

A Descriptive study on the quality standards of spices with reference to Indian Spices Board

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Abstract

Spices are the brand ambassadors of India. Spices are in great demand in western and Arabian nations. Maintenance of quality standards of spices marked for exports is given high priority by the Spices Board of India. Since stringent health and food laws exist in all developed countries, spices production in India faces tremendous pressures and challenges from the stage of cultivation to marketing methodologies. It is here that the Spices Board plays a vital role in ensuring international quality of spices. The guidelines on quality improvement of spices board of India and other international organization have to be meticulously followed. Proper application of organic cultivation methods, utilization of latest technologies and inputs will boost India's export of spices.

Introduction: India is known the world over as "The Home of Spices." India is a leader in global spice market. Almost all Indian states grow one or other kind of spices with Kerala in the south taking the lead role. India's spices are acknowledged as having unique taste and aroma in the international market. Indian spices are commonly used in Indian cuisine and varieties of species are used every day. The Indian spices can be categorized into three main categories.

1. The basic spices are cumin seeds, coriander seeds, black mustard seeds, turmeric, chilli powder, asafetida
2. Complimentary spices are fennel seeds, fenugreek seeds, carom seeds
3. Aromatic or secondary spices are green cardamom, black cardamom, saffron, nut mug cloves, cinnamon sticks.

India caters to the 48% of demand of spices in the world. India's spice export was 2.25 lakh tones valued at Rs.1213 crores during 1996-1997. For the first time in the history of spices exports, during 2012-2013, Indian spice exports have able to record all time high of 22%. The total export of spices during the period crossed Rs.10000 crores.

The total export between April 2013 and December 2013 of spices and spice products was 571680 tonnes, which generated 9433 crore rupees. Earlier during April to December 2012, the total exports were of 449926 tonnes valued 6696 crore rupees. This was a hike of 27 percent both in terms of volume and value of dollars.

India at present produces around 60 lakh metric tones of spices of which around 6.9 lakh metric tones (11%) is being exported to over 150 countries. Spices exports have registered substantial growth during the last five years, registering a compound annual average growth rate of 23 per cent in value and 11 per cent in volume. India is the world's largest producer and exporter of spices of the 109 varieties listed by the International Organization for Standardization (ISO), as the country produces and exports about 75 varieties of spices.

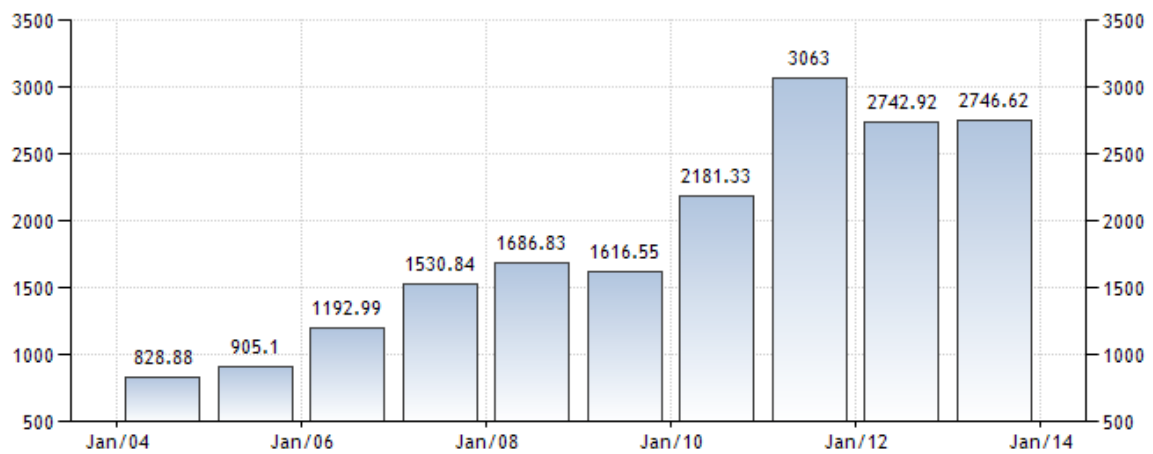
Spices export may close in the range Rs 12,000-Rs 15,000 crore in the current year boosted by large shipments of jeera, mint, chilli -- three high value items in the spice export basket.

The countries that import the maximum of spice products from India are Malaysia for chilli and coriander, USA for pepper, celery, spice oils and oleo resins, China for mint products, Saudi Arabia for cardamom, UAE for turmeric, Bangladesh for ginger and garlic, Pakistan for cardamom large and fennel, UK for cumin, Japan for fenugreek, Nigeria for curry powders and Nepal for other seed spices.

Export value of products from India in INR lacs for three financial years.

Name of the Products	Apr 2011 to Mar 2012		April 2012 to Mar 2013		Apr 2013 to Mar 2014		Year over year growth
	Value in INR Lacs	% Share	Value in INR Lacs	% Share	Value in INR Lacs	% share	% in INR
Coffee, Tea, Mate and Spices	1,466,377.56	1.0003	1,492,724.75	0.9134	1,660,520.86	0.8741	11.24%

INDIA EXPORTS OF COFFEE, TEA, MATE & SPICES



SOURCE: WWW.TRADINGECONOMICS.COM | MINISTRY OF COMMERCE & INDUSTRY, INDIA

Source: Ministry of Commerce & Industry, India.

