 1982-83 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q | V | Q | V | Q | V | Q | V | Q | V |
| West Europe | 68 | 67 | 68 | 69 | 52 | 56 | 56 | 57 | 60 | 62 |
| America | 17 | 18 | 18 | 17 | 25 | 21 | 23 | 20 | 12 | 16 |
| East Europe | 7 | 6 | 6 | 5 | 10 | 10 | 10 | 11 | 9 | 9 |
| East Asia | 4 | 5 | 4 | 5 | 5 | 5 | 6 | 7 | 7 | 7 |
| West Asia | 3 | 4 | 4 | 4 | 8 | 8 | 5 | 5 | 6 | 6 |
| South Asia | @ | @ | @ | @ | @ | @ | - | - | @ | @ |
| Africa | 1 | @ | @ | @ | @ | @ | @ | @ | @ | @ |

Q = Quantity in percentage V = Value in percentage
@ = Negligible

Source: Indian Production, Exports and Internal Consumption of Coir, Coir Board, Cochin, 1983, p.7.

TRENDS IN COIR EXPORTS

Kerala is the major producer of coconuts with a share of about 55 per cent of the total production in the country. Abundant availability of skilled labour and the natural advantages of the region offering extensive backwaters and lagoons at close proximity of the raw material sources have made Kerala the home of coir industry. Kerala accounts for about 80 per cent of the coir production in India.[14]

14 Background Paper-I - Indo-EEC Workshop on Coir, Cochin, 1984, p.1.

About three decades ago coir industry was predominently export-oriented when almost 80 per cent of the production used to be exported. The pattern has undergone significant change over the past years. At present only 30 per cent of our total production of coir and coir products is being exported while the remaining 70 per cent is consumed within the country.

Export of coir yarn from India has declined considerably over the years due to multiple reasons. The U.S. offtake steadily decreased right from 1955 as a consequence of the reduction in acreage of hop cultivation in the country. Hop is a climbing vine which is a major ingredient in the brewing of beer. The crop used to be extensively cultivated in the U.S. and U.K. By improved techniques of farming the acreage under hop cultivation was substantially reduced resulting in reduced requirement for coir yarn which was used as support for the climbing vines.[15]

Export of coir yarn to France, Netherlands, Italy, F.R.G., Portugal, Poland, Turkey, G.D.R., Belgium and U.K. declined considerably in terms of quantity over the last five years.

The crisis in the coir products manufacturing units in Europe led to the closure of several units there resulting in reduced offtake of coir yarn from India for manufacturing purposes. The major reason for the closure of the coir floor covering manufacturing units in West Europe was the escalation in the cost of wages making it uneconomical for the units to operate.

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[15] Chacko, N.J., 'India's Coir Yarn', Coir, Vol. No.4, Cochin, 1957, p.

Export of coir yarn from India also faced competition from substitutes which were cheaper in prices. Besides, competition from other new sources of supply like Sri Lanka and Thailand became a threat to our exports.[16]

The export of coir products from India to the consuming countries in West Europe, U.S.A., Canada and Australia has been showing a declining trend while the market in U.S.S.R. has more or less remained steady.

Coir mats and mattings from India face severe competition from products made out of synthetics like polymides, polypropylene, acrylics and also from cheaper natural products like sisal, china grass.[17] The increase in the cost of coir products from India caused by rise in wages at the various stages of production and the cost of other inputs like raw material have rendered our products increasingly uncompetitive in the international markets.

Other coir producing countries like Sri Lanka and Philippines have adopted mechanical processing system resulting in increased productivity and better quality of the products manufactured, offering stiff competition to our products manufactured in the traditional way.

In the export market coir products now suffer from the disadvantage of higher prices compared to floor coverings from

16 Report of the Working Group on Coir, Planning Commission, New Delhi, 1984, pp.7-8.

17. Ibid.

synthetics and also natural substitutes. For wall-to-wall carpeting, rubber/plastic backed synthetic floor coverings are often cheaper than latex backed coir mattings. Coir mats are also outpriced by grass mats, reed mats and others.

World demand for coir floor furnishings has been met by exports from India and also to a substantial extent by factories in Europe manufacturing the products out of coir yarn imported from India. The world market for coir mats and mattings has shrunk by about 50 per cent over the last two decades as can be seen from table 7.6.

Table - 7.6

Estimated Average Annual Market size for Coir Mats and Mattings in Foreign Countries

(Quantity in tonnes)

| Period | MATS | | | MATTINGS | | | Grand total of mats & mattings |
|---|---|---|---|---|---|---|---|
| | European production | Indian Exports | Total | European Production | Indian Exports | Total | |
| 1960-65 | 18,660 | 13,813 | 32,473 | 27,983 | 3,453 | 31,442 | 63,915 |
| 1966-70 | 14,912 | 14,285 | 29,197 | 22,369 | 2,920 | 25,289 | 54,486 |
| 1971-75 | 20,490 | 12,424 | 32,914 | 5,122 | 4,961 | 10,083 | 42,997 |
| 1976-80 | 16,633 | 10,097 | 26,730 | 4,158 | 7,533 | 11,691 | 38,421 |
| 1981-83 | 10,792 | 7,616 | 18,408 | 2,698 | 6,000 | 8,698 | 27,106 |

Source: Report of the Working Group on Coir, Coir Board, 1984.

[redacted]ECONOMIC PROBLEMS OF THE INDUSTRY

Coir industry provides employment to half-a-million workers who belong to the weaker sections of the society in the

rural areas in Kerala. The industry is highly labour intensive and about 80 per cent of the total work force is employed in primary activities like retting, fibre extraction and spinning. Majority of the workers engaged in fibre extraction and spinning are women.

The annual production of white fibre in India, major portion of which is produced in Kerala, is estimated at 140,000 metric tonnes and that of brown fibre at 30,000 metric tonnes.[18]

The large population of the labour employed in the industry has its own social implications. The income level of most of the workers in the industry is low, majority of whom are not able to get work for more than 100 days in a year. As a measure to improve the conditions of the workers, especially in the primary sector of production like retting of husk, extraction of fibre and spinning ( ' government made efforts to bring more and more workers under the co-operative sector.

As on date Kerala has 456 primary Co-operatives, 19 Co-operative Societies for production of mats and mattings, 3 husk collection societies, 5 small scale producers' Co-operatives and one state level Apex Co-operative Coir Marketing Federation. About 2.21 lakhs workers have already been enrolled as members of Co-operative Societies.[19]

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[18] Ibid., p.14.

[19] Ibid., p.29.

Coir industry has been given special consideration by the Government of India in the Five Year Plan Programmes because of its social significance. The industry in Kerala is located in backward areas where scope for alternative gainful employment is limited. Besides, the plight of workers in the primary and manufacturing sectors of the industry has been far from satisfactory. While formulating the programmes under the 5 year plans the government had kept in view the objectives of improving the earnings of the workers and increasing employment opportunities.

In India, coir and coir products are still manufactured in the traditional mannually operated system. This has proved to be a major constraint which limits the productivity and also quality of products. It has been estimated that on a powerloom one worker could produce about 750 square yards of coir matting in a week of 44 hours of work while on a handloom two workers would produce only one-fifth of it. This is a factor of great disadvantage for us in the world market where machine-finished products from competing countries reach in large quantities.[20]

The fear of large-scale displacement of labour as a consequence of mechanisation has been a major obstacle against any progress in this direction. The government was also reluctant to initiate any bold step towards mechanisation of the industry. In fact, the need for gradual mechanisation of the industry had

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[20] Aiyer Krishna, R., "Economics of Coir Industry - Some basic considerations", Coir, Vol.I, No.1, Coir Board, Cochin, p.40.

been identified and advocated right from the early 1950's. But the socio-political complexities of the problem hindered the progress in the direction of mechanisation of coir industry in Kerala. Today the industry has dispersed to other states like Karnataka, Tamil Nadu, Andhra Pradesh and Orissa where mechanical processing system has been adopted. In the absence of adequate retting facilities these states produce only brown fibre unlike Kerala.

STATUS AND POTENTIAL OF EXPORT AND INTERNAL MARKETS

In the earlier years coir industry was predominantly export-oriented with about 75-80 per cent of the production reaching the overseas markets in more than hundred countries in the world. The position underwent a drastic change over the past 30 years and now only 30 per cent of the total production of the industry reaches the export market while the remaining 70 per cent is consumed within the country.

While the reasons for the dwindling exports of coir and coir products have been examined in detail elsewhere it could be observed that the industry was sustained by the growing internal market to a large extent.

Traditionally, coir and coir products were marketed within the country by private traders. At present co-operative societies and their apex bodies in Kerala, Tamil Nadu and Karnataka and the Kerala State Coir Corporation are engaged in the marketing of coir and coir products within the country through their network of sales depots and commission agents. Sales of

coir goods have also been substantially increased through the efforts of Coir Board which has showrooms and sales depots at important centres and appointed accredited dealers at other places.

Table 7.7 indicates the trend of consumption of coir and coir products in the domestic market.

Table - 7.7

Consumption of Coir and Coir Products within India

(Quantity in tonnes)

| ITEM | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 |
|---|---|---|---|---|---|
| COIR FIBRE | | | | | |
| White | 3,300 | 2,740 | 3,800 | 2,700 | 1,690 |
| Brown | 11,900 | 14,000 | 13,900 | 10,000 | 8,100 |
| COIR YARN | 53,200 | 54,300 | 50,100 | 59,960 | 65,350 |
| COIR PRODUCTS | 9,200 | 7,010 | 7,300 | 9,280 | 9,310 |
| COIR ROPE | 33,900 | 36,120 | 35,400 | 35,600 | 34,910 |
| CURLED COIR | 2,100 | 2,260 | 2,350 | 2,475 | 5,850 |
| RUBBERISED COIR | 1,490 | 1,500 | 1,500 | 1,500 | 3,200 |
| Total | 115,090 | 117,930 | 114,350 | 121,515 | 128,410 |

Source: Coir Board, Cochin.

