

EXPORT POTENTIAL OF INDIAN SPICES - AN UPDATED OVER VIEW

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India has been a traditional producer, consumer and exporter of spices. In fact, the word, India is associated with spices. An estimated quantity of more than 9.9 million tons of spices and herbs valued at US\$ 20 billion are being traded globally every year. With variety of spices in its inventory, almost one third of the world demand is being met by Indian exports. In terms of value, spice exports from India has grown from \$133 million in 1990-91 to US\$ 430.2 million in 1999-2000, registering an average growth rate of more than 25% per annum. Spice exports contributed about 19.37% of the total export earnings of all agricultural commodities valued at Rs.7270.76 crores (1997-98) and the unit value earned by spices (Rs.61546/ton) is 3.6 times more than that for other horticultural exports. In recent years under the WTO regime, the country has to face many challenges both in production and export marketing of spices. Lost its monopoly supply to new entrants in the world trade for spices. There is a falling exports and increased imports of spices. During 2000-2001, the export has shown a decline of 3% in terms of quantity and 20% in rupee value. In dollar terms the decline is 25%. The trend continued during the post-QRs free trade period i.e. during 2001-02. Exports declined by 12%, both in terms of quantity and value. Our failures have arisen mainly from poor marketing strategy, non-competitive pricing and absence of quick flexible response to the changes in the international market i.e. absence of 'market oriented production' strategy to name some weaknesses of the Indian spice industry. The article is an attempt to identify the export potentials for Indian spices.

Production

Spices being the low volume and high value commercial crop, play an important role in the agricultural economy of the country. Almost all States in the country produce one or other spices. The total value of spices produced was about Rs.30,735.64 crores during the crop year 1997-98. About 8% of total spices production in the country is exported. Share of export in total production varied from mere 1.7% in garlic to 73.4% in black pepper during 1999-2000 (Table 1).

Export

Spice exports was consistently moving up during the last one-decade with an increase of 210% in quantity and 622% in value. The country commands 46% in global trade in terms of quantity and 28% in terms of value. Export during 1999-2000 made an all time record in terms of value. Compared to previous year, export has registered an increase of six per cent in rupee value and the increase was three per cent in terms of dollar value. However in the subsequent year, the export has shown a decrease of around 10 per cent in volume. In the total spices export earnings, pepper contributed about 46 per cent followed by spice oils and oleoresins (15%) and chilli (13%). The value added products in the export basket constituted 37% of the total (Table 2).

Table 1. Production of Spices in India (1999-00)

Spices	Area ^P (Ha)	Production ^P ('000MT)	Export ^F (MT)	Export as % of production
Pepper	192.27	58.29	42806	73.4
Cardamom (small)	72.43	9.30	646	6.9
Cardamom (large)	26.36	2.35	1211	51.5
Chilli (Red pepper)	915.200	1018.00	64776	6.4
Ginger	77.61	263.17	8773	3.3
Turmeric	161.30	653.60	35556	5.4
Coriander	546.50	290.00	13973	4.8
Cumin	264.01	108.74	6145	5.7
Celery	2.94	4.50	3497	77.7
Fennel	15.93	17.98	2953	16.4
Fenugreek	82.67	80.48	10901	13.5
Ajwan	13.58	2.87	-	
Clove	3.25	2.94	-	
Garlic	114400	495.30	8542	1.7
Nutmeg	10.21	2.25	-	
Cinnamon	0.73	0.37	-	
Other tree spices	14.19	5.56	-	
Other seed spices	925.64	504.57	2349	0.5
Others	13.92	14.31		0.0
Total	2500.03	3023.20	236142	7.8

Source: Directorate of Arecanut and Spices Development, Calicut.
Spices Board data, Spices Board, Cochin.
P= Provisional, F= Final,

During 2000-01 export of pepper, small cardamom and garlic registered a positive change both in terms of quantity and value of exports as compared to previous year. In all other commodities there was a negative growth both in terms of quantity and value. In terms of quantity, overall, there was a decrease of 9.75% over 1999-2000. The decrease

in quantity was more pronounced in large cardamom (-29.78%), ginger (-11.14%), turmeric (-11.70%), and curry powder (-16%). Unit value realised was more pronounced in black pepper (Rs. 205.46/kg), small cardamom (Rs.501/kg), and oils and oleoresins (Rs. 1010.49/kg). Overall export realisation was only 96% of the target fixed for 1999-2000 in quantity and 106 % in rupee and 105% in dollar terms of value. Export target of spices for the year 1999-2000 was 2.178 lakh tonnes valued Rs. 1780 crores (US \$ 408.4 million). Targeted growth rate was 6% in rupees terms and 3.5% in dollar terms for the period.

