CHAPTER II

REVIEW OF LITERATURE

The past studies related to the present study are reviewed in this chapter. This chapter is divided into two parts. The first part reviews the studies on the impact of liberalization and the second part explains the studies on the marketing of spices.

2.1 IMPACT OF LIBERALISATION

According to Mia Mikic\(^1\) Agriculture is the economic activity that still provides a livelihood for the majority of people, especially the poor. Every effort thus needs to be made towards making this sector more productive and able to sustain a better quality of life for those who remain dependent on agriculture as a livelihood while also indirectly contributing to improved welfare among the remainder of the population. This understanding has not always been the driving force behind policy making. It took the Uruguay round to start main steaming agricultural trade into the multilateral trading system under the WTO in 1995.

Biswajit Dhar revealed that the case of liberalizing agricultural trade has been built on an esoteric set of studies, the origins of which can be traced back to the pure theory of international trade. According


to these studies, trade liberalization provides the “optimal solution” but only under “ideal” market conditions. Some of the key assumptions that are made in this regard are the following: (i) markets are assumed to be perfectly competitive; (ii) producers minimize costs subject to constant returns to scale; (iii) consumers maximize their utility; and (iv) all markets, including the labour market, are cleared with flexible prices. While the earlier studies enumerated the welfare implications of adoption of free trade policies in largely conceptual terms, more recent studies have provided precise estimates of the welfare gains that would result from the liberalization of agricultural trade. Among the more influential of these studies are those that have used general equilibrium models.

Manisha Lodha mentioned that liberalization of external trade formed an important aspect of the economic reforms programme launched in July 1991. Although, policy efforts directed towards external liberalization can be traced back to late seventies and mid-eighties, it is only during the nineties that such measures received a momentum as well as definitive direction. Trade openness indicates a better allocation of resources which in it stem contributes to an increase in real per capital income. In this connection, India has made a remarkable achievement during nineties with the implementation of liberalized policy.

Hajela\textsuperscript{4} explored in view of what is happening at the global kvd that isolation would be harmful to any nation’s interest today to analyse various aspects of globalization. Global competition is a highly heterogeneous world, with large differences in infrastructural facilities, in equal availability of information, sharp differences in the stage of development of various countries and restricted mobility of factors like labour and capital and state intervention would be unavoidable even for achieving globalization only it will be far less in the direction of unemployment and poverty.

Bolling et al.,\textsuperscript{5} stated that USA is among the largest investors in food processing industries. Their investment doubled from 15000 million US dollars in 1991 to 3000 million dollars in 1995 after liberalization. These investments are spread across a wide range of food products and most investments have been increased among the countries with relatively high consumer incomes with similar taste.

Castellaneous\textsuperscript{6} observed that in Belize economy agriculture production accounts for about 20 percent of GDP and 25 percent of the labour force is the dependent of this sector in this country. Agricultural products are exported under pre frontal terms. As a result

of the WTO preferences, granted to AGP exports are being systematically reduced. Thus agriculturists appear to be losses on consequences of globalization and liberalization.

Arvind Virmani\(^7\) analysed the liberalization of India’s external sector. The reforms improved the openness of the Indian Economy vis-a-vis other emerging economics much however, remain to be done Indian economy is still relatively closed compared to its peer competitor’s. Further reduction of tariff protection and liberalization of capital flows will enhance the efficiency of the economy and along with reform of domestic policies will stimulate investment and growth.

O.P.Sharma analysed\(^8\) the tenth plan document and stated that the twin processes of globalization and liberalization are shaping a new system of international economic relations in which the changing pattern of investment, production and trade, the global span of finance and the central role of technology are dominant. In order to benefit from globalization, developing countries like India will need to engage themselves more actively in shaping the contours of the international economic order.

Suchearira Sen and Saraswathi Raju\textsuperscript{9} analysed the globalization and found that macro economic reforms have induced a number of discernible changes in Indian agriculture, including a greater policy emphasis on high value crop diversification. It has been argued that moving away from a cropping pattern oriented towards foodgrains production which would enable land-poor farmers to sustain and improve their livelihoods.

The World Bank has provided crucial support to the WTO in pursuing trade liberalization. The Bank’s projections have been made on the basis of a computable general equilibrium (CGE), model of trade and production, the so-called, LINKAGE model. Like so much of international trade theory, the models make problematic - or at least moot - assumptions, such as full or fixed employment, while focusing only on the effects of price changes. Indeed, trade liberalization is likely to cause unemployment or to lower incomes in previously protected internationally un-competitive activities\textsuperscript{10}.