Prior to the recent developments in the internal marketing system of coir and coir products, the marketing activities were largely controlled by master traders. The outlets for sale of coir in the domestic market were limited in number. These outlets were, however, not well organised having no arrangements for timely supply of coir products of standard quality.[21]

[21] Report of the Working Group on Coir, p.63.

The efforts of the Coir Board and those of the coir federations of the states and the Kerala State Coir Corporation have had a cumulative effect on the internal market for coir and coir products. With the proposed expansion of the network of sales depots during the seventh plan period and the further efforts to promote sales in internal market, the domestic market is expected to grow steadily.

While expanding the internal market efforts have to be made to activate the export markets. The export market which used to absorb 70,000 - 80,000 metric tonnes of coir products annually, has shrank to the distressing level of 30,000 metric tonnes. The reasons which have been attributed to the drastic fall include increased competition from synthetics, reduced differential in the prices of coir in relation to other floor coverings manufactured out of wool, polymides, polypropylene, acrylics and cheaper natural fibres which have substantially eroded the market for coir in major consuming countries.[22] Besides, some of the manufacturers of coir products in Europe went out of business unable to withstand therise in price of coir yarn which reduced their margin of profit drastically. In this situation it has not been possible for the export houses in India to keep up the traditional trade links and maintain the share of coir in the floor furnishing market of Europe.

However, studies conducted by the International Trade Centre, Geneva and the report of Trade Delegations to West Europe

[22] Ibid., p.79.

have revealed that if concerted efforts are made the market for coir products could not only be sustained but progressively expanded in selected markets like West Germany and Scandinavian countries by projecting the positive aspects of coir products through effective publicity.[23]

GOVERNMENT POLICIES ON COIR

The socio-economic importance of coir industry compelled the government to initiate policies with the desired objectives of improving the conditions of workers, expanding export and domestic markets for the products and achieving over all growth of the industry. However, on account of various constraints the objectives have not been fully realised.

The Coir Board was set up by the Government of India in 1954 to look after the functions of regulating production in the coir industry, improving products, developing new products and technologies besides promoting exports and expanding internal market for coir and coir products. The Board stepped into the scene when the coir industry was largely unorganised.[24]

Pursuant to the above functions the Board had to attend to the primary tasks of collecting and compiling statistical data on the industry, formulating specifications for the products, organising marketing on sound lines and linking of

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[23] Ibid., p.80.

[24] Unnithan, K.B., "Coir Industry and the Board", Coir, Vol.I, No.1, Coir Board, Cochin, pp.9-10.

primary sector with the manufacturing and exporting sectors. The Board introduced the system of licensing retting places, warehouses, processing and manufacturing establishments with a view to organising the industry. The Board had also to apply itself to the tasks of product development, finding new uses for the products and also promoting export and internal markets.

Co-operatives in coir industry:

A scheme for the development of coir industry on co-operative basis had been introduced by the government of the erstwhile Travancore-Cochin State in the year 1950. The objectives of the scheme were to ensure regularity of work and adequate remuneration to the workers. It was also envisaged to prevent exploitation of the workers and the primary producers by middlemen. The scheme comprised of organising:

a) husk societies for collection and supply of raw materials,

b) yarn societies for the production of yarn, and

c) central coir marketing societies to market the yarn produced by the member societies.[25]

Co-operativisation of the coir industry has progressed considerably from its initial stages to the present status. Till recently the programme of co-operativisation of the industry was pursued by the state government, but the government of India approved the policy in 1982-83 and decided to sponsor schemes.

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[25] Unnithan Bhaskaran, K., Coir Industry in India, Coir Board, Cochin, 1970, p.103.

Today in Kerala there are 462 primary societies, 18 mats and matting societies and a state level Co-operative Coir Marketing Federation. Government of India has already released funds to the state government towards share capital assistance for Co-operative Societies. By the close of the Sixth Plan considerable progress is expected in the co-operativisation programme.[26]

Taking into account the crucial importance of domestic market for coir and coir products in the context of diminishing exports, a chain of sales depots and showrooms have been set up at important centres by the Coir Board. The Coir Marketing Federation also has a network of showrooms and sales depots throughout the country. They have plans to increase the number of sales depots to cover new areas. The Kerala State Coir Corporation has also set up sales outlets at various places. These efforts towards expansion of internal market are of strategic importance as about 70 per cent of the total annual production of the industry is consumed within the country itself.

Export registration and floor price fixation:

The system of registration and licencing of exporters under the Coir Industry (Registration and Licencing) Rules 1958, permit only those exporters who register themselves with the Coir Board to export their products. Besides, Government of India has also fixed minimum export prices for different items of

26 Report of the Working Group on Coir, 1984.

coir and coir products. The government has revealed its intention to continue these measures during the Seventh Plan period also.

The restrictions imposed by the government originate from its concern to protect the industry and ensure better income levels for the workers. However, the approach has not yielded the desired results but on the other hand, the export of coir and coir products has declined over the years. It is obvious that the importance of the factor of price competitiveness in the export market has not been given adequate attention while imposing such restrictions. Moreover, the threat from cheaper substitutes for coir was also not given due consideration.

Supply of raw material:

Coconut husk is the basic raw material for the industry. Kerala has an annual production of 3,000 million coconuts which forms 54 per cent of the total production of 5,700 million nuts in the country. The husk requirement of the industry in Kerala for white fibre production at current levels has been estimated to be equivalent to 1,600 million nuts. It is strange that even in such an advantageous position the industry in Kerala suffers from raw material shortage.

The Husk Control Order issued by the State Government with the motive of ensuring steady supply of raw material to the industry at economic price levels has in practice created the problem of shortage.

The discussions at the Indo-EEC Workshop on Coir held at Cochin in 1984 brought to light the acute problem of husk scarcity being faced by the industry. The representatives of the trade who attended the workshop wanted the Husk Control Order to be abolished or suitably amended to allow free movement of husk throughout the state.

The shortage of raw material has now pushed up the price of husks and unless timely steps are taken by the government to decontrol meeement of husk from surplus to deficit arear the situation would further be aggravated. Coconut production in the state is showing a declining trend due to the root wilt disease which has reached epidemic proportions and also because of the unprecedented drought in 1983. These adverse conditions vitiated the problem of shortage of raw material rendering the Husk Control Order a negative measure.

Mechanisation of the industry

Political parties, trade union leaders and the labour in the coir industry in Kerala are vehemently opposed to any move in the direction of introducing mechanisation even in a phased manner in the industry. This hostile attitude towards mechanisation has been created by the fear of largescale displacement of labour if mechanised production units are allowed to be set up. Viewing the coir industry as a 'sensitive area', the government has refrained from taking any step which is likely to disturb the present position in the industry.

The emerging situation in other states where coir industry has made steady progress is quite contrary to what is prevalent in Kerala. Tamil Nadu, Karnataka and Orissa have adopted mechanical processing system with resultant higher productivity and lower costs. As coir is being increasingly put to non-conventional uses, the demand for brown fibre produced in these states would grow steadily. The special advantage of white fibre which is now almost exclusively produced in Kerala may become irrelevant.

The future of coir industry in Kerala has to be planned taking into consideration the possibility of competition in the internal market in the coming years. In other coconut growing states in India coir industry is of recent origin and hence do not suffer from the burden of socio-economic problems unlike Kerala. In the absence of adequate brackish water sources for retting of husks in these states, the defibering operations have to be necessarily done using mechanical facilities. Thus they got a congenial situation to set up mechanised units for coir production.

Despite these developments Kerala still enjoys a monopoly in the production of white fibre. But this status need not remain a permanent feature as processing technology makes advancement. Recognising the importance of price competitiveness mechanisation has to be introduced in the coir industry in the state. To begin with the change over should be introduced on a selective basis to dispel the fears of those who are sceptical about mechanisation. The state can also encourage brown fibre

extraction units where complete mechanisation of processing is adopted. This step will help utilise the husk in areas where retting facilities are not available.

While stepping up the social welfare measures for the workers in the industry the state government has to initiate steps to 'de-politicalise' the industry and liberate it from the compulsive opposition to modernisation.

DEVELOPMENT STRATEGIES FOR PRODUCTION AND MARKETING OF COIR*

The plan programmes implemented in the coir industry were essentially oriented to:

1. develop and expand internal market through vigorous efforts,
2. expand export market,
3. Support measures for modernisation of production infrastructure in the organised sector,
4. support welfare measures for workers in the coir industry.

The perspective plan for the next decade formulated by the Coir Board aims at continuing the efforts with accelerated thrust and appropriately re-orienting the strategies for production and marketing.

With a view to improving productivity, concerted efforts for research and development in the following areas are planned.

* from discussions with the Coir Board Authorities.

(a) Process improvement in the extraction of retted coir fibre.

(b) Development of equipment for the extraction of coir fibre from retted husks.

(c) Development of spinning ratts to facilitate higher per capita output.

(d) Improvement in bleaching, dyeing and shade matching of coir fibre/yarn.

(e) Setting up of common functional service facilities like dye house for coir units for bleaching and dyeing of fibre/yarn for uniformity and consistency of shade in the product.

(f) Development of new designs.

(g) Improvement of weaving techniques for mats and mattings.

Product development and new uses for coir:

While it is feasible to develop non-conventional uses for coir, the work in this direction has not gained the required momentum. Development of techniques for manufacture of new products out of coir fibre and yarn and identification of new areas for increased use of coir have to receive adequate support from the government.

The Working Group on Coir appointed by the government of India has already made its recommendations for taking up studies in collaboration with institutions possessing special

expertise on the lines for use of coir in soil conditioning, anti-soil erosion works, as barricades for sand stowing in coal mines, as filler at bed of seawall for sea erosion control, for general purpose building insulation, for manufacturing briquettes out of coir pith etc.