Table 2. Export of spices from India during 2000-2001

Crop	(Quantity in MT, Value in Rs. Lakhs)							
	1999-2000			2000-2001			% change in	
	Qty	Value	% in total value	Qty	Value	% in Total Value	Qty.	Value
Pepper	42806	88488.1	36.30	19250	32632.8	46.48	20.75	35.55
Cardamom (small)	648	3201.8	1.43	1100	5654.7	1.48	15.79	9.49
Cardamom (large)	1211	1696.9	0.68	1645	2768.8	0.83	-29.78	30.21
Chillies	64776	25065.89	12.32	61000	19523.5	12.57	-4.17	8.00
Ginger	8773	3060.15	2.31	6580	2295.4	1.56	-11.14	-28.36
Turmeric	35556	12168.7	7.08	34500	9106.0	5.62	-11.70	-16.02
Coriander	13973	3496.8	2.61	11700	2742.5	1.39	-40.78	-43.68
Cumin	6145	3428.2	3.42	13800	11743.5	1.58	-60.37	-51.01
Celery	3497	1059.6	0.55	5250	1700.5	0.37	-36.11	-29.69
Fennel	2953	1441.5	0.87	4000	1778.0	0.62	-35.59	-25.40
Fenugreek	10901	2095.4	1.09	9050	1787.5	0.95	-13.21	-7.50
Other seeds (1)	2349	1026.5	0.43	2425	896.3	0.26	-33.78	-34.92
Garlic	8542	1326.9	0.42	11000	1040.3	0.50	53.64	26.54
Other spices (2)	22012	8850.4	4.36	35000	14490.0	3.20	-9.58	-22.35
Curry powder	5814	3460.6	2.05	6200	3997.0	1.60	-9.79	-17.29
Mint oil	2820	10310.7	6.97	3875	12645.0	5.64	-31.66	-14.26
Spice Oleoresins & other oils	3368	32330.6	17.11	3625	36405.0	15.34	2.73	-5.09
Total	236142	202508.6		230000	161206.7		-9.75	5.86

Source: Draft Annual Report (1999-2000), Spices Board, Cochin-682 025.

Export Performance

Table 3 provides estimates of compound growth rate achieved in export of various spices during the past two decades. During eighties, except black pepper all other commodities have registered a negative growth rate in volume exported. But, oils and oleoresin the value added spice products export achieved the maximum growth rate of 42.93% in volume and 25.91% in value terms. Overall, there was a negative growth rate of 3.6 was recorded for total spices during the period between 1978-79 to 1987-88.

Table 3.

Compound Growth rate in spices export during 1978-79 to 1997-98

Spices	1978-79 to 1987-88			1988-89 to 1997-98			1978-79 to 1997-98		
	Qty	Value	U.Value	Qty	Value	U.Value	Qty	Value	U.Value
Total spices	-3.6	10.81	14.95	9.71	21.81	11.05	5.77	13.27	7.56
Black Pepper	9.64	28.69	17.38	2.33	15.87	13.22	10.27	3.22	13.82
Cardamom (small)	-14.13	-16.17	-2.31	-4.19	4.19	8.79	-12.73	-8.27	4.68
Cardamom (large)	-3.67	9.3	13.44	13.63	21.75	7.15	14.11	23.22	7.98
Chillies	-14.67	-7.9	7.86	18.77	28.33	8.36	10.09	20.89	9.79
Ginger	-11.39	-34	12.47	18.35	23.4	4.26	6.73	11.43	4.4
Turmeric	-4.2	2.33	6.82	6.37	18.39	11.3	4.45	12.49	7.7
Oil & Oleoresins	42.93	25.91	10.33	16.66	30.15	11.57	25.49	27.39	8.63
Seed spices	-11.79	-5.87	9.29	13.62	28.07	9.36	5.31	13.27	7.57

During the period from 1988-89 to 1997-98, except in cardamom (small) exports of all other commodities achieved a positive growth rate both in volume and value terms. Chilli and ginger has performed well. Unit price rise was more for pepper than for all other commodities exported. During this decade almost all the crops have recorded a positive growth rate in terms of value because of the continued rising trend in prices.