K. Dhanasekaran\textsuperscript{11} viewed that in the new economic environment of trade liberalization, there has been a debate whether the reforms have helped to accelerate agricultural output, employment


and real wages for the agricultural labours. There is an apprehension that the economic reforms have had an adverse impact on the employment and poverty particularly in rural India, but the empirical evidences suggests that despite the lower growth of agricultural output, poverty has declined in the 1990s than in the 1980s, when economy was on a lower growth path as compared to that of the earlier years. A faster decline in the rural poverty during the 1990s can be attributed to the higher growth rates of employment in non agricultural sectors and in the real wages. Safety nets played an important role during reform to attack poverty. Rural development programmes affected rural poverty more directly as compared to other safety net programmes during the post reforms period. To conclude agricultural trade liberalization helped to reduce rural poverty in India.

Jayanti Ghanekar - Kajale analysed the trade liberalization on the soyabean sector in Maharastra. Till 1994, imports of oilseeds and edible oils were canalized through State Trading Corporation. Import restrictions and various programmes for increasing the area and production under traditional and non-traditional oilseeds during the late 1980s made India nearly self-sufficient though at the cost of high 011 prices for the consumers of edible oils. However, with the

\[1 \text{Jayanti Ghanekar - Kajale, “Trade Liberalisation and the Soybean Sector in Maharashatra,“}
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initiation of India’s own programme of economic liberalization and the Uruguay Round Agreement, a major policy decision relating to edible oils was taken.

According to V. Ratna Reddy and P. Prudhvikar Reddy\textsuperscript{13}, Trade liberalization in the absence of effective price protection is harming the interests of the farmers. The absence of alternative crops to suit the climatic conditions distress among the farmers is conspicuous in the drought-prone regions. While it is clearly inefficient to produce oilseeds in India, the interests of the farmers need to be protected till the crop shifts take place or policies should guide the crop shifts. While MSP has served its purpose during the times of food shortages, its importance is rather over played in the context of bulging food stocks and liberalization of trade. This would not only provide incentives to produce these crops but also helps in making farming viable. Further, it imposes fewer burdens on the exchequer given the magnitude of their area coverage. Besides, more investment should go into increasing productivity of land and extension services, which would reduce the gap between the potential and actual yield rates. Enhancing productivity alone can ensure food security in the long run as well as making our agriculture competitive in the international markets due to cost reduction.

The rupee was also made partially convertible in 1991. Though trade restrictions on agricultural products were left mostly untouched in the 1991 reforms, subsequent trade policy changes gradually lifted most of the restrictions on both exports and imports of agricultural products. The role of canalizing agencies in agricultural trade was greatly reduced. Except for a few sensitive imports for a few commodities like cereals, oilseeds and edible oil, import of all other agricultural items was decimalized. Exports of all agricultural items except a few such as onion, Niger seeds, etc. were also decimalized\textsuperscript{14}.

Brajesh Jha and B.B. Mohapatra\textsuperscript{15} suggested that growth in the market and administered prices has been similar for important agricultural commodities in the 1980s. Disparity between these prices has started in the 1990s; for rice, wheat and cotton, growth in market prices is higher than the administered prices, while for pulses, oilseeds and coarse cereals market prices are lower than the administered prices. The commodities in the earlier group are the exportable for India and exports generally give an upward pressure on the market prices. In this situation external trade in a commodity, generally in


small quantities, affects market price of the same only in regions adjacent to the port, further widening disparity in market prices across states.

Liberalisation also had a significant effect on growth in some of the key services sectors. Overall, the average annual growth rate in the services sector shifted from 6.9 percent during 1981-91 to 8.1 percent during 1991-2001. Finally, large fiscal deficits continue to crowd out private investment. The lackluster performance of industry to-date is the principal cause for at most a marginal acceleration of the growth rate in the post 1991- reform era. The only way India can push its growth rate to the levels experienced by China in the last two decades by freeing the conventional industry of several continuing restraints.\(^\text{16}\)

The trade liberalization and also due to a host of other factors like deficient rainfall, excessive concentration on export oriented perennial crops, decline in production and productivity, fall in prices, etc. the agricultural sector of the State has been facing a crisis during the last one decade, which led to rise in farmers’ indebtedness and suicides. While farm distress continued, there was significant rise in loans issued by formal financial institutions in the recent period,

especially short-term loans, thus, raising the indebtedness of the farmers further. In general, farmers’ suicide was reported more in those districts which are concentrating more on cultivation of export-oriented commercial crops. An agricultural crisis was one of the major reasons for suicides, but not the sole reason\textsuperscript{17}.