The present uses of coir in the manufacture of rubberised coir and in accoustics for theatres and auditoria has to be further extended with corresponding product improvement.

Product modification/diversification:

The Coir Board envisages diversification of product range by improving upon the details of construction, texture and finish of the product. New designs have to be developed taking into account consumer preferences both at home and abroad and also popularising new patterns of designs. The scope for evolving suitable spinning system to spin yarns of desired texture from blends of softened coir, other fibres like jute, sisal etc. needs to be explored.

Export market development:

The Working Group on Coir (1984) has suggested 'continued contract extension' programmes in selected overseas markets such as West Europe, Australia, U.S.A., Canada and East European countries. This step is expected to help in maintaining the current levels of export and also creating reasonable growth rate over the years. To accelerate efforts in this direction, the working group has recommended the setting up of a liaison office of the Coir Board Board at a suitable location in West Europe

during the Seventh Plan period. This office would attend to the functions of market intelligence on coir products, liaison with coir importers, canvassing of orders, monitoring of deliveries and organising publicity and promotional programmes. The Working Group has also suggested that this office would work on the concept of co-operation with Indian export trade, the importers in Europe and with international institutions like International Trade Centre (ITC) and European Economic Community (EEC).

The proposed liaison office when set up would serve as an important link between India's export trade and world market. However, the results of its efforts would largely depend upon the policy orientations which the government initiates.

Table - 7.8

Export Targets for Coir and Coir Products - Seventh Five Year Plan (1985-90)

Quantity = Tonnes

| Item | 1984-85 (Base level) | % growth anticipated | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|---|---|---|---|---|---|---|---|
| Coir fibre | 18 | 5 | 19 | 20 | 21 | 22 | 23 |
| Coir yarn | 17850 | 2 | 18242 | 18634 | 19026 | 19417 | 19808 |
| Coir products | 12000 | 6 | 12700 | 13500 | 14300 | 15200 | 16100 |
| Coir rope | 81 | 5 | 85 | 89 | 93 | 98 | 103 |
| Curled coir | 51 | 5 | 54 | 57 | 60 | 63 | 66 |
| Total | 30000 | 3.78 | 31100 | 32300 | 32500 | 34800 | 36100 |

Source: Coir Board, Cochin.

Despite the current stagnant situation in the export of coir and coir products, there is good scope not only for retaining the traditional markets but also for progressively expanding them as revealed by the survey conducted by the International Trade Centre, Geneva and from the reports of various trade delegations who visited various importing countries.

An export market well supported and balanced by a developed domestic market would be the ideal situation for the coir industry in India in the present context. However, it is essential that price competitiveness is maintained both at Home and export markets lest the products are replaced by substitutes.

Price competitiveness could be maintained only by bringing down the cost of production. It is evident that increased productivity in the manufacture of coir products could be achieved through mechanisation of processing. As machine finished products possess superior features like uniformity and better finish, these are preferred by overseas consumers. Any programme for development of export market for coir and coir products without considering these basic facts would not bring in desired results.

As the manufacturers of coir products in West Europe are increasingly quitting the field due to increase in wage cost rendering it uneconomical for them to operate, the Indian

manufacturers should now make use of the opportunity to buy the second hand machineries to set up mechanical production facilities at home. The Coir Board has to initiate necessary policy changes in this direction.

Domestic market development:

The domestic market for coir and coir products which has grown to the present impressive size, helped the industry to survive the adverse conditions in the export market. Ideally the export and domestic markets would be mutually supportive to maximise benefits. A stagnant export market for coir and coir products makes it necessary for the home market to expand further to absorb adverse fluctuations.

The Working Group on Coir (1994) has anticipated a compound annual growth rate of 6 per cent for internal market for coir and coir products. There is good scope for considerably expanding the home market when new products are developed and new uses for coir are also found out. However, if prices do not remain competitive the home market would also retract.

It has now been decided that while the Coir Board will be responsible for co-ordinating the marketing efforts and attending to the market promotion of coir products, the marketing would be left to the co-operative institutions and other established trade channels. The Board would, however, maintain at least one showroom in each state for popularising coir products.

The Working Group on Coir (1984) has suggested appropriate strategies for home market development and also recommended suitable financial outlay to meet the expenditure. Efficient arrangements to link up centres of production with sales outlets and maintaining supply lines are essential to fully exploit the domestic market potential for coir products. While the accepted policy of the government is to encourage Co-operative institutions in setting up sales net work throughout the country, the role of private tradesmen has to be adequately recognised. The system of dealership with Coir Board accreditation which is in vogue, has to be continued with liberalised conditions.

Table 7.9 shows the targets for internal consumption of coir and coir products during the Seventh Plan period, which have been fixed by the Working Group on Coir (1984). These are realistic projections based on current consumption levels, trends in consumption and also the market promotion programmes. Rubberised coir has the highest anticipated growth rate (15%) which is achievable if effective publicity on the positive advantages of the product is followed up by organised sales efforts. The 10 per cent annual growth rate of consumption is at feasible level in view of the current consumption trends. However, a well planned subsidy-cum-rebate scheme would further boost up the sales. This is evident from the data of sales at the Coir Board showrooms during periods of special sales campaigns. Sales of domestic consumer products could be considerably increased by introducing innovative sales schemes like

Table - 7.9

Targets for Internal Consumption of Coir and Coir Products - Seventh Five Year Plan (1985-90)

Quantity = Tonnes

| Item | 1984-85 (Base level) | Percentage growth anticipated | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|---|---|---|---|---|---|---|---|
| White coir fibre | 2,844 | 2 | 2,900 | 2,960 | 3,020 | 3,080 | 3,140 |
| Brown coir fibre | 11,421 | 2 | 11,600 | 11,800 | 12,000 | 12,300 | 12,600 |
| Coir yarn | 63,160 | 5 | 66,300 | 69,600 | 73,100 | 76,800 | 80,600 |
| Coir products | 9,775 | 10 | 10,700 | 11,800 | 13,000 | 14,300 | 15,800 |
| Coir rope | 37,500 | 5 | 39,400 | 41,400 | 43,500 | 45,600 | 47,900 |
| Rubberised coir | 3,300 | 15 | 5,500 | 6,240 | 7,180 | 8,220 | 9,460 |
| Total | 128,000 | | 136,400 | 143,800 | 151,800 | 160,300 | 169,500 |

Source: Report of the Working Group on Coir (1984), Coir Board, Cochin.

credit purchase. A growth rate of 15 per cent in the consumption of coir products could be achieved if the activities of production, publicity and sales are effectively co-ordinated.

# C H A P T E R - VIII

## NON-TRADITIONAL AGRICULTURAL PRODUCTS

### BACKGROUND

In 1972, the Indian Institute of Foreign Trade, New Delhi was commissioned by the Government of Kerala to undertake a survey of the export potential of the State. The Market Research Division of the Institute which conducted the survey identified a number of specific areas with potential for export development. These included traditional as well as non-traditional products of agricultural and industrial origin.[1]

The product group identified by the survey included spices, cashew, handicrafts, minerals, rubber based products, marine products, tea, essential oils, engineering products, handlooms, preserved fruits, ayurvedic preparations, forest based products like rose wood, plywood veneers and wooden furniture, chemicals, tapioca and tapioca products besides miscellaneous items like coconut shell powder.

The survey recommended that an Export Promotion Board should be set up in the state to mobilise and co-ordinate all

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[1] Export Potential Survey of Kerala, Vol.I, Indian Institute of Foreign Trade, New Delhi, 1972, pp.x-xi.

activities pertaining to exports besides attending to other related functions.

More than a decade has passed now after the submission of the report, with considerable changes having taken place in the trends and pattern of exports from Kerala. However, in the absence of concrete efforts, the export growth has remained stagnant. Kerala, with its agrarian base and a background of many years of export activity, should be in a position to make remarkable progress in the export front.

Report of the Task Force on Agricultural Exports:

The Task Force on Agricultural Exports, appointed by the Government of India have projected that the country will have a potential for agricultural exports amounting to about Rs.3,125 crores by the end of the Sixth Five Year Plan.[2] The following items with potential for export have been identified by the Task Force:-

1. Live animals
2. Meat and Meat Products
3. Dairy products, eggs and other poultry products
4. Marine products
5. Cereals
6. Fruits, vegetables, nuts
7. Sugar
8. Coffee, tea, spices

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[2] Report of Task Force on Agricultural Exports, Ministry of Agriculture and Irrigation, New Delhi, 1978, p.5.

9. Animal feeds
10. Miscellaneous foods
11. Beverages
12. Tobacco
13. Oil seeds

Growth in Agricultural Exports - Specific advantages:

Development of agricultural exports has multiple advantages. Increased returns from agricultural production improves incomes and provides employment to the most needy section of the population. The economic conditions of the small and marginal farmers who dominate our agrarian system could be considerably improved by efforts of agricultural exports. Agricultural resources are renewable and the capital requirements for agricultural production are low.

India's share in world agricultural exports is hardly one per cent. However, agricultural exports account for one third of the country's exports which highlightsthe vast potential for development of agricultural exports. Exports of non-traditional agricultural products recorded an impressive growth rate when their export earnings increased from Rs.112 crores in 1976-77 to Rs.628 crores in 1981-82.[3] Table 8.1 gives data on the exports of non-traditional agricultural products from India during 1981-82.

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[3] Survey of India's Exports, Indian Chamber of Commerce, Calcutta, 1983, p.8.