Over the twenty years period (1978-79 to 1997-98), on an average around 5.77% and 13.27% growth rate was estimated for spices export both in volume and in value terms. There was a better performance by 'hot spices' like pepper, chilli and ginger apart from oils and oleoresin export.

Over the years, India's share of world spices market has not appreciated much as it should be and its monopoly as a supplier of spices is threatened by countries like China, Brazil, Vietnam, Pakistan, Egypt, Turkey and other African and Caribbean countries. India also faces shortage of exportable surplus because our domestic demand for spices is admittedly high resulting in supply fluctuations. Sharp fluctuations in the quantum and value of exports and in the unit value realization have characterized the spices trade in recent years. The problem is further made complex due to low productivity of the spice crops resulting in Indian spices priced high, rendering them uncompetitive in the international markets.

Under the influence of WTO regime there is a fall in exports of many spices from India. Spices export during the post-QRs free trade period i.e. during April-March, 2001-02 decline in export was 12%, both in terms of quantity and rupee value. It is noteworthy that during the last three years, import of spices has increased considerably whereas, export from India has declined quantitywise during this period even though

there was a growth in earnings. During 1997-98 the quantity exported was 240863 MT, and the figure came down to 230000 MT in 2000-01 (Table 4).

Table 4 Export and import of spices from India from 1994-95 to 2000-01

Year	Import (MT)	Value (Lakh Rs)	Export (MT)	Value (Lakh RS.)
1994-95			155008	62010.53
1995-96			203398	80443.01
1996-97	28997.27	9710.8	225295	123071.17
1997-98	35223.51	13182.8	242071	146681.60
1998-99	67436.95	29358.2	240863	179609.78
1999-00 (P)	64963.92	29409.3	236142	202508.63
2000-01 (E)	40951.04	23098.1	230000	161206.65

Direction of Indian spice exports

India exports its spices to more than 120 countries in the world. But, few countries dominate the importers list for Indian spices by virtue of the quantity imported. Region-wise export data during the nineties is given in table 7. It can be seen that American zone consisting of USA, Canada and Mexico continue to take more share followed by European Union countries. However, country has lost its stable market in the Eastern Europe after the political changes there. The Coppok's stability index worked for the data in the above table indicates that the direction of Indian export of spices will remain the same in the near future as well. So, while formulating the marketing mix, it is necessary to know who wants what? For this, there is a need to analyse the historical data on the direction of individual spice exports from India.

The International Market for Spices

The world market, which includes India for spices, is rapidly increasing. The estimated growth rate for spice demand is around 3.19%, which is just above the population growth rate. World trade in spices has shown a consistent upward trend over the past 20 years (Table 5). According to available sources of information (UNCTAD) world spice trade amounted to \$2338.54 million in 1998. However, the real value of world trade is much bigger. The amount may be more than \$100 billion at the retail level. Because, the retail price of spices is more than 6 times than that of farm price. Further, the value of commodity traded within the producing country is not taken into account.

Table 5. Average world import of spices

Period	Quantity (MT)	Value (\$ million)
1970-75	220 000	300.6
1978-80	311 500	737.5
1981-85	350 000	1000.0
1991-93	450 000	1600.0
1993-95	500 000	1750.0
1995-98	992 680	2135.7

Source: International Trade Centre, UNCTAD/WTO (ITC) estimates

An analysis of the share of major spices in world trade indicated that pepper and capsicum (including chillies) account for 57% of the total volume, followed by seed spices (16.67%) cinnamon and cassia (7.33%), Turmeric (6.67%) ginger (4.0%) etc. (Table 5). In USA, the largest importer of spices in the world demand for 'hot spices' like 'black pepper', red chillies, ginger etc. has gone up by about 73% during the past 20 years. India has a comparative advantage in these crops with maximum are under these crops.