V.M.Rao\textsuperscript{18} revealed that liberalization is expected to stimulate growth processes and bring about growing integration between the domestic market and the world markets. It is best to view it as a pervasive process which could give rise to major structural changes in the economy spread over a period of several years. This long transitory phase would have to be steered by the policy-maker through continuing corrective, regulatory and promotional interventions and, in this sense, planning would become more important than now rather than less until the economy fully assimilates the changes occasioned by liberalization. However, while considering the likely impact of liberalization on agriculture, it is important to keep in mind the sharp intra-sectoral differences which have emerged in the course of growth and diversification of agriculture since independence.

Ramkishen S. Rajan (2002)\textsuperscript{19} Theory offers a number of plausible benefits from international financial liberalization. However, a careful examination of available empirical literature on the subject suggests much less reason to be sanguine about the benefits. In view of the widely noted concerns regarding short-term indebtedness, a strong case can be made for the setting of prudential limits on the amount of short-term debt that a country can accumulate. Somewhat less clear is what steps need to be taken to reduce vulnerability due to uncovered long-term foreign currency borrowing.

Prem S. Sharma\textsuperscript{20} viewed that the benefits of international liberal Trade can be realized at the optimum level if all countries of the World follow fair, equitable and transparent rules and regulations and promote exports based on their natural inherent advantages. However, export subsidies and farm supported extended by any country to its farming community can distort international trade in agriculture commodities.

Erol H. Cakmak\textsuperscript{21} found that fertilizer use grew rapidly during the 1970s. From 1970 - 72 to 1981 - 83 total consumption grew by 61 per cent despite the price increases in 1974 - 75 and 1978 - 79.

This period was followed by a slow growth period. During the 1980s until 1992 - 94, total consumption increased by only 4 per cent. All regions recorded positive growth during the first period with much faster increases in the developing countries, led by the Asian developing countries with a five-fold increase. According to recent data, about 55 per cent of the nutrients are consumed in the developing countries compared with a figure of 20 per cent in the early 1970s.

The industrial licensing and the Central Governments direct industrial investments gave the Central Government a very significant role in deciding the industrial location and the States which had large clout in the Union Government had an advantage as far as industrial location was concerned. However, in the liberalized era industrialists and entrepreneurs have more freedom to choose their business and location of production base. The liberalization of foreign investment policy has also stimulated such an environment for foreign investors in India.\textsuperscript{22}

None of India’s domestic support policies faced discipline as a result of the Uruguay Round Agreement on Agriculture. As notified to the WTO, India’s Aggregate Measure of Support (AMS) shows negative aggregate support through the 1990s. Input subsidies are notified by India as support to small, resource poor farmers that is

\textsuperscript{22} Francis Cherunilam “Liberalization and Industrial Dispersion, Organizational Management, Vol. XXIII, No.1, April - June 2007 p. 47.
exempt under the URAA. Similarly, expenditures under the “food grain subsidy” are notified as domestic food aid and not counted as producer support. For major commodities, however, tariff bindings are sufficiently high to prevent imports, although some imports of high-value and processed items (fruits, nuts, canned goods, etc) are now occurring at bound rates. In most cases where significant imports have occurred. Such as edible oils, pulses, and cotton, it is because of a unilateral Gol decision to set applied rates below bound rates. For a few commodities, including oilseeds (phyto-sanitary regulation) and com (tariff rate-quota administration), non-tariff barriers likely prevent trade at bound rates even when market price condition are favorable23.

According to Abdulhamidsukar, G.Ramakrishna24 the Literature on trade liberalization can be grouped into two categories. The first category, which examines export-growth nexus, is extensive and dates back several years. The second relates to the nexus between trade liberalization and growth using with and without and before and after approaches. There has been a great deal of controversy, however. Using cross-section data, Feder (1983) Balassa (1978), Tyler (1981) and Michaley (1973) have found positive association between exports

and economic growth. One issue arising from this body of work is that some of the results may involve a spurious correlation due to the fact that exports themselves being part of national product. This concern led to a version of cross-sectional studies which estimate aggregate production function that includes exports as an explanatory variable along with other proposed economic growth determining fundamentals such as labor, capital and investment.

R. Meenakshi\textsuperscript{25} found that agricultural production gave less response to globalization policy. The growth of agriculture has fallen in spite of increase in terms of trade and private investment in agriculture. The growth rate of food grains production had fallen in spite of successive good monsoons. The compound growth rate is 1.52 per cent for rice, 3.76 per cent for wheat, 1.13 per cent for pulses and 1.74 per cent for food grains. These annual growth rates worked out for the period from 1990-91 to 1999-2000 indicates that agricultural production grew at a slower rate and economic prosperity in agricultural sector also grew at a small rate. In India the food grains account for about 63 per cent of country’s agricultural output and hence even a marginal decline in food grains production has a ripple on the economy.