**Table - 8.1**

*Non-Traditional Farm Exports from India 1981-82

(Value Rs.'00000)

| Sl. No. of Items | Description | Value |
|---|---|---|
| 1. | Animal feeds and concentrates | 496.0 |
| 2. | Fresh meat | 1,553.0 |
| 3. | Fresh mangoes | 349.0 |
| 4. | Other fresh fruits (excluding mangoes) | 2,950.0 |
| 5. | Mango juice | 499.0 |
| 6. | Other canned/bottled fruits | 1,639.0 |
| 7. | Canned vegetables | 252.0 |
| 8. | Dehydrated vegetables/pickles chutneys | 611.0 |
| 9. | Frozen meat and canned meat | 4,433.0 |
| 10. | Poultry products | 326.0 |
| 11. | Alcoholic beverages | 57.0 |
| 12. | Instant coffee | 1,200.00 |
| 13. | Instant tea | 489.0 |
| 14. | Cocoa products | 187.0 |
| 15. | Mushrooms | 278.0 |
| 16. | Other processed foods | 111.0 |

Source: Survey of Indian Exports, Indian Chamber of Commerce Calcutta.

* Only items relevant to Kerala have been included.

POTENTIAL OF KERALA

Kerala has considerable scope to develop exports of specific products of distinct advantage from the agricultural sector. Based on the projections made by the Task Force on an all India basis, the following areas have special significance for Kerala.[4]

1. Meat and meat products
2. Fresh vegetables
3. Preserved vegetables
4. Fruit juices and fruit products
5. Pickles and chutneys
6. Poultry products
7. Cocoa and cocoa products
8. Mushrooms
9. Cut flowers and other floricultural products
10. Medicinal plants, herbs
11. Phytochemicals
12. Essential oils and oil seed extractions
13. Poultry and animal feeds
14. Honey

NEW STRATEGIES FOR FARM PRODUCTS EXPORT

The Task Force had recommended programmes for the production of items like green vegetables, flowers and certain fruits. It was suggested that development projects for selected crops should be undertaken in specially identified areas for increasing production. A system of contract cultivation for items for the export market has also been recommended.[5]

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[4] Report of Task Force on Agricultural Exports, Ministry of Agriculture and Irrigation, New Delhi, 1978, pp.5-9.

[5] Ibid., p.15.

Hundred per cent export-oriented farms:

The Federation of the Indian Chambers of Commerce & Industry has submitted a scheme to the Government of India proposing to set up hundred per cent export oriented farms. The concept of the scheme is innovative and seeks to implement the recommendations of the Task Force. The immense export potential for non-traditional agricultural products like flowers, fruits and vegetables has not so far been exploited by the country. The proposed hundred per cent export farms would be exclusive areas where intensive farming of high yielding varieties of crops will be undertaken. Such farms will have to be exempted from the purview of land ceiling regulations. Land not cultivated at present could be allocated for this purpose. The FICCI has also proposed that government lands suitable for the purpose could be leased out to the entrepreneurs on a long term basis to set up export production farms.[6] The corporate sector should be encouraged to enter the field as they would be in a better position to mobilise capital and technology inputs for such ventures.

In Kerala, hundred per cent export farms could be set up for production of fruits like banana, mangoes, pineapple and also for vegetables and flowers. Farms for production of meat, fish, poultry products, dairy products etc. could be raised

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[6] "Export Farms", Economic Times (Editorial), Bombay, March 20, 1984.

taking advantage of the natural endowments of the State. The products from these farms could be sent direct to overseas markets by sea or air. The export production farms would serve as focal points for the development of the region in which they are located, besides generating employment.

## CASE FOR A NEW APPROACH

The Ministry of Commerce has now recognised the crucial role of farm products exports in our economy. A package of incentives for export of agricultural products is under its active consideration.[7] However, the prime requisite for the substantial expansion of export of farm products is the capacity of the state governments concerned, to increase production and make available a growing exportable surplus.

There has been an increasing feeling in the government as well as trade circles that the need for a shift in the pattern of exports from bulk supplies to value-added products should now be recognised.[8] However, the switch-over should be smooth without upsetting the traditional trade channels. In such cases fiscal incentives should be liberally extended to the entrepreneurs as in the initial stage, competition with established suppliers of branded products would be fierce. It has also to be recognised that world commodity trade is dominated by organised export houses. We have, therefore, to encourage export

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[7] "Agricultural Exports", Economic Times (editorial), Bombay, February 9, 1984.

[8] Venkitaraman, C., "Export of Agricultural and Allied Products", Cashew Bulletin, Vol.XIX, No.4,

houses and trading houses to take up export of farm products. It is essential to evolve appropriate strategies covering the entire gamut of agricultural exports ranging from production and processing to marketing and from costs and prices to taxes and incentives. The institutional framework for farm products export should be adequately strengthened to take up the new tasks.

## EXPORT PROSPECTS OF NON-TRADITIONAL AGRICULTURAL PRODUCTS FROM KERALA

### Meat and Meat Products:

Export of meat from the country has registered impressive growth in recent years. Taking into consideration the abundant growth prospects of meat and meat products export, the Indian Institute of Foreign Trade has submitted a report on the development of the export of the item to the Ministry of Agriculture and also the Ministry of Commerce. The Task Force on Agricultural Exports has also recommended the setting up of a Meat Board for regulating domestic market and developing export market.[9]

The public sector meat processing unit in Kerala which was set up a decade ago has confined its activities to the domestic market. A scheme for the expansion of the present unit and also for setting up of two new units, one at Trivandrum and the other at Trichur, has been approved by the Government of

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[9] Report of Task Force on Agricultural Exports, op. cit., p.14.

Kerala. The expansion scheme also envisages to enter the export market apart from meeting domestic demand. Export of frozen meat by private sector units in Kerala has shown appreciable growth. However, the set back to export which has taken place due to detentions at the importing countries recently should serve to bring out the need to organise future exports on sound basis.

At present a large number of culled animals are being slaughtered for meat. This practice should be banned by legislation and only animals specially reared for meat purpose should be allowed to be utilised for production of meat for export. Modern abattoirs should be set up in the public sector and the meat processing plants in the private sector should conform to stipulated norms for ensuring product quality. The farmers growing animals should be able to directly deliver the supplies to the meat processing units to ensure maximum benefits to them. The recent set back to meat exports from India was due to the detention of consignments of frozen meat sent from here for the presence of pathogenic bacteria. There has also been apprehension in the importing countries about the quality of animals slaughtered for meat and also the level of hygiene in the meat processing units here. It has to be borne in mind that unless we organise our meat processing industry on a scientific basis we will not be in a position to sustain or expand our exports as developed countries compete with us in the field.

Fresh Fruits and Vegetables

India has now made a beginning in the export of fresh fruits and vegetables which is identified as an area of immense potential. A quantity of 23,000 metric tonnes valued at Rs.15 crores approximately, was exported from the country during 1978-79.[10] Kerala's share in the export of fresh vegetables to Gulf countries has now commenced on a modest scale from the state since the commissioning of the Air Cargo Complex at Trivandrum airport. At present there are weekly flights to Kuwait, Dubai, Abu-Dhabi, Sharjah, Ras-al-lhaima, Male and Sri Lanka.

Flights for more number of destinations in the Middle East will soon start operating from the Trivandrum airport which is fast developing into an international airport. The prospects of airfreighting larger quantities of fresh fruits and vegetables to more destinations would thus become brighter. At present the vegetable exports from Trivandrum are supplied from farms in the adjoining Tamil Nadu. However, farms exclusively meant to raise fruits and vegetables for export could be set up in Trivandrum and Quilon districts which have the advantage of proximity to the airport. As irrigation facilities in the state are now considerably expanded Kerala can achieve remarkable progress in the export of fruits and vegetables.

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10 Survey of India's Exports, op. cit., pp.8-9.

Varieties with export demand:

The most important fruit crops in the country with demand in the export market are mangoes, banana, pineapple and apple. Kerala has a small share now in the total production of mangoes in India.[11] Though the state has extensive area under banana cultivation, the varieties having export demand are not grown here. In the case of pineapple the state occupies the leading position in production followed by North Eastern states. In North Eastern States of India large farms for growing vegetables for export have been set up close by the airport. Brinjals, ladies finger, tomatoes and leaf vegetables are grown in such farms.

Prospects for Export of Fresh Fruits and Vegetables from Kerala:

The Government of India has now initiated several steps to activate and develop the export of fresh fruits from the country. Kerala should now evolve a suitable programme to utilise the liberal incentives announced by the government like the increased cash compensatory support (from 15 per cent to 18 per cent) and the reduction of normal freight rates by 70 per cent for fruits intended for export, making available latest technology in packaging and the introduction of hybrid varieties of fruit plants.[12] The state can successfully

11 "Boosting Exports of Fruits and Flowers", Economic Times, Bombay.

12 "Exports of Fruits and Vegetables", Economic Times, Bombay, November 7, 1983.

develop production of Mangoes, pineapples, papaya and bananas for export by employing scientific farming techniques and also vegetables with demand in the Middle East Countries.

## CUT FLOWERS AND OTHER FLORICULTURAL PRODUCTS

### The Market:

India can claim only a modest beginning in the export of cut flowers and other flouricultural products which form a potential group among the non-traditional export items. We are yet to exploit the fast growing market for cut flowers in the European markets, especially in the Federal Republic of Germany.[13] Tropical flowers have considerable demand potential in the markets. However, market entry requires constant monitoring of trends in this trade as the market is highly diversified and subject to rapid fluctuations. Other factors like the high perishability of the products, the multiplicity of species and varieties of flowers and the fast changing consumer preferences have also to be taken into consideration.

### Demand Factors:

It is interesting to note that during the ten year period beginning from 1966 the total turnover of cut flowers in the Federal Republic of Germany recorded an increase of more than hundred per cent. Flower consumption in this country was boosted

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13 "Blooming Market for Flowers", World Trade, Vol.XIV, No.1, 1980, p.30.

not only by favourable retail prices but also by the high quality of flowers supplied and the changing assortment of varieties offered. Flower consumption has also been given an impetus by the growing urbanisation of the country and also the positive attitude of the consumers to improve their living standards.[14] Federal Republic of Germany, Switzerland, Sweden, Norway, Denmark, Finland, Italy and France have the highest per capita consumption of flowers in the world.