Table 5. World imports and India's export, by type of spices (1998)

Spice	World Import		Indian export	
	Qty (tons)	% share	Qty (tons)	% share
Black Pepper	155000	34.45	48743.2	31.45
Capsicum	100000	22.22	30776.3	30.51
Spice seeds	75000	16.67	28884.4	38.51
Cinnamon and cassia	33000	7.33	-	-
Turmeric	30000	6.67	25436.0	84.79
Ginger (dry)	18000	4.00	4796.5	26.65
Nutmeg and mace	14000	3.11	-	-
Cardamom	14000	3.11	2184.2	15.6
Cloves	10000	2.22	-	-
Curry powder	6000	1.33	3411.0	66.85
Vanilla	2000	0.44	-	-
Pimento (allspice)	2000	0.44	-	-
Saffron	30-50	0.1	7.03	25.00
Total	450000	100.00	182334	40.52

Source: Spice Statistics, Spice Board, Cochin.

- Three spices (pepper, capsicum and spice seeds) constitute about 3/4th of all spices traded world over (Fig 1).
- Three countries (USA, Japan and Germany) take over half of all spices traded internationally (Fig 2).
- Two entreports (Singapore and Holland) trade about one-quarter of all spices traded.
- United States - takes about one-third of traded spices in the world
- Mexico - dominates the imports of cinnamon and cassia;
- Middle East - takes about 80% of cardamom traded in the world
- Indonesia - about 80% of the world's clove production goes into the Indonesian 'Kretek' cigarette industry.

New Developments and Emerging Opportunities

There are some positive developments world over promoting the growth of the spice industry, which needs immediate consideration:

- Increasing awareness about the naturality of spices and its substitution for synthetic colouring and flavouring agents.
- Emergence of 'nature food' 'yogic food' 'organic food' and emphasis on 'back to nature'.
- Increase in use of spice oils, oleoresins, pigments and flavourants etc.
- Increasing demand for spicy ethnic food items from countries like India, China, Mexico etc.
- The multinational food chain have spread all over the world, and are changing the taste of the world through their spicy menus.
- The long established health claims for spices and herbs in countries of origin are being accepted by consumers in the West – eg. products based on garlic, turmeric as well as cloves, cardamom etc.
- There is a 'hot trend' in spice consumption world over i.e. an increased consumption of hot spices like pepper, ginger, chillies etc.
- Demand for organic spices increasing in developed countries.
- The prevailing trend for convenient foods and that to highly flavored signaling the enormous potential for increasing use of spices.
- An increased demand for spice oils and oleoresin and spices in other forms, such as encapsulated spices, in recent years.
- In the European market there is a shift towards ready mixes like curry pastes, ketchups and sauces which reduced the intake of curry powder.

The present level of world trade in spices has already crossed the projected level of around 6.25 lakh tones valued US \$ 3.0 billion by the year 2001. Consumption of spices to a large extent influenced by size of the population and the rate at which it grows. It is also influenced by the disposable income. With a rapid change in the above factors both in the domestic and in the international market, the demand for spices may exceed the projected figures for future. India being the largest producer of spices in the world has the potential to meet at least 25% of the total value of world requirement of spices, and that is the goal set by our planners for the new millennium (Anon' 1994). How are we going to achieve this target?

Factors influencing Indian exports

A committee constituted to examine the strengths and weaknesses of the spices industry in India (1995) suggested the following points:

1. Develop a strategy with specific points for each market and place.
2. Develop new end products and increase range of use of Indian spices, spice products, along with exploring the possibilities of natural products.
3. Prepare a plan as there is need for updating consumerism on a continuing basis

But, unfortunately all our developmental plans were directed towards increasing production of spices, preferably at decreased per unit costs and the marketing strategy followed was 'production oriented marketing' approach. During the VIII plan, the targeted growth rate in spices production was 10 % compared to 4 % in VII plan. Investment on spices production under central sector scheme was only Rs. 5.74 crores during 1991-92 and it was Rs. 125 crores during 1992-97 (VIII plan). The Integrated Programme for the Development of Spices continued during IX Plan, at an approved cost of Rs.142.48 crores. The strategy adopted for development was production of nucleus planting materials of all improved varieties of spices at Research Institutes, their large scale multiplication at State Agri/Horticulture department farms, rejuvenation, area expansion, adoption of plant protection measures against major pests and diseases, transfer of technology through method demonstration, trainings, seminars etc. During the X Plan it is proposed to continue the IX Plan programmes with suitable modifications considering the present scenario in crop development. An average annual growth rate of 8-10% in production of various spices is proposed to be achieved during the Xth five-year plan. An integrated approach will be followed for creation of adequate infrastructure and provide technical support for the betterment of spice industry in the country (Draft X Plan

document for spice, 2001). An outlay of Rs.1953 crores earmarked for research on spices during the same period. Little attention has been given to determine which commodity will satisfy consumer needs and desires and how products are to be made available to consumers **at the time, at the place, in the form and at a price** the consumer is willing and/or able to pay. Failure to consider these factors has adversely affected the developmental programmes aimed at improving the spice industry. Non-competitive pricing and inability to respond to the changes in the international market responsible reasons for declining spices export.