Sarada Prasanna Das pointed out part from all these developments and crisis, Indian agriculture is not achieving so much yet. For this the Government of India should initiate bold measures to ensure that the WTO regime does not deviate from the trade-related approach and considerations like environmental and labour standards should not be brought into trade issues. With the topical climate, herbal plant varieties, numbering more than 2000, India can be a leader in bio-genetic engineering and plant diversification. In this context the intellectual property rights and trade related investment should be well-guarded and promoted to safeguard the interests of the marginal farmers and small farmers in the country side, for whom farming has been a way of life and a mode of culture, for centuries together.

Pulapre Balakrishnan, K. Pushpangadan, M. Suresh Babu (2000) presents results of a test for a shift in productivity growth since 1991. They expect any shift in productivity to occur in those sectors of manufacturing where the reforms have been most pronounced. It is widely held that the defining character of these reforms is the greater openness of the Indian economy. Therefore it is focused on those sectors where trade has been liberalized. While we

are aware of many dimensions to trade liberalization, for the purpose of this study they define trade liberalization as significant reductions in the tariff rate.

Another present paper reviews the impact of WTO on Indian agriculture on the basis of Agreement On Agriculture (AOA) and identifies both the gains and losses that India may have as member of the WTO. In order to have a positive impact of WTO on Indian agriculture the better policy option is that India should effectively protect its domestic market of food items by continuing to impose a high tariff rate on these commodities. India can even deny the market access of both rice and wheat to other countries under the provision of AOA since they are traditional staples of our country. Finally, the study argues that unless subsides are removed by the developed countries, India cannot benefit from the WTO. Advanced countries offer huge domestic support and export subsidies, so it is not feasible for India to agree to cut tariffs. It may lead to social disorders in the rural sector of the country. Therefore, it has been suggested that India should try to attain the benefits of globalization under WTO regime by continuing its membership as long as its interests are not hurt by the policies of WTO.28

Rais Ahmad (2005)\textsuperscript{29} suggested that for promoting agricultural exports, Indian Government should increase the subsidy both for exports and domestic support as the majority of Indian farming community belongs to small and marginal farmers category so as to make the Indian agricultural commodities and products competitive in the international market and also should levy heavy tariffs on imports so as to restrict the entry of undesired products of developed countries in Indian market. As per AOA developing countries should reduce subsidy to the level of 10 percent till 2005.

According to Renuka Mahadevan in the last five decades, the Government’s objectives in agricultural policy and the instruments used to realize the objectives have changed from time-time, depending on both divided into supply side and demand side policies. The former include those relating to land reform and land use, development and diffusion of new technologies, public investment in irrigation and rural infrastructure and agricultural price supports. The demand side policies on the other hand, include state interventions in agricultural markets as well as operation of public distribution systems. Such policies also have macro effects in terms of their impact on

\textsuperscript{29} Rais Ahmad, WTO and Indian Agricultural Exports, “Monthly Public Opinion Surveys” February 2005, p. 12.

government budgets, Macro level policies include policies to strengthen agricultural and non-agricultural sector linkages and industrial policies that affect input supplies to agriculture and the supply of agricultural materials.

2.2 PRODUCTION AND MARKETING OF SPICES

Ramesh Chand, S.S. Raju and L.M. Pandey\(^\text{31}\) revealed that diversification towards horticulture got real boost in the early 1990s which coincided with liberalization of economy. The growth rate in output of fruits and vegetables reached 6 percent and condiments and spices reached almost 5 percent. The underlying diversification in favour of fruits and vegetables has been higher returns relative to other crop groups and the difference in productivity between horticulture and other crops have been widening during 1980-81 to 2000-01. During 1980-81 to 2005-06, the share of fruits and vegetables in total cropped area on the country increased from 2.8 to 4.9 percent and their share in crop output increased from 15.95 percent to 25.61 percent.

Pratap S. Birthal. et.al,\(^\text{32}\) has analysed the sources of growth in Indian agriculture for the period 1981 - 81 to 2004 - 05 focusing on the role of horticultural crops in speeding up agricultural growth.


Three important conclusions are drawn from this study. First, despite deceleration in its contribution, technology has remained an important source of growth in Indian agriculture. Second, diversification of agricultural growth. Third, horticulture-led growth is an opportunity for small farmers to raise their income. There are a number of factors like, slow growth in input use, deterioration of soil health due to unbalanced application of fertilizers, low seed replacement rate, depleting water table, inefficiency in transfer of technology, etc. that can better cropping yield potential.