Market Segments:

The cut flower market has two distinct segments:[15]

i) The necessity segment: This segment accounts for one-fourth of total flower sales approximately. Demand in this sector is influenced by consumers' attitude towards traditional customs and rituals.

ii) The impulse segment: This is comprised mainly of consumers who buy flowers to decorate their homes. A large part of the expansion of flower market in Europe (especially in FRG) could be attributed to this group. It has a much higher income elasticity than the necessity market and hence benefits from high growth rates in income in the European countries.

Varieties in demand:

Traditionally Roses and Carnations are the most important cut flowers sold in the West European market. However, the varieties of these flowers preferred by the consumers have

[14] Ibid.

[15] Ibid., pp.31-32.

changed. Bulb flowers (Tulips and Narcissi) are next in demand. Crysanthamums are purchased round the year. A significant development in the demand for cut flowers is the growing importance of bunch flowers - bunches of several species of flowers. Bunches have now attained a share of thirty per cent of the total expenditure on flowers. Orchids, both tropical and temperate, are also in good demand, the remaining portion of the market is shared by new species of flowers.[16]

PROSPECTS FOR EXPORT FROM KERALA

Kerala has not so far entered the field of export of flowers and floricultural products. Roses, carnations, jasmine, tropical orchids and a number of species of flowers currently in demand in the export market could be successfully raised in Kerala taking advantage of the agro-climatic endowments. Large scale commercial cultivation of flowers could be undertaken in Trivandrum and Palghat districts which have low rainfall but well developed irrigation facilities. Fresh flowers could be air-freighted from Trivandrum and Cochin airports.

If countries like Israel could achieve great success in the field of export of flowers we would also be in a position to do so. The liberal incentives announced by the government by way of increased cash compensatory support and concessionery air-freight rates should help us to achieve a breakthrough in the field.

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[16] "Boosting Exports of Fruits and Flowers", Economic Times,

## BOTANICALS AND PHYTOCHEMICALS

### The world market situation:

The trade in medicinal plants and their derivatives in pharmacy has declined in many industrialised countries due to competition from synthetic products but the overall trade registered an increase following their increased use in food and cosmetic industries. A renewed interest in traditional medicine in Asia and in health foods in Europe and North America has provided new outlets for a number of botanicals.[17]

U.S.A., F.R.G., France, Switzerland, Netherlands, U.K., Japan, Hongkong, Singapore, Indonesia and Thailand are the important markets for botanicals and their derivatives. Developing countries grow and supply large quantities of many species of medicinal plants to these markets.

### The supply situation:

Changes in demand pattern for medicinal plants have resulted in changes in supply pattern also. The decline in the availability of wild herbs led to an increase in their cultivation. Research into the development of new varieties with increased content of active constituents is being carried out successfully in a number of developing countries sometimes on joint ventures with developed countries.

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17 Markets for Selected Medicinal Plants and their derivatives, International Trade Centre, UNCTAD/GATT, Geneva, 1982, p.3.

Many developing countries have large areas of arable land at their command and also suitable agro-climatic conditions and manpower resources. Thus they should be in a position to produce and sell botanicals at a competitive price. Such countries may enter into joint venture agreements or similar collaboration arrangement with importers/end users which would prove to be the best way to develop export of botanicals on a long term basis.[18]

Market Strategies:

Changes in demand pattern would require the supplying countries to adopt appropriate strategies to survive such situations. It is of prime importance that developing countries determine those crops which they can best exploit commercially. It is also essential that developing countries organise cultivation of medicinal plants and obtain regular information on the current markets in botanicals. They should also concentrate on producing plants that are indigenous to them rather than trying to compete with growers of plants that are grown in temperate climates. The plants selected for growing in the developing countries may preferably have internal or regional demand also lest a sudden change in world demand pattern should affect the trade.

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[18] Ibid., p.57.

[19] Ibid., pp.27-28.

## BOTANICAL EXPORTS FROM INDIA

India is often called the 'Botanical Garden of the world' having a wealth of more than 2,000 types of medicinal and essential oil bearing plants. Our exports of medicinal plants which stood around Rs.360 lakhs in 1969-70 reached an impressive figure of Rs.2,283 lakhs in 1976-77.[20]

India has virtually occupied a monopoly position in the export of Psyllium seeds and husk. It also occupies an important position in the export of Rauwolfra serpentina and Senna (leaves and pods). Exports of Cinchona bark, Nux vomica seeds, Barberis bark and Papain from Carica papaya have taken place in the form of their active principles like alkaloids, glycosides or enzymes. Psyllium seeds and husks formed the single largest item among the medicinal plants exported from India. In 1978-79 the export of this item reached a value of Rs.686 lakhs.[21] Psyllium is a stemless annual herb which can be grown on a variety of soils. Commercial cultivation is now being done in Gujarat and Rajasthan.

Cassia senna is an annual crop extensively cultivated in Tamil Nadu.

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20 "Indian-Botanical Garden of the World", World Trade, Vol.XIV, No.1, 1980, pp.54-55.

21 Ibid.

Papain is collected from the fruits of Carica papaya. 95 per cent of the papain is used in food and beverage industry. It is a hydrolysing enzyme and is called 'vegetable pepsin' because of its similarity to pepsin. It is mostly used as a stabiliser in beer and other beverages and as a meat tenderiser.

Papaya is grown practically all over the tropical and sub-tropical countries especially in Sri Lanka, India, Philippines, Africa, South America and West Indies. Export of Papain from India has been steadily growing, from a quantity of 212Kg. in 1972-73 to 200,000Kg. in 1978-79.[22]

SCOPE FOR EXPORT FROM KERALA

Many of the botanicals exported from India could be successfully grown in Kerala especially Rauwolfia serpentina, Psyllius sp., Carica papaya, Cassia senna and other species indigenous to tropical areas. There are a large number of herbs collected from the forests in Kerala. More than a decade ago the government of Kerala launched a 'Phytochemicals Project' at Neriyamangalam with extensive areas brought under the cultivation of a variety of herbs and medicinal plants. The project had envisaged extraction of active principles from the herbs for internal market and also for export. However, the project had to be given up as it failed due to various reasons. This experience may deter the state government from taking up a new project. An investigation into the failure of the Phytochemical

22 Ibid.

project at Neriyamangalam has revealed that the failure was not due to any marketing problems but because of labour problems and poor crop management.

A new interest in the traditional systems of medicine could be witnessed now in India and also in several other countries of the world. The proposed Central Institute for Ayurvedic Research could be set up in Kerala which has a heritage of renowned physicians of the system. Centres of Ayurvedic Therapy in the state have now acquired world-wide fame and acclaim. This position would help Kerala to export Ayurvedic preparations and other herbal remedies to many countries in the world where sizable number of Indian citizens live. Tinctures, extracts and other formulations of Ayurvedic preparations are now exported in appreciable quantities. There should be efforts to co-ordinate the activities in the field of exports of these items and research should also be taken up in the government/corporate sector.

The shift from export of crude drugs/botanicals to their extracts/derivatives should be planned smoothly. There should be joint ventures in this field between producing and consuming countries.

The state should establish medicinal/herbal plantations in suitable districts with a central processing facility at Cochin/Trichur. The internal market and export demand could be integrated through effective planning and co-ordination. The

activities of the forest department in the field of collection and production of medicinal plants should also be streamlined. The corporate sector should be allowed to enter into joint ventures with other countries which will ensure the marketing of the product. These strategies would help Kerala to significantly develop the export of medicinal plants/derivatives.

## HONEY

The production of honey in Kerala reached appreciable levels in the recent past. In fact, an increase in production which outstripped the internal demand for honey created a glut in the market. The stagnant situation which continued for sometime, resulted in a fall in the price of honey.

The domestic use of honey is at present confined to medicinal preparations, as a vehicle for certain drugs and as an ingredient of special diets for patients and invalids. Honey is yet to be recognised in the country as a nutritive food item. Its importance as a potential export product is almost ignored.

### Prospects for developing export of honey

The production of honey in Kerala has been showing a steady growth as a result of the encouragement given by Khadi and Village Industries Commission and the State Department of Agriculture. Several households in the State have taken to beekeeping. But, unlike in Tamil Nadu where farmers'

Co-operative Societies undertake the collection, grading, packing and marketing operations, Kerala is yet to make adequate progress in organising this rural agro-industry on sound basis.

The International Trade Centre (UNCTAD/GATT) Geneva in their market survey on honey had projected the vast potential for developing export of honey from developing countries. The study also highlighted the growing demand for good quality honey in the developed countries for direct consumption and industrial uses.[23]

It is important that necessary infrastructural facilities for processing and packing of honey are made available in areas where honey is produced on a large scale. The honey production in the State could be stepped up many fold if the domestic consumption is augmented and an export market for the product is developed simultaneously.

Australia and New Zealand are among the important honey producing and exporting countries in the world and the USA is one of the major importers of honey from these countries. The export market would demand honey of acceptable quality possessing characteristics required for

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23 Joint FAO/WHO FOOD STANDARDS Programme. Draft Standards for Honey, p.14. (1982)

specific end-use purposes. The different types of pure honey exported include Table Honey, Comb Honey, Chunk Honey, Candied (or Crystallised or Granulated) Honey, Creamed Honey and Manufacturing (or Baking or Industrial) Honey. Honey is used as an ingredient in the preparation of foods and in cosmetics besides its use for direct consumption. It is, therefore, required that honey must have appropriate organoleptic, physico-chemical and microscopic characteristics to meet different needs. This clearly indicates the importance of meeting quality requirements of honey for export.

Before we enter the export market our production and processing capabilities will have to be organised on a sound basis so that the product exported would meet the exacting quality requirements of the importing countries.