Objective of the Study:

1. To study on the various measures taken by the Spice Board in respect of quality of the spice products.
2. To study various international agencies, their functions for the betterment of world spice industry.
3. To study the problems faced in spices cultivation in India.
4. To formulate strategy to increase spices yield.

Statement of the Problem:

Indian spice industry has to ensure quality norms especially of the products exported to European nations. Various measures taken by spices board of India and other international agencies dealing with spices have brought in major changes in global trade of spices. The cultivators of spice products encounter numerous challenges. To increase spice production, the cultivators are using excessive fertilizers and pesticides which is detrimental to eco system, land and leads to forest degradation. Following good agricultural practices and the norms prescribed by the Spices Board of India by the cultivators will ensure our country to compete effectively in the international market.

Role of Spices Board of India

Spices Board of India is a statutory body responsible for the Development and Growth of all the major items of Indian spices, having commercial significance. Up to the year 1960, the Spices Export Promotion Council was responsible for looking after the export affairs of Indian spices excluding Cardamom, for which there was 'Directorate of Cardamom Development' constituted in the same year. Subsequently the Government of India constituted a Cardamom Board in the year 1966 instead of the Directorate of Cardamom Development. Understanding the significance of the coordination of the activities in the export of spices, the Spices Board Promotion Council and the Cardamom Board were clubbed together and the Spices Board was constituted in 1986.

The activities of the Board include the promotion of export of spices and spice products, maintenance and monitoring of quality of exports etc.

Various phases of quality standards are prescribed to ensure that the product exported conforms to international quality standards. This is one of the major concerns, since Indian spice industry is plagued by the usage of pesticides, fertilizers and toxic chemicals like Sudan dyes i.e. Sudan I to IV. Sudan Orange G, Sudan Red B, Sudan Red G, Sudan Red 7B and Sudan Black B and other dyes like butter yellow is basically synthetically produced azo dyes. Their degradation products are considered to be Carcinogens and Teratogens. Sudan dyes are also known as Scarlet red and they are not permitted to use in food. Due to this fact, the European Union does not permit the use of these colours as food additives. Sudan dyes are legally used in shoe, floor polish, solvents, oils, waxes and petrol. Even today sudan dyes are used illegally in spices, pastas, tomato sauces, chutneys, vinegars and palm oil.

One of the major efforts taken by Spices Board of India is to ensure that the spice products exported from our country does not contain sub standard materials are:

1. The Spices Board has directed exporters to destroy the consignments of spices and spice-based products detected with Sudan dye contamination in the pre-shipment sampling and testing.
2. A circular issued by the director (marketing) of the Board, strictly instructed such consignments should be fully destroyed within 15 days in the presence of the Spices Board and Food Safety and Standards Authority of India (FSSAI) officials.
3. This is in view of the emerging quality concerns in the world spice trade and any requests from exporters for re-sampling of consignments once detected with banned substances will not be entertained under any circumstance.
4. When the analytical report of testing shows positive results for banned substances, viz. illegal dyes, Aflatoxin, pesticide residue etc. there are requests for

re-sampling. The board has clearly stated that because of quality concerns re-sampling would not be allowed.

Spice Parks and Labs of Spices Board of India

Spices Board of India not only takes care of quality standards but it takes substantial efforts in augmentation of spices trade by setting up Spice parks.

The Spice Parks in the country provide scientific infrastructure facilities to benefit the growing community through quality improvement, grading, packing, warehousing etc for value addition. The exporters can also set up their units in the parks for processing spices under the terms and conditions of the Board.

The objective of setting up these facilities is to ensure that the quality assessment of spices and spice products is complete before they are shipped, thus avoiding the quality and safety issues that crop up when India – the largest spice producer and consumer – exports them.

Parks are already functioning in Chhindwara (MP), Puttady (Kerela), Kota (Rajasthan), Guna (MP), Mattupetty (TN). The other centres where spice parks are proposed include Guntur (AP), Jodhpur (Rajasthan), Mehsana (Gujarat).

The quality Evaluation labs established by the Board at different parts of the country provide analytical services to the industry and monitor the quality of spices produced and processed.

‘Spices India’ signature stall

‘Spices India’ signature stall, the new initiative from the aroma box of Spices Board, is aimed at branding and promotion of Indian spices. ‘Spices India’ that exhibits a wide variety of Indian spices and their value-added products was launched at Lulu Mall, Kochi, in 2013. It specially features an assortment of whole spices and a basket of exclusive spice oils and extracts. ‘Flavourit,’ an authentic brand for quality Indian spices, is an initiative of Spices Board to promote finest quality spices across the globe. It undertakes branding, packaging, marketing and promotion of finest spices collected from farmers to be sold to the general public.