Strategies for new millennium

The ongoing 10th plan in the new millennium marks a new and different phase for our spice industry. The de-regulated and quota-free marketing came to exist in the global spice trade, which necessitates a re-look at our prevalent approach to spices exports. The days of monopoly supply (in pepper, cardamom etc.), safe and steady markets (erstwhile USSR (for most spices) and Western Asia (for cardamom) and demand for bulk supplies etc. are being replaced with:

1. Stiff competition among producing countries to earn extra dollar through export
2. High standard of quality and sanitary regulations by importing countries
3. Diversification in product use etc.,

Export of quality spices:

Of the many challenges faced by the Indian spice industry viz., productivity, quality, value addition etc., The challenge of 'Quality' is the major one, which often questioned by the developed country importers.

Quality has become the key word in the spice industry today. Almost all importing countries especially the developed countries have stringent regulations to enforce safety of food products imported into their countries. These regulations specify quality minima for macro cleanliness standards, aflatoxin, microbial contamination and pesticide residues. Attacks have been occurring in an increasing frequency, such as:

- aflatoxins in nutmegs and chillies
- high total bacteria content in pepper
- salmonella in paprika powder

It will be imperative for the country to meet these standards to retain and increase market shares. Though the intrinsic quality of Indian spices has always enjoyed a good reputation. The physical quality of Indian spices however has been an area of concern.

Accordingly, the export promotion strategy of 'Spices Board' continued to be centered around quality improvement and value addition.

This matter of quality assurance needs to be addressed at the farm level and follow all the way through to final consumer and is perhaps best enshrined in the maxim "Quality from Ground UP". During the late period of Eighth Plan and in the IX Plan more thrust was given to improve the quality of produce exported, since our competing countries supply quality produce of international acceptance conforming to stringent parameters. The net result was loss of important markets like USA and Europe and thereby assumed significance to launch of innovative export promotion activities in the Spices Board.

It was realised that the quality should be the prime mover and accordingly, the Board established its own quality evaluation and up gradation laboratory in Cochin. The Board also initiated steps to educate the farmers especially those in Andhra Pradesh and Tamil Nadu to reduce the level of incidence of aflatoxins, salmonella and other microbial contaminants and it focused its attention more towards scientific post harvest operations so that the quality specifications demanded by importing countries could be met from the grassroots level itself. Simultaneously, the Board also entered into agreement with ASTA and other laboratories in USA, UK and Japan for crosscheck sampling in order to understand the testing methods, adapted by different countries and introduce the same by the Spices Board laboratory and disseminate the testing methods among the industry also. The Board also took steps to send technical personnel working in the spice processing and manufacturing industries in India to quality control laboratories in leading importing countries to understand the actual testing procedures and methods. In fact all these initiatives on the part of the Board brought a quality conscious attitude among the exporters here.

Clean products

India has been exporting cleaned bulk spices for years. Now, the world demands 'clean spices' but not the 'cleaned spices'. Poor post-harvest practices being followed in the rural India, where spices are produced is the root cause for poor quality of end products.

Indian exporters are taking keen initiative to achieve minimum level of contamination in the raw and value added spices, and many of them took giant leap towards achieving this objective by introducing heat treatment and sterilization of spices in the last one decade.

This initiative has helped the Indian spice industry to step up its exports to sophisticated and developed markets of Germany, Spain, Australia, USA and UK. One of the major problems confronted by the exporters during the 1990s was high pesticide residue levels in spices. In this direction too, Spices Board took steps to educate the farmers through integrated pest and disease management system. The introduction of the system helped to reduce the residue level to a large extent. Spices Board and Department of Commerce, Government of India also set forth steps to fix and notify minimum pesticide residue levels for spices. The Codex Alimentarius also acting as a forum to express the industry's view on quality standards and for fixing of residue levels. The World Spice Congress, a biennial event also gave opportunities to discuss the issues related to the industry and reach to an understanding with the buying countries.