According to M. Srinivasa Rao, India is the second largest producer of fruits and vegetables in the world. Value of the horticulture produce at whole sale price is estimated to be Rs.60000 crore. Banking sector has supported the expansion of production base of horticulture sector, both in terms of diversification of crops and geographical spread across the country. During the X Plan period, the focus of institutional finance is shifting to post harvest management and marketing. The paradigm shift from production to marketing requires innovations in loan product design, delivery and pricing, owing to changes in clients and their organizational structures.

Jesy Thomas and R. Sunderesan (1996)\textsuperscript{34} used the coefficient of variation to study the export performance of cardamom in India. The results showed that there was high instability in the quantum of exports with an instability index of 68.5 percent. The coefficient of variation was also as high as 60.47 percent. The fluctuation in cardamom export was attributed to the influence of production.

A study of Paramjit Singh revealed that there has been fluctuating trend in the export of cashew kernels due to fluctuation in raw nut import. Domestic production and import of raw nuts have significant positive impact on the export of kernels from India whereas domestic consumption has negative influence on the price front, Indian farmers are getting about 41 percent less than the realizable value of raw nut and they are slightly in a disadvantageous position. The study concluded that the India’s overdependence on USA and Japan for export has made it vulnerable to bargain for better price even with a quality product. So the main marketing strategies should be to strengthen the non-traditional markets and explore new once along with maintaining good relationship with buyers in the traditional and established markets. Export of kernels in value added farm is meager and attempts should be made to export value added form to ensure better price for Indian kernels.


Another study of Mahendra Singh and V.C. Mathur\textsuperscript{36} showed that high value commodities contributed substantially in national agricultural exports and around half of this is shared by horticultural commodities. The growth and variability of area, production and yield of major horticultural sub-sectors indicates that substantial growth has occurred in the area of all the sub-sectors during entire period (1991-92 to 2005-06). The maximum growth in area was observed for spices, followed by fruits, plantation crops and vegetables, respectively. The shares of existing crop groups have been predicted using first order Markov Chain model for the period 2000-01 to 2011-12. The results indicate that the share of fruits, vegetables, and plantation and spices crops would continuously increase, while the share of field crops would decline and the share of nuts and flowers would be constant during the Eleventh Five Year Plan period. The development of the horticulture sector is essential to achieve the targets of agricultural growth and exports, food and nutritional security, and ultimately efficient utilization of natural resources.

J. Resmi\textsuperscript{37} printed out that All spice is a native of Jamaica (West Indies) which is the major producer and exporter of the spice, accounting for 70 percent of the world trade. The remaining 30


\textsuperscript{37} I. Resmi, “Production Technology of Allspice”, Indian Journal of Areca nut, Spices and Medicinal Plants, Vol.9, No. 1, Jan-March 2007, p. 32.
percent is produced by Honduras, Guatemala, Mexico, Brazil, Belize, Costa Rica, Cuba and the Caribbean islands. The natural habitat of allspice in Jamaica is lime stone forest. In India, the tree is grown in Maharashtra, Tamil Nadu, Kamata and Kerala.

The scheme on production and distribution of quality planting materials of spices was implemented through State Agricultural Universities and National Research institutes spread all over India. Under this scheme, nucleus planting material of high yielding varieties of different spices as per their agro climatic suitability are produced for supply to other agencies for further multiplication and distribution among farmers.

Solarized potting mixture in combination with nutrients and biocontrol agents was evaluated for production of vigorous disease free rooted cuttings of black pepper. Plants raised in solarized potting mixture had better growth than plants rose in non solarized potting mixture (soil, sand, and farm yard manure 2:1:1 proportion). Among the various treatments, plants raised in solarized potting mixture with recommended nutrients (urea, superphosphate, Potash and magnesium sulphate 4:3:2:1) showed significant increase in number of leaves (5.3), length of roods (20cm), leaf area (177 cm2), nutrient contents

and biomass (3.7g Pl-1). The results indicted the superiority of solarized potting mixture for reducing the incidence of diseases besides yielding vigorous planting material\(^\text{39}\).

India is the largest producer, consumer and exporter of spices. It has over 1.8 million hectares of land under cultivation of spices. On an average, the country produces about 2.5 million tones of spices of which about 93 percent are consumed in the domestic market and only 7 percent are exported. India produces over 60 different spices, valued at more than Rs.5,000 crores. Till a few years ago, India dominated the global spices market, now estimated at 5 lake tones and valued at $ 1.5 billion (Rs.4,5000 crore), with a 95 percent share\(^\text{40}\).