Key Role for State Government

It is necessary that the farmers in Kerala who engage themselves in beekeeping for supplementary income are organised under a Statewide Co-operative Society for Apiculture. The Kerala State Export Trade Development Corporation should undertake the task of identifying the export markets for honey and also organise exports through the Co-operative Society. It is essential that liberal incentives and support from the government are extended to the export efforts. Processing and packing facilities

at the various production centres should be set up by governmental organisations as the Society would not be in a position to do so.

The indigenous consumption of honey should also be simultaneously accelerated through effective publicity measures with a view to making an optimal mix of domestic and export market for honey.

## COCOA

Cocoa (Theobroma Cacao) is a crop which has been recently introduced in India. At present Kerala State has the largest area under Cocoa followed by Karnataka and Tamil Nadu.

The major Cocoa growing countries in the world are, in the order of importance, Ghana, Nigeria, Sierra Leon, Cameroon, Brazil, Ecuador, West Indies and Malayasia.

Cocoa has very good export potential apart from a steadily growing internal market. A sizeable portion of the current production of cocoa in India is now being exported as various cocoa products.

Though the area under cocoa cultivation registered a sudden increase in Kerala, resulting in increased production there was no corresponding increase in demand. The price of cocoa which was ruling high until then experienced a

sharp fall. The prices, however, subsequently stabilised at a remunerative level due to an improvement in demand.

Major importers of cocoa beans and cocoa products are the USA, Federal Republic of Germany, USSR, the Netherlands and the United Kingdom. These countries import cocoa as cocoa beans, cocoa butter, cocoa powder, cocoa liquor and cocoa cake. The final users increasingly prefer to buy cocoa butter and cocoa powder instead of direct conversion of cocoa beans.[24]

Export Marketing System in Cocoa Growing Countries

The marketing systems adopted by most of the cocoa growing countries belong to either of the following three categories.[25]

1. Marketing Board System
2. Price Stabilisation Fund System
3. Private Trading Firms/Producer Co-operatives System

The Situation in Kerala

In Kerala cocoa is grown mainly as a mixed pric in coconut/arecanut gardens. The fluctuation in the price of cocoa in the recent past had an adverse impact

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24 Cocoa Products, Facts and Figures on the World's Major Markets, pp. 10-14.

25 Ibid., p. 21.

on the cultivation of this crop in the state. However, the prices have more or less stabilised now as more and more chocolate/food manufacturing units started entering the market.

It is important to ensure a remunerative price to the cocoa farmer while keeping the price workable for the food manufacturer. In view of the competition from other cocoa producing countries in the world, we will not be in a position to unduly depend on export market for cocoa.[26] It is, therefore, imperative that we have to expand the internal consumption of cocoa while taking steps to export the surplus production.

As revealed by the market study conducted by the International Trade Centre, Geneva, a comprehensive marketing system has to be established in every cocoa producing country to survive the changing global market situations. Emphasis should be laid to export cocoa products instead of cocoa beans.[27] The Kerala State Industries Development Corporation could encourage private entrepreneurs to enter into tie-ups with food manufacturing companies from the major cocoa importing countries. A large cocoa processing plant in the co-operative sector is now being set up in

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26 Ibid., p. 22.

27 Ibid., p. 23.

Karnataka state. The project is jointly sponsored by Kerala and Karnataka. Besides, cocoa processing plants in the private sector are being planned in Kerala.

A cocoa processing and exporting unit could be set up in the Export Processing Zone at Cochin.

## MUSHROOMS

### Introduction

Export of mushrooms from India showed a steady upward trend during the period from 1976-'77 to 1981-'82. A quantity of 41 metric tonnes of mushrooms valued at Rs.1.07 crores was exported from the country in 1976-'77. The value of exports rose to Rs.2.78 crores within a span of 5 years. However, India's share in the global export of mushrooms is negligibly low as commercial mushroom growing is still in its infancy in the country. In the last decade Taiwan achieved considerable progress in the production and export of mushrooms and reached the third position among the world's mushroom growing countries; the USA and France occupy the first and second positions. Despite the presence of suitable agro-climatic conditions for large scale mushroom cultivation, India is yet to make a breakthrough in this field. One of the reasons for the neglect of this promising area is that several misconceptions and prejudices exist in our country about the food value of mushrooms.

Paddy straw is an ideal stratum for growing some of the commercial varieties of mushrooms. With the abundant availability of this material in Kerala, we should be in a position to bring in a 'mushroom revolution' in the country.

IMPORTANT COMMERCIAL VARIETIES

Research in mushroom cultivation has yielded useful information on the varieties suitable for growing on a commercial scale in the country. Four varieties (species) of edible mushrooms of commercial importance have been identified.[28] They are:

1. White forest (Agaricus bisporus)
2. Black forest mushrooms (Lentinus edodes)
3. Straw mushrooms (Volvariella volvacia), and
4. Oyster mushrooms (Plurotus zajor)

Mushrooms are rich in proteins and low in fats and carbohydrates. Oyster mushrooms contain as high as 35 per cent protein, besides containing B1, B2, Thiamine and calcium. The nutritive value and the dietary significance of mushrooms will be of special appeal to consumers in the developed countries.

Prospects for Mushroom Cultivation in Kerala:

Mushroom farming has immense scope for development in Kerala. In fact some entrepreneurs started mushroom cultivation

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28 "Mushroom Cultivation - A Profitable hobby", Mathrubhoomi, February 26, 1984.

in the state more than a decade ago. Their venture was initially successful. However, they had to abandon the project later on account of constraints beyond their control. They also could not exploit the export market and the internal market was at the beginning stage of growth. Besides, they were handicapped by inadequate knowledge on the selection of the right species of mushrooms and the techniques of growing them on commercial scale and on the control of diseases which affected the crop. All these problems have now been overcome and it has been established that V. Volvacia (Straw mushrooms) and P. zajor (Oyster mushrooms) could be successfully grown in Kerala on commercial scale. Already a large farm has been established very near Kasargod district. The plentiful availability of paddy straw in Palghat and Alleppey districts make these two places ideally suited for large-scale mushroom growing. Other districts could also grow mushrooms utilising paddy straw, saw dust, banana leaves etc. Each household could undertake the cultivation as the space requirements for mushroom growing are limited and the activities could be co-ordinated by a co-operative society who will market the product internally and also take up exports. Processing also could be done at a central processing facility. Exploration of export markets and transfer of technical know-how of cultivation and processing of mushrooms has to be looked after by the central agency. The Taiwanese pattern of 'mushroom production villages' could be adopted in Kerala. The scheme could be implemented through the Small Farmers Development Agency or under the Integrated Rural Development Programme.

## MISCELLANEOUS ITEMS

The state has good potential to develop exports of processed fruits and other food products. Already there are a few private sector units in the state manufacturing and exporting various fruit products and other processed food items. The State Agro Industries Corporations has set up a unit at Punalur for the manufacture of fruit products. Availability of adequate quantity of raw material at viable prices is the major problem in the expansion of exports of processed foods from the state. Production of fruits and other crops to cater to the requirements of the industry has to be increased to meet the growing demand.

Production of miscellaneous items like poultry products, oil seeds extractions, cattle and poultry feed etc. could be developed with a view to generate sufficient surplus for exports. The State Export Trade Development Corporation should undertake the work of organising production of items with potential for export. Most of items identified for export have good demand in the internal market with prices higher than in the export market. Hence exports could be mobilised only if government support/subsidies/incentives are given as a measure to encourage exports. These measures may be continued till the exports become self-reliant.

# C H A P T E R - IX

## SUMMARY AND RECOMMENDATIONS

### SUMMARY

Kerala had trade contacts with several countries of the world right from ancient times. The spices and other items of trade from the state had a profound influence on the course of history and civilisation.

The unique agro-climatic and eco-geographical conditions of the state had considerably helped the domestication of several exotic crops. The state has also been the natural habitat of some of the crops of commercial significance.

The state's leading position in cashew industry is under severe threat on account of the large-scale migration of the industry to adjoining Tamil Nadu because of reasons of lower cost of production. The state government policies have further complicated the situation by increasing cost of production and also decreasing the availability of raw material. The apathy of the industrialists to adopt technological improvements has also proved to be a constraint in the development of the industry, besides the absence of marketing strategies.

Though Kerala is the premier state in the field of export of fish and fishery products it is fast losing its dominant position. This is mainly due to the dwindling annual catches, absence of programmes to increase production, lack of diversification of products and markets and also the dispersion of sea food export industry to other states.

Though Kerala still retains its unique position as the major producer and exporter of some of the spices from the country, its share in the world market has been considerably reduced. This is attributable to the low productivity, low levels of production, uncompetitive prices of spices produced here and the emergence of new sources of supply in the world market. Absence of strategies to diversify markets and products besides other factors like restrictive government policies have created this situation.

The coir industry which is one of the oldest export-oriented industries in the state has been affected by several problems. The fall in demand for coir products in the world market, competition from other products and other producing countries, absence of technological improvements, increasing cost of production, shortage of raw material caused by restrictive policies of the government and absence of marketing strategies have created the present situation in the industry in Kerala.

The tremendous potential for developing non-traditional agricultural products exports has not been adequately recognised. There has been no well defined policy approach and co-ordination of activities to increase the exports of these items from the state. Efforts to identify specific potential areas for development of exports have not been made. Meat and meat products, fresh fruits, vegetables and flowers, processed fruits and other foods, medicinal plants and botanicals, honey, mushrooms and other miscellaneous items, have been identified as items of potential for development of export from the state.