Organically grown spices and its products have huge potential in the international markets especially due to the increasing demand for 'Natural food'. The demand for organic agricultural products including spices increasing day by day in the world market. The consumers in developed countries are ready to pay premium price for such foods. Government of India has authorized Spices Board as one of the agencies for development, certification and export of Indian organic spices in the National Agriculture Policy 2000. The export scenario of organic spices looks bright for India. The programs implemented by Spices Board for promotion of organic spice production and export includes:

1. Training to the spice growers
2. Financial aid for setting up of vermicompost units.
3. Production and distribution of organic planting materials
4. Certification programme etc.

At present few tons of organic pepper and ginger is exported from India. Efforts should be further intensified to increase the share of Indian export in the market for organic spices. India can also promote 'eco-spices' taking advantage of the fact that, imaximum of exportable spices (pepper, cardamom, tree spices) are produced in the ecological paradise of Western Ghats – world over rated as a unique bio-geographic zone needs to be highlighted as a powerful market or generic brand promotion scheme.

Change in the composition of export basket

Traditionally India has been exporting unprocessed bulk (whole) spices to the world market. Only in the eighties a beginning was made in exporting value added spices like oils and oleoresins, spice powders, mixes and consumer packs also emerged. When compared to the value added products, unit price earned by the whole spice is much

less. Value addition at source can generate enough employment opportunity also. When it is processed, blended and packed at the consumption market, there is no difference between Indian spices and spices from other competing countries. So, not only to increase the value but also to maintain identity and promote 'brand' name it is necessary to enter into the market for value added products by improving quality and earning consumer confidence.

- ~ The Malabar black pepper has a great demand in the world market. Because of their high quality and intrinsic value. Indian pepper always demanded better price in the world market.
- ~ Indian cardamom has a niche in the Gulf market mainly for its characteristic flavour.
- ~ Alleppey turmeric and the Cochin ginger from Kerala are demanded mainly because of their quality characteristics.

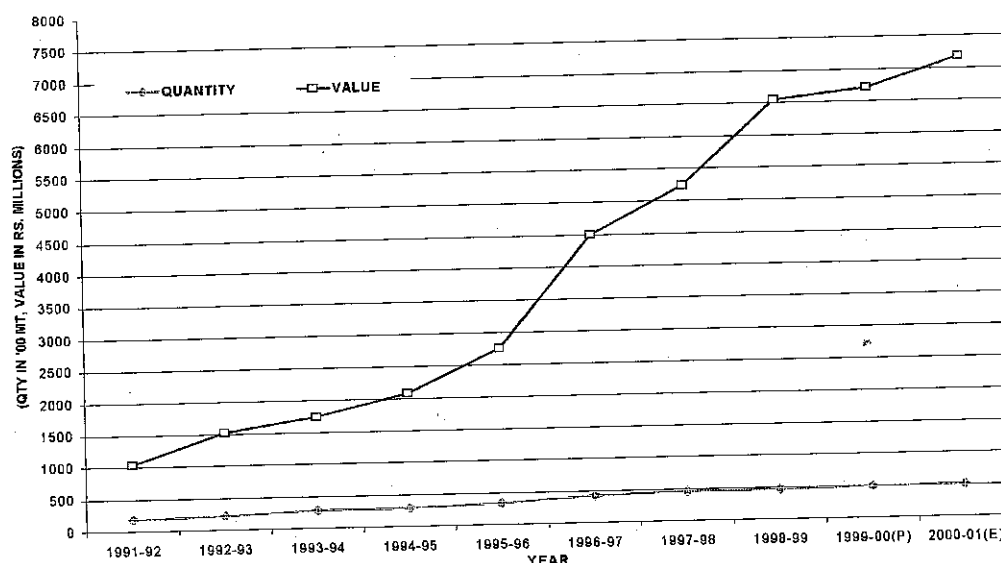
The above unique characteristics should be further exploited to create a identity for Indian spices. These product related activities are usually directed at a specific group of consumers called target consumers or market. Here, in our case our target market is the leading spice importing countries in world.