Shukla. Y.R. et. al\(^\text{41}\), found that Ginger occupies the prime position amongst summer season vegetables after tomato, capsicum, cucumber and French bean. The production and productivity of ginger crop is far below due to lack of proper management practices, long duration of crop, poor resource base of the farmers and lack of knowledge to exploit the situation. Till date, around 70 to 75 percent of ginger growers of Sloan district apply only FYM as organic


fertilizer irrespective of the requirement of soil or the crop. In a survey, it has been reported that the farmers are not using nitrogen, phosphorus of potassium as fertilizer for over the last 20 years.

India is likely to emerge as a leading global spice processing hub in about 10 years, according to V.J. Kurian, Chairman, Spice Board. India’s spice exports, expected to amount to $575 million in the current fiscal (2007-08), will breach the $1 billion-mark next year. The country plans to set up over half a dozen spice parks in major growing centers, besides regional quality control laboratories in Mumbai, Chennai, Delhi and Guntur. According to Kurian, production this year is expected to jump by 10 percent from last year’s four million tones42.

India produced an estimated 3.4 million tons of spices on a planted area of 2.5 million hectares (ha). The country is by far the largest producer of spices in the World. India produces a diverse array of spices, some in very large quantities. Approximately one-third of Indian spice production and planted area is for chilies, grown for their color and pungency. A broad range of varieties comprise the more than one million tonnes of India’s chilies output. Other spices grown in very volumes include turmeric (some 650,000 tonnes), garlic (520,000 tonnes), ginger (315,000 tonnes), and an array of spice seeds,

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42 Update, “India to emerge as global spice processing hub” www.SDicesboard.com
including coriander (320,000 tons) and cumin (205,000 tonnes). India is the world’s largest producer of each of these spices. India is also a significant producer of black pepper and cardamom and a relatively small producer of a broad group of other spices (including vanilla, cloves, nutmeg and cinnamon). Spices are produced in all of India’s 28 states or territories.

According to R.P.Gupta, Garlic is the most important commercial spice or condiment and is consumed almost all over the country. About 14.56 million tones of garlic is produced in the world from about 1.13 million hectares area (FAO, Year 2005). The total area and production of garlic in India as per NHRDF estimates during the year 2005-06 is 0.11 million hectares and 0.56 million tones.

A field experiment was conducted by A.Nagaraja. et.al., during kharil season of 1996 and 1998 to evaluate the efficiency of fungicides for the control of ripe fruit rot of chilli. Fruit not caused by colletetrichum campsite was effectively controlled and higher yields were contained with three sprays of kitazin @ 0.15% given as an interval of 15 days commencing from appearance of the disease. Chilli (capsicum annual) is grown all over India having 75 percent of

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its area and production in the states of Andhra Pradesh, Karnataka and Maharashtra. Chillies are widely used throughout the tropics and are one of the major ingredients of curry powder in the culinary preparations.

Kumaresan and Baskara\textsuperscript{46} have made an attempt to study the effect of thrips damage on cardamom price structure. They studied the relationship between damage and the prevailing market price of the cardamom capsules. The study was conducted from the auction centre at Vandanmettu, idukki District, Kerala. The study indicated that the present thrips damage and intensity coriander-efficient of thrips damage and number of capsules / kg directly influenced the price of cardamom in the auction centre in the case of the Alleppy Green Bold (AGB) grade whereas in the case of the Alleppey Green Extra Bold (AGEB) grade the number of capsules / kg along directly influenced the price structure of the cardamom.

Peter, Nybe and Sujatha\textsuperscript{47} found that India is the homeland of many spices, but productivity of many of the spices is low when compared to other competing countries. India has lost its competitiveness for pepper, cardamom ginger, fennel and fenugreek

\textsuperscript{46} Kumaresan and Baskara, “Effect of Thrips Damage on Cardamom price structure”, Spice India, November P. 9.

due to low productivity and high cost of production. India can sustain and recapture the international market by attaining reduction in unit cost of production by increasing productivity.

Arunachalam and Wimpelpessy\textsuperscript{48} presented that the major reason for the shortfall in Indian production and export of cardamom were the lack of scientific support to the farmers, high cost of production, low productivity, strong domestic demand and non-competitive prices. This study also indicated that the average annual productivity of cardamom in India ranged from 65 to 180 kg depending on the monsoon and seasonal and timely rain. Exports of turmeric in 2008-09, despite the global economic recession coupled with higher prices of the commodity consequent to short supply, are expected to cross the set target of 50,000 tonnes in quantity and Rs.160 crore in value.