General Conclusions:

Exports from a country will take place only when the phenomenon of comparitive advantages exists between the exporting and importing countries.* Agricultural production and

* Proceedings of the Seminar on Export Research (1970) organised by the National Council of Applied Economic Research and the Indian Institute of Foreign Trade, p.75.
Mr. Janos Horwath has combined and enlarged the concept of comparitive advantages outlined by Professor Frank D.Graham and Dr. Raul Prebish which related to physical productivity per man and wage ratio between countries. Mr. Horwath has explained the new approach as follows:

"A commodity will be exported only if productivity ratio is equal or greater than the wage ratio. Given this structure in order for it to export a commodity for which the productivity ratio is less than the wage ratio, wages must fall. The unpleasant problem of wage cuts can be of course be avoided through higher productivity of labour or if the corresponding cost of reduction can come from other factor of production than labour. The latter approach escapes the limitations of the labour theory of value and thereby facilitates calculations on the basis of all factors of production. For that purpose however, the approach of Graham and Prebish should be broadened to calculate productivity ratio also in terms of land, capital and entrepreneurship. The new productivity ratio which I label "Composite technological densities ratio will be weighted in accordance with each other factors shown in the production function.

(contd.....)

exports are subject to the influence of number of variables like levels of production, yield per unit, area cultivated, vagaries of nature, incidence of pests and diseases, competitiveness of prices, emergence of new sources of supplies and the availability of substitute products. The complex interaction of these variables often leads to a situation of fluctuating demand and supply affecting the prospects of exports.

Cashew, spices and coir which are the traditional items of agricultural exports from Kerala have suffered as a cumulative effect of increasing cost of raw materials, insufficient production to meet internal and export market demands, competition from other producing countries, low productivity, high cost of labour, availability of cheaper substitutes, restrictive government policies, low levels of technology and absence of appropriate marketing strategies. The interaction of the variables which generally influence the export of agricultural commodities is illustrated in diagram 1 (logical model on export of agricultural commodities).

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contd.....

Thus

$$Xi = f(L^{a1}, K^{a2}, NA^{a3}, E^{a4})$$

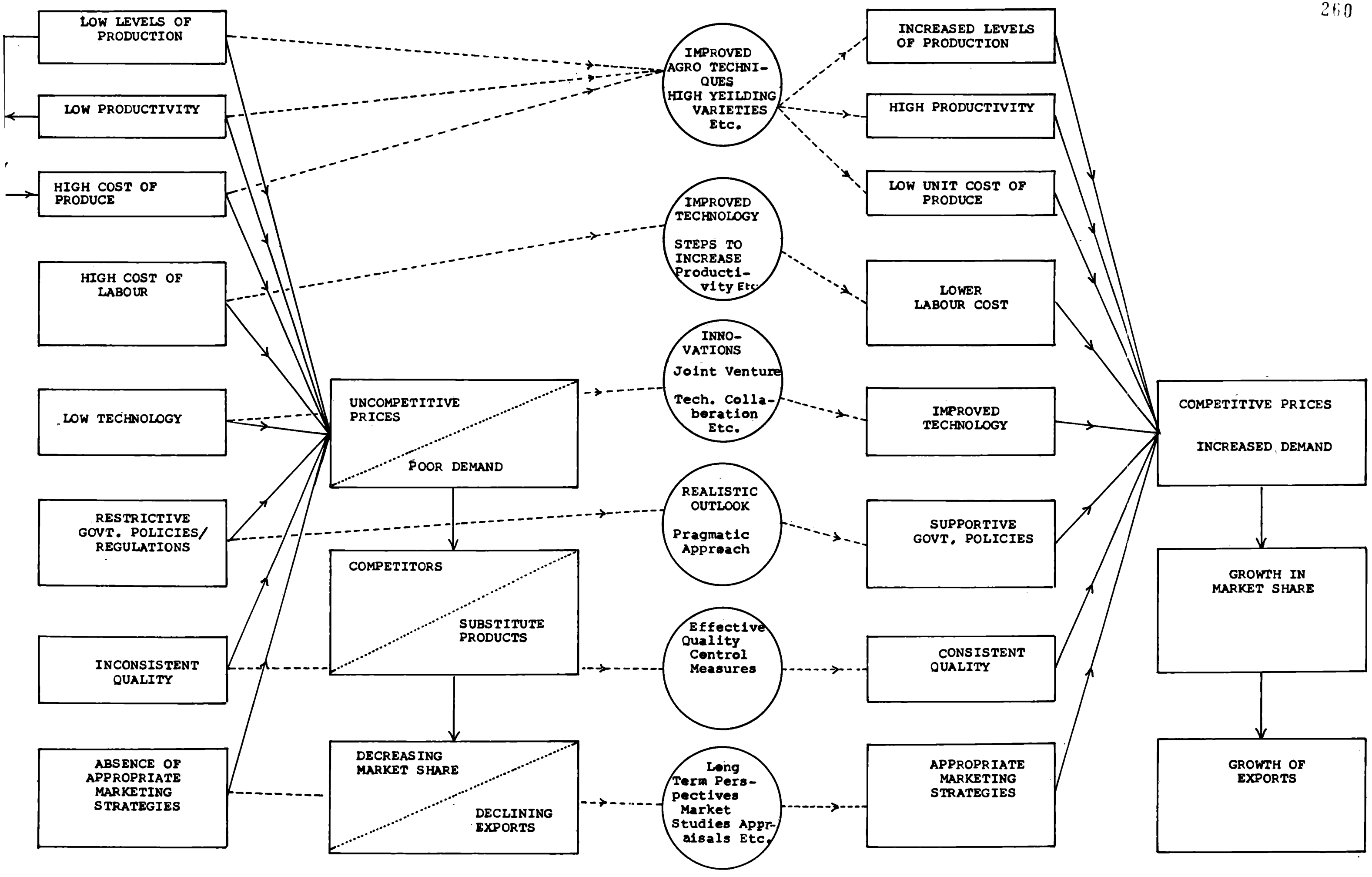
Where X = Composite technological densities ratio

i = Commodities

L, K, N, A, E = labour, capital, natural resources and entrepreneurship

a1 + a2 + a3 + a4 = equal units, the proportional share of each factor in the production function".

Dig. 9·1. LOGICAL FLOW MODEL FOR DEVELOPMENT OF EXPORTS OF AGRICULTURAL COMMODITIES



The low levels of production and productivity could be improved through agro-techniques, cultivation of high yielding varieties, improved cultural practices etc. Higher productivity will thus bring down the unit cost of the produce enabling the country to offer products at competitive prices. The high cost of labour input in production could be reduced by improved technology and other steps to improve productivity. Restrictive government policies could be transformed to supportive policies by adopting pragmatic approach. The absence of appropriate marketing strategies could be overcome by suitable planning of marketing operations through promotional and publicity programmes, product innovation, product modification and other inputs. Inconsistent quality and poor image of the product which adversely affect the prospects of exports could be overcome through appropriate planning and organising of quality control operations and other strategies to improve the product image.

The logical model given at diagram 9.1 while analysing the factors limiting the prospects of exports has also presented the corrective steps and strategies to improve the exports of agricultural commodities from the state.

## RECOMMENDATIONS

### CASHEW

1. All activities relating to production, marketing, product development, research, export promotion etc. should be

brought under a single agency merging all the diverse existing agencies, to ensure efficient and effective co-ordination.

2. A comprehensive programme for developing exports on a multi-directional pattern has to be adopted on top priority basis.

3. An integrated programme to increase per capita consumption of cashew kernels in the U.S.A., Canada, Japan, United Kingdom, West European countries and other developed markets should be evolved and implemented.

4. Efforts should be made to expand progressively the internal market for cashew kernels to support and supplement the export market. Consumer packs of appropriate sizes for graded plain as well as salted cashew kernels have to be introduced in the domestic market through retail sales network covering all important urban centres in the country.

5. Exports in bulk packages should be progressively replaced by consumer packs. Tie-ups with leading importers/super-markets/chain stores in U.S.A., Japan, U.K., West Germany, Canada, Australia, U.A.E. etc. have to be made to market consumer packed cashew kernels (plain and salted and roasted) with brand names.

6. Taking advantage of the policy announced by the government of India 100 per cent export-oriented units should be set up in the Free Trade Zone /Export Processing Zones at Cochin for producing consumer packed cashew kernels in conformity with the specific requirements of individual importing countries.

7. Price competitiveness should be assiduously maintained in the international market to survive competition from other countries exporting cashew kernels and also from other tree nuts.

8. A strategy to increase the farmers' income by improving yield per unit area should be adopted instead of any approach to increase the prices of raw nuts beyond the parity level of the processing industry.

9. The proposed programme for joint venture with Tanzania for cashew production should be dropped.

10. The new method of processing cashew nuts through 'steam cooking' should be popularised in Kerala to derive the benefits of better visual characteristics of the kernels and the apparent advantage of setting up small sized processing units.

11. Collaborative venture with Japanese importers has to be arranged to market cashew kernels obtained by the 'steam cooking method'. The arrangements could be fashioned on the pattern of the Japanese-U.S. joint venture for promotion of almonds.

12. In the absence of a regional wage policy for cashew industry the Government of Kerala should desist from any move to revive the monopoly procurement of raw cashewnuts.

13. Scientific methods of harvesting, grading and storage of raw cashewnuts have to be introduced to avoid loss and enhance output.

14. Facilities of crop insurance and organised crop protection measures have to be extended to cashew crop.

15. Fiscal incentives, subsidies and price support should be given to the cashew farmers as a short-term strategy till they become self-reliant.

16. Internal utilisation of cashewnut shell liquid should be stepped up with the active involvement of public sector undertakings and large industrial units in the private sector. Price stability of cashewnut shell liquid has to be ensured to increase internal consumption.

17. Any attempt to channelise export of cashew kernels through State Trading Corporation or National Agricultural Co-operative Marketing Federation (NAFED) should be abandoned.

18. The government should extend adequate support to the export trade in times of market crisis through a predetermined mechanism.

FISH AND FISHERY PRODUCTS

1. A strategy for diversification of markets should be adopted to avoid any demand crisis. Exports to new markets should be encouraged by fiscal incentives.