Through the promotion of 'Spice Logo' and 'Spice House Certificate', the country could gain a lot more credibility for Indian Spices in the international market. It has helped in enthusing and encouraging the exporters to strive for better levels of quality. Many spices processing units in the country having 'Spice House' certificate have already obtained ISO 9000 certification. The Indian 'spice logo' should earn reputation for the established intrinsic quality of our product.

Value added spices:

During 1960s curry powder emerged the most sought after value added spice product and during 1970s the focus shifted to spice oils and oleoresins including mint oil and today these products are the leading contributor in value terms. The Indian spice industry has achieved 45% of its total spice exports in the form of value added spices during 2000-01, compared to just 4% achieved during 1976-77 (Figures).

Figure Trend in Export of Value added Spices from India (1991-92 to 2000-01)



Technology upgradation

Indian spice industry is on the move to adopt latest innovations in technology. Super Critical Fluid Extraction for spice oils and oleoresins and Cryogrinding process for spice powders and mix masalas were introduced by several leading manufacturers in order to upgrade the quality of the product.

New uses and applications

Indian spice industry has already taken initiative towards Research and Development in order to evolve new derivatives from spices. The research is directed towards finding out nutritive and medicinal value of spices, develop new applications, which would result in the growth of Indian spices in value added form.

~ The medicinal properties of spices can be highlighted and sold in the market to promote consumption.

There are many other ways of presenting the product in the quality conscious world market for spices. Spices Board of India is working in this direction to widen the market for spice.

Vanilla and Herbal Spices

Support for cultivation, processing and value addition is extended by the Spices Board. Suitable promotional programme coupled with large scale cultivation of these items are expected to yield better results in the next few years.

Packaging

Attractive packaging is the another aspect, which the consumers like much.

Finding out the market's requirements in a product's packaging can be just as important as finding what product it wants. Colour preference and container capacity etc. varies from country to country. Thus it is necessary to collect information before packing the produce to destination market. Both bulk as well as consumer packing needs improvement. The packaging technology is fast changing in the developed countries. Consumer pack in these countries fetch much returns. It is expected that the package should protect the flavour and freshness of the spice inside and at the same time it should convey the message about the produce effectively.

Bad packaging can kill a product's chances in the market because it can result in one or more of the following:

- Costly handling and transport
- Delivery in poor condition
- Difficulty in storing before resale or use
- Difficulty in dispensing or using the goods
- Failure to meet legal requirement
- Difficulty in attracting customers

Further, the packing material should be biodegradable. Expertise in packing technology can be imported to meet the state of the art requirement.

Pricing activities

Price is the amount of money that consumers must pay in exchange for the product, service or idea. Like most agricultural products, spices have relatively inelastic demand and the price elasticity of demand is usually negative i.e. less than one.

There was a time when India as major, if not, the only supplier of spices in the international market could able to charge monopoly price for its exports. But now, the country has lost its price competitiveness to other competing countries. Much cheaper Guatemalan cardamom has entered into the households in the land of spices is the old story. In recent times (1999-2000), Indonesia and Vietnam is supplying pepper at \$1000/ton less than the Indian black pepper. India is in the process of losing its traditional market for black pepper (East European countries including Russia) to Vietnam and the USA market to Indonesia. Monopoly in chilli, ginger and turmeric also lost to competing countries mainly because of high prices. The superior intrinsic quality of Indian pepper

loses its identity in the consuming countries because of the fact that, imported spices are packed and marketed in different brand names. The origin of the spices packed inside is not spelt out. For the buyers in the consuming country price has become the main consideration for a given pack of produce. Low priced produce gets acceptance. Country can't afford to lose its established traditional markets to other competing countries mainly because of the price factor. When China's production of mint oil has come down, it has supplied the imported mint oil from India at 10% less than the purchased price to its traditional buyers to keep the market intact. Thus, exporting country's competitiveness is decided not only by the quantum of exportable surplus it can create but also by the market driven price.