Total shipments during April - February of last financial year touched 49,000 tonnes valued at Rs.226.30 crore as against 44,360 tonnes valued at Rs. 137.93 crore in the corresponding period in 2007-08. Going by the trend the total exports would have crossed the target,

\textsuperscript{48} “Cardamom exports to the Netherlands” \textbf{Fact for you}, Vol. 25, No.5, February, pp. 21-23.
official sources told Business Line. The average unit value in 2008-09 has shot up to Rs.46.18 area kg from Rs.31.09 area kg in 2007-08 due to short supply.\(^{49}\)

Many of the spices that India grown and export find easy markets internationally. But it is not that easy these days on account of stiff global competition. The short cut to win competition is to raise the quality of the product exported. With this in view the Spices Board has taken up area programme to reach the farmer in their growing tracts. Meeting thousands of farmers, the campaign officials interacted with farmers, farm labourers and communicated to them the necessity to stick to scientific post harvest practices to get rid of contamination and infestations. It was an experience gaining exercise in area way for its helped in gathering the live styles and the problems of the farmers\(^{50}\).

Pepper happens to grow best in the kind of soil along India’s Malabar coast - a loamy, red “late rite” soil produced by the decaying rock, laden with iron and other minerals. So it is not surprising that the world’s best pepper comes from this region - Tell cherry pepper, which is grown north of Kochi and Malabar pepper, once known as

\(^{49}\) The Hindu, Business Line, Thursday, 16th April 2009.

\(^{50}\) P.S. Sreekantan Tharapi, “Chillies and Seed Spices Quality Appeal Campaigns in Andhra Pradesh, Gujarat and Rajasthan” Spice India, Vol.22, No.4, April 2009, p. 4.
Alleppy pepper, which is grown to the south. Along the coast, vines in homestead plots clamber up the trunks of palm and eucalyptus trees. In the inland valleys, it is cultivated in commercial plantations and in the high hills, pepper can be found under shade trees, merrily growing alongside coffee, tea and cardamom at elevations of 3,000 feet.\textsuperscript{51}

V.Sankar. et.al\textsuperscript{52}, reveals that garlic (Allium Sativum L) is one of the important spices cum vegetable crop commercially grown in India. It is also important foreign exchange earner for India. It is used in various processed forms like, powder, paste and pickles. It has very good medicinal property also India, in spite of being a major garlic producing country, has very low productivity of 4.07 t/ha. The reason for low productivity of garlic are unawareness of the farmers about improved varieties, climatic, soil, agronomic practices, pest and disease management and improper post harvest management practices.

Sudha\textsuperscript{53} found that horticulture comprising fruits, vegetables, flowers, medicinal and aromatic crops, plantation crops, spices, coconut and cashew with 15.71 million hectares and a production of 152.7 million tonnes, has emerged as a core sector in India over the

\textsuperscript{52} V.Sankar, K.E.Lawande and P.C.Tripathi, “Fertigation Studies In Garlic”” Spice India”, Vol.22, No.4, April 2009, p. 10.
last two decades. This sector contributes to about 24 to 28 per cent of agricultural GDP, provides employment for around 19 per cent of the country’s agricultural work force.

A marketing system can be considered physically efficient if its four functions (transactions, storage, transport and processing) are performed close to the minimum possible cost under the circumstances. The commission agency system in marketing of chillies at Odanchatram is generally working well. The commissions agencies have extend considerable effort to chillies marketing and in fact, some of their efforts in assembling and selling have been very successful.\(^\text{54}\)

The dynamics of changes in the export trade was analysed through the estimation of markov chain transitional probability matrix. The probability of retaining the previous market share and gain or loss is interpreted by studying the diagonal and off diagonal element of the matrix. The transitional probabilities for dry chillies showed that “other countries group” was the most stable importer of Indian dry chillies such as Belgium and gulf countries. Other countries group gained 87.7 per cent from “Bangladesh and 28 per cent from USA in

addition to retention of 34.7 per cent of its own share in the previous period. Similarly, Nepal retained about 47 per cent of its previous share in exports of dry chillies from India..\textsuperscript{53}

A study of Shiva shankar and Baswaraj Baskar\textsuperscript{56} found that in India, chillies are grown in almost all states of the country. The important states growing chilli in terms of production are Andhra Pradesh (49 per cent). Karnataka (15 per cent) Maharashtra (6 per cent) West Bengal (5 per cent) Rajasthan (4 per cent) and Tamil Nadu (3 per cent). The total production in the country is around 8.4 lakh tonnes from 8.2 lakhs. During (2002-2003), Karnataka stood next only to Andhra Pradesh with an areas of 1.61 lakh hectares, followed by Maharashtra and Tamil Nadu. Even though the area under chillil is comparatively more in Karanataka (1.431 hectares) than Maharashtra and Tamil Nadu. But karanataka production of chillli (4.37 lakhs tonnes) is found to be less as compared to the state of Tamil Nadu mainly because chilli is cultivated extensively under rain fed conditions of Karanataka.