Packaging enhanced the Indian cardamom’s value in international markets

In the international markets, where stringent regulatory norms are set by importing countries, high quality packaging is the need of the hour. The Spices Board India assists exporters to improve their packaging and develop modern packaging for increased shelf life, increased attractiveness and visibility, reduced storage space, customer friendly opening and closing, and overall better presentation of Indian spices in markets abroad.

International Organization of Spice Trade Associations (IOSTA)

The International organization of Spice Trade Associations is a non-profit professional organization designed as a common platform for the betterment of world spice industry. The members from different countries meet regularly to discuss various issues pertaining to the spice industry. The organizations at the National and International level plays a significant role with regard to policy decisions, quality aspects, food safety and manufacturing practices in their respective countries. They support the principal of good agricultural and good manufacturing practice. The harvest and post harvest conditions should ensure that material is stored and handled in such a way as to prevent adulteration, contamination and the growth of micro organisms. Following are the nine members to promote consensus amongst the member organizations, in all matters concerning the spice trade and industry

1. All Nippon Spice Association, Tokyo, Japan
2. American Spice Trade Association (ASTA), Washington, USA
3. Australian food and Grocery Council, Barton, Australia
4. Canadian Spice Association, Toronto, Canada
5. European spice Association, Bonn, Germany
6. The International General produce Association, London, United Kingdom
7. Spices and Allied products producers' and Traders' Association, Colombo, Sri Lanka
8. Spices Board of India, Cochin, India
9. Vietnam Pepper Association, Vietnam

Food Safety and Hygiene Standards of global food industries:

The global food industries have been focusing on food safety and hygiene and have introduced various standards such as

GAP (Good Agricultural Practices)

GMP (Good Manufacturing practices)

HACCP (Hazard Analysis and Critical Control Points).

GAP (Good Agricultural Practices):

Good Agricultural Practices (GAP) have been defined as "practices that address environmental, economic and social sustainability for on-farm processes, and result in safe and quality food and non-food agricultural products" by the Food and Agriculture Organization

GMP (Good Manufacturing Practices):

Good Manufacturing practices guarantee high quality products to the consumer and thereby delivering products free of all possible contamination.

HACCP (Hazard Analysis and Critical Control Points):

Hazard Analysis and Critical control points is an approach to food safety that is systematic and preventive. It is recommended by the Codex Alimentarius Commission, the United Nations International Standards for food safety. HACCP is used by most countries around the world. It has been in use since the 1960s.

It involves review of each step of the food making processes from start to finish, to identify the presence of hazard or sources of contamination and to ensure that contamination does not occur or it will be restricted to an acceptable level.

Problems faced in spice cultivation in India:

- a) Increase in spice production over the past three decades was closely related to the use of fertilizers and pesticides which contains high level of mycotoxin and toxic chemicals. For instance water and soil in cardamom hills was found to be highly contaminated by pesticides.
- b) Senility and poorly selected varieties.
- c) Prolonged drought.
- d) Over dependence on monsoon.
- e) Predominance of small holdings.
- f) Problems of land tenure.
- g) Inefficient and inadequate attention to management in both production and protection practices.
- h) Faulty post harvest practices.
- i) Non availability of skilled labour during harvest season.
- j) Shifting of interest of growers to more profitable crops.
- k) Adulteration of spices.

- l) Cyclic market fluctuations at national and global level.
- m) Lack of MRL (Maximum Residue Limits) and ADI (Acceptable Daily intake) standards of the pesticides used. India's spices now have to meet global standards with regard to pesticide content and traceability of raw materials.
- n) India's spice production is carried out by marginal farmers and their productivity is low.
- o) The lack of organized supply chain linkages for sourcing spices from farm level. Spices are mainly channelized through agents and intermediaries in the unorganized segment.
- p) Contract farming is still in its growth stage.
- q) Corporate land ownership is not allowed.
- r) Indian spice traders and producers are facing challenges like food safety, sustainability and traceability. Food safety regulations are affecting spice exports especially to the countries like Germany, France, England, Japan and Australia. As the regulation varies from country-to-country, it is becoming hard to maintain all the required standards. The maximum containers are rejected from European countries, Japan and Australia. India the largest exporter of chili and ginger to these countries.

Conclusion: Nowadays, most of the countries are using excessive use of fertilizers and pesticides. Promotion of organic cultivation and adopting low cost traditional practices will have positive impact on the value of the product being produced.

The Spices Board of India's have envisioned various measures to enhance quality of the spice products like emphasizing on post harvesting processing, better storage system, educating the farmers and traders in handling/processing the produce hygienically, imparting training, opening of more labs and spice parks all over the country, Private and Public partnership as producers and distributors of certified planting material and products, utilization of latest technological tools such as satellite imagery, use of GPS (Global Positioning System) and mapping techniques using GIS (Geographic Information system) have to be fully utilized for land use planning will help in fulfilling the demand for quality materials in spices. It requires more autonomy and determination.

The problems faced by the industry are many and are indeed challenging. The proactive measures of the Board with increased awareness of all the segment of the industry and the way to handle them will certainly usher in enhanced volume of production and trade, in the years ahead.

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