Cost factor

Cost of production and productivity per unit area are the two important factors, which decides the unit price. Cost of production in the country for agricultural commodities in general and spice crops in particular has gone up steadily during the last decade. At the same time productivity per unit area is either declined or remain unchanged. The result is, Indian spice is becoming costlier in the world market. Labour cost accounting for more than 60% of the total variable cost and labour wages in the country has increased enormously over the period (700% between the period from 1980 to 2000), the result was high production cost in the state of Kerala. Consequently, Indian spices are quoted higher prices in the world market. Per kg production cost for pepper is becoming more and more costlier, because of the higher labour cost. Because of this higher cost of production, Indian produce could not compete with other spice producing countries. Table 6. gives some of the points of competitiveness of spice producing countries in terms of productivity, cost of production and quality etc.

Competition: Severe competition may indicate a lower price than when there is monopoly or little competition.

Generally, the higher the price, lower the quantity of a product that will be purchased. But the specific impact that particular price will have on sales volume depends on many factors which the marketer must take into account, including:

- The supply of competing products
- The current price of competing products and how the competition reacts to being undercut (or to a price being so higher than its own)
- The nature of the market segment the company has chosen as its target;

- How the buyers in this market segment or segments react
- Competitive and advantages the product may have, such as high quality, unique features or a favourable image among buyers.

Competitors:

<u>Crop</u>	<u>Countries</u>
Pepper	: Indonesia, Brazil, Malaysia, Vietnam and China
Chilli	: Mexico, China, Pakistan, USA
Ginger	: Brazil, China, Nigeria
Turmeric	: Pakistan
Cardamom	: Guatemala
Seed spices	: Pakistan, Turkey, Australia and Greece
Oils and Oleoresin	: USA, Germany

Productivity

There is inadequate orientation both in production programmes and in research efforts for making available the quality spices required in the international markets at competitive price. Though the country is the home land for many spices, productivity level attained in most spices are very low. Table 7. furnishes productivity achieved in India vis-à-vis other countries.

Table 7. Potential for productivity increase at the national level (kg/ha)

Crop	National	Progressive farmer	Research station	Abroad
Pepper	315	2000	2445	2925 (Malaysia)
Cardamom	154	1625	450	250 (Guatemala)
Ginger	3477	5500	8250	-
Turmeric	3912	6200	10700	-
Coriander	591	-	1900	515 (Morocco)
Cumin	578	-	2000	-

Promotional Activities

Promotional activities consist of various means of communicating persuasively with the target audience. The important promotional methods are:

1. Advertising
2. Personal selling
3. Sales promotion
4. Publicity and public relations etc.

Advertising and other forms of promotion are used both to push products into trade channels and to create demand among consumers or industrial buyers. Of particular importance is the composition of the **promotion mix** i.e. the combination of different promotional methods used in communicating with the consumers. Spices board (Ministry of Commerce), Government of India is the apex organization for the development and world-wide promotion of Indian spices. The Board is the major link between the Indian exporters and the importers abroad. In order to promote exports of Spices, the Board has announced a number of incentive schemes: i. Product promotion abroad ii. Promotion of Gift/Tourist packs iv. Sales promotion tour abroad v. Financial assistance for printing of brochures/folders and Brand promotion loans. However, not much effort is being taken to develop new markets for Indian products. If all these programs are integrated and implemented properly it may be more effective.

Conclusion

The gap between the yield level obtained at experimental and demonstration farms and the achieved average yield in the country indicates the vast potential to be tapped by the country to increase the production level in many spice crops. The domestic market is one of the biggest in the world market providing cushion to fluctuating prices, which depends on international price in many commodities. WTO accord has brought producers in different countries for the same commodity to compete with each other. Indian spice producer has to increase the yield levels many commodities making use of the available High Production Technologies (HPT), lest they will be out of the world market. In the export front, there is an increasing demand for value added spices. India has one of the best facilities in the world along with availability of raw materials and cheap labour. So, the country can make use of the opportunity to export value added products instead of exporting bulk raw spices. The setting up of Agro Export Zones will increase the export-oriented spice production and exports in the coming years. The demand for natural colour and seasoning/flavouring agent are also likely to have a surge in export of spices especially in the light of demand for Indian culinary specialties in Europe USA and the Far East. In all the following points of strategy are recommended:

- Diversification of product range and development of new range of products
- Shift from commodity marketing to value added products
- Achieving cost competitiveness both in production and pricing
- Reinforcing existing markets and exploring new markets
- Shortening the distribution channels for both processed and raw spices

- Know the customer and the market and respond to their needs through new products and innovative packaging in tune with market needs
- Enhancing quality capabilities and promotion of brands at retail level