2. The present narrow product range should be enlarged by adding new products and modifying the existing products.

3. The current form of exporting products in institutional packages should be progressively changed to consumer packages to derive the benefits of brand image and value addition.

4. 100 per cent export-oriented units with emphasis on new products/modified products should be started at the Cochin Export Processing Zone.

5. Quality control should be strictly enforced on products exported and all units processing for exports should be upgraded to meet international standards of hygiene and sanitation.

6. Joint ventures with importers/chain stores in U.S.A. and Japan have to be encouraged with the active support of the government as part of the strategy to expand markets. Potential markets in West Europe, Canada, Australia and Middle East have to be penetrated by consistent marketing efforts supported by the State Export Trade Development Corporations.

7. Government of Kerala should recognise the fact that unless competitiveness is maintained in the export there is hardly any future for us in world trade. All obstacles and restrictive measures should therefore be abolished. The purchase tax now being levied on shrimps should be withdrawn.

8. Credit facilities at concessional rates of interest and liberalised terms should be extended to the seafood export trade.

9. A time-bound comprehensive programme for the development of culture fisheries in the state has to be implemented. Land for aqua culture should be exempted from land ceiling.

10. Private entrepreneurs should be encouraged to enter into multinational ventures for deep sea fishing.

11. Government should re-define its role in the state's fisheries development on pragmatic lines. It should withdraw from the field of processing and export of fishery products and confine to infrastructural developments for the fishing industry in the state.

12. The conflict between traditional/artisanal fishermen and the mechanised boat sector should be resolved amicably.

13. Inputs for fishing and fish culture should be provided at concessional rates. Diesel for fishing boats should be made available at concessional rates.

14. Measures of conservation of fishery resources have to be adopted on a top priority basis. Steps should be taken to regulate the mesh-size of fishing nets, to re-stock backwaters, brackish water lakes and inshore areas by releasing juveniles grown in hatcheries and to impose fishing holiday during fish breeding season.

15. Strict measures should be enforced to prevent aquatic pollution from industrial effluents and other sources.

## SPICES

### General Conclusions

1. Most of the important spices exported from the country are from Kerala. However, the significant share in the world market enjoyed by the spices produced here has shrunk to low levels. The main reasons for this phenomenon are:

(a) emergence of new competing countries with sizable production compared to India,

(b) increased domestic consumption for most of the spices resulting in reduced exportable surpluses,

(c) uncompetitive prices of our spices in the world market,

(d) low productivity of most of the spices creating high cost of production and higher prices,

(e) instability of prices resulting in wide fluctuations.

In view of the situation created by the above factors, a comprehensive time-bound programme incorporating strategies to increase production and productivity, to re-capture the lost market share, to develop new markets, to maintain consis - tency of quality, to promote new products and to attain an overall growth rate commensurate to the increasing world demand for spices, has to be adopted on a priority basis.

A new policy approach with emphasis on exporting spice products, spice oils, oleoresins and other value-added items has to be adopted immediately.

PEPPER

1. The multiple functions of development of production, research, marketing, product development, export promotion etc. which are now being looked after by different organisations has to be brought under a single unified agency for effective co-ordination.

2. A strategy for market diversification has to be adopted.

3. Production of pepper should be increased to generate sufficient exportable surplus equivalent to meet 25 per cent of the current world demand.

4. Production has to be increased by improving the yield per unit area cultivated with a view to raising the farmers income while keeping the prices of the produce competitive in the world markets.

5. Pepper cultivars should be evolved with desirable characteristics like higher oleoresin content and aromatic properties to suit the various pepper products. Emphasis has to be given on growing selected varieties for particular products and market requirements.

6. A comprehensive promotional programme to increase the per capita consumption of pepper in importing countries together with new markets should be organised.

7. Price understanding with the members of the International Pepper Community should be arrived at tbo stabilise prices of pepper in the world market.

8. The Government of Kerala should exempt pepper from the levy of purchase tax to enable price competitiveness for the item.

9. The specific advantageous characteristics of Malabar black pepper should be consolidated and extended by appropriate agro-techniques.

10. Production of white pepper should be promoted in view of the increasing world demand for the item.

11. A package of incentives including price support should be extended to the pepper farmers on liberal terms.

12. Hundred per cent export-oriented units should be set up in the Export Processing Zone at Cochin for the exclusive production and export of oleoresins, canned green pepper, dehydrated pepper, white pepper and other products.

13. Quality control on pepper exports should be strictly enforced and the lapses in the present scheme removed.

CARDAMOM

1. The present strategy to increase production and productivity should be augmented with time-bound programmes.

2. A comprehensive programme to develop exports of cardamom and cardamom products to new markets while increasing the market share in the traditional markets should be adopted.

3. The crop has to be protected against vagaries of nature and incidence of pests and diseases through improved agro-techniques and prophylactic measures.

4. The farmers should be continually supported through incentives and stable prices until they become self-reliant.

5. High yielding, disease resistant varieties of small cardamom with improved quality characteristics should be evolved and propagated.

6. The cardamom growing forest areas should be effectively protected against all kinds of clandestine tree felling, encroachment etc.

7. The prices of cardamom in the international market should be maintained competitive.

GINGER

1. Production and productivity of exportable varieties of ginger should be increased.

2. The directional spectrum of exports should be improved.

3. Product diversification should be made with a view to increasingly switching over to value added items for export.

4. Varieties with desirable characteristics and specific export market demand due to high oleoresin content, lesser moisture and fibre etc. should be grown on selective basis in the state.

5. Farmers should be given incentives and crop insurance cover along with arrangements for marketing the produce.

6. A production programme should be implemented with the objective of avoiding cyclical fluctuations. The farmers should be assured of a minimum support price.

7. A comprehensive programme of publicity to promote the market for ginger products should be undertaken in overseas markets.

TURMERIC

1. Production and productivity of exportable varieties of turmeric should be increased.

2. Varieties with desirable characteristics like high curcumin content should be selectively grown.

3. The farmers should be given liberal package of incentives, crop insurance cover etc.

4. The farmers should also be assured of a minimum support price so that the cyclical phenomenon in the production of turmeric could be avoided.

5. The use of turmeric should be popularised in target markets like U.S.A., West Europe, Middle East and Japan for culinary cosmetic and medicinal purposes.

6. Research on new uses of turmeric in medicines/toilet preparations should be undertaken.

7. A strategy to export more turmeric products on a progressive basis, in place of raw turmeric should be adopted.

**COIR**

1. A thorough review of the existing policies of the state government relating to coir should be made immediately with the objective of removing their restrictive effect. The policies have to be recast to ensure that coir exports from the state become competitive in the world markets.

2. The Husk Control Order restricting the movement of husks from area to area within the state should be abolished.

3. Conscious efforts have to be made to 'de-politicalise' the industry.

4. The present system of export registration and minimum export prices enforced by the Coir Board has to be critically reviewed. A liberalised approach to allow 'approved units' to export has to be adopted. The pattern followed for marine products, engineering items etc. by approving units to export would be a better alternative (As the approval is given by the Export Inspection Council of India, the Coir Board could discontinue the present system of registration of purchase orders).

5. Mechanisation has to be introduced in the industry on a phased manner.

6. The internal market for coir and coir products has to be progressively expanded considering its crucial importance. A compound growth rate of 10 per cent in domestic consumption has to be attained.

7. The programme to develop new products and find out new uses for coir should be accelerated. The present efforts to improve processing technology and product development should receive special impetus from the State and Central governments.

8. While the policy of co-operativisation in the production and marketing of coir is being vigorously pursued by the government, an efficient mechanism to periodically assess the performance of the co-operative societies should be set up. Private entrepreneurs should also be given all encouragement and support in the field of production and marketing.

9. A comprehensive publicity programme, as part of the marketing strategy has to be organised to re-capture the traditional markets and to develop new markets.

10. Joint ventures for marketing coir products in West European countries with the importers/manufacturers of coir products have to be organised. The second hand machinery from their manufacturing units could be imported into the country to set up mechanised processing units here.

11. The state government in association with the Coir Board should provide all infrastructuralfacilities to the coir industry with a view to stabilise it on sound production and marketing lines.

12. The increasing competition from other producing countries in the world should be recognised and constant efforts made to improve the quality image of the products from Kerala. The state has also to face competition from other producing states in the country and quality of 'white fibre' products has to be improved by better methods of manufacture.

NON-TRADITIONAL AGRICULTURAL PRODUCTS

1. The Kerala State Export Trade Development Corporation should formulate a strategy for developing non-traditional agricultural exports from the state.

2. The government should extend liberal incentives and infrastructural facilities for expanding exports of fresh fruits and vegetables to Middle East countries.

3. Private capital should be induced to make investment in the non-traditional agricultural products sector.

4. All the expenses for market surveys and overseas publicity should be borne/reimbursed by the government. The units processing/manufacturing non-traditional agricultural products should be given 'tax holidays' and other fiscal incentives till they get stabilised in the world market.

5. 100 per cent export farms should be organised in the private sector for production of fruits, vegetables, flowers etc., exempting them from land ceiling regulations.

6. A comprehensive programme for research and product development should be implemented under nationally recognised institutes.

7. Common facilities for processing of produce wherever capital-intensive equipments/machinery are required, should be provided by the state government.

8. Joint ventures for production/marketing with importers/ prospective importers have to be liberally encouraged with a view to successfully meeting competition and also to get easy market entry.

9. As far as possible non-traditional items should be encouraged to be exported as value-added products.

10. The state government should adopt a positive and pragmatic approach by framing suitable policies to help the growth of non-traditional farm exports.

11. All efforts should be made to capture the Middle East markets considering the immense potential.

12. The freight structure should be rationalised to make our exports competitive.

13. Liberal package of incentives should be given to the farmers till they attain self-reliance in the field.

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