Turmeric is now produced in some of the Caribbean nations, Guyana at present does not figure in the turmeric map of the Americas, through it is told that the Indians settlers once used to grow


the spices in the country, perhaps in connection with the Hindu religious customs and beliefs. It is true that the country is suited for turmeric production as it is blessed with a well distributed annual rain fall of 2800 mm and a mean temperature of 28°C without any extremes plus a fertile soil. Realizing the scope of turmeric production in the country efforts are now a foot to revive the crop.57

Exporters registered with the spices board are encouraged to participate in all the international fairs which the spices board is taking part every year. In fact, the presence if the representatives of the exporters in all the fairs make the participation more effective and fruitful. The list of the various fairs for participation have been compiled and approval sought from the Ministry of Commerce based on importance from point of view of trade. Spices exporters desirous of participating in the various fairs during 2009-2010 are requested to inform their decision in advance to facilitate making arrangements.58

The Spices Board took up an ambitions programme for replantation and rejuvenation for pepper in Idukki District of Kerala. The programme was approved by the National Horticulture Mission under the Department of Agriculture and Ministry of Agriculture, Government of India for replantation/ rejuvenation of pepper in

Idukki district for five years from 2008-2009. The scheme is to replant old and senile as well as diseases affected pepper vines with diseases from high yielding pepper vines. The scheme was effectively implemented by the Spices Board using its field set up in Idukki district.\textsuperscript{59}

According to Peter\textsuperscript{60}, among spices, black pepper is the king. It is the most popular and the widely used spice in the world. It has extensive culinary uses for flavouring and preserving processed foods and is important medicinally. South West India is the traditional home of black pepper, particularly the Western coastal regions of South Peninsular India (Malabar Coast). Black pepper was the first oriental spice was introduced into the Western World and was well known among the Greeks and Romans. In the middle ages, pepper assumed great importance in Europe. Its use along with other spices resulted in revolutionary changes in Western cooking to improve flavour and taste.

Turmeric is one of most important spice crops of India. During April- November 2008 the export of turmeric was 50,000 tonnes of value 16,000 lakhs rupees. The crop is grown in Andhra Pradesh, Orissa, Tamilnadu, Assam, Mahaarashtra and West Bengal. Turmeric may severely affected by both rhizome and foliar diseases.\textsuperscript{61}

\footnotesize{59} Major Pepper Development Programme for Pepper in Idukki District, Kerala, Spices India, Vol.22, No.6, June 2009, p. 4.
\footnotesize{60} K.V.Peter, “Spices for Wellness”, Spices India, Vol.22, No.6, June 2009, p. 7.
The export of processed spices like curry powder and spice oils and oleoresins, mint products and spice providers account or 58 per cent of the total exports. Major items Viz. spices oils and oleoresins and curry powder and blends have shown substantial increase both in terms of quantity and value as compared to last years. During the year 2008 - 2009, a total quantity of 13,250 tonnes of curry powder and blends valued Rs, 163.75 crores has been exported as against 11,500 crores in 2007 - 08 registering an increase of 15 per cent in volume and 18 per cent in values.62

According to T.M. Mathew63 an Indian spice dares backs to the beginning of the human civilization. There are references about spices and their uses in the Vedas (6000 B.C) by Manu, the law giver in 4000 BC, by the Baby lonians and Assyrians (around 3000 BC), and the old Testament (1000 BC) of the bible (Siva Raman and Peter, 1999). Traditionally India was known as land of spices and the West Coast of India, Known as the Malabar Coast with very active trade relations with ancient Egypt, Greek, and Rome. (Ravindran 2000) India is blend with varied agronomic and climatic conditions which helps in growing a number of spices.

Spices exports during July 2009 has been 40,625 metric tonnes valued Rs. 460.73 crores as against 38,975 metric tonnes valued Rs. 480.07 crores in July 2008, registering an increase of four per cent in volume. However the export value has declined by four per cent. The major items, which have shown positive trend during the month, are chilli, cardamom (small), turmeric, nutmeg & mace and garlic.64

India is the world largest producer, consumer and exporters of seed splices. The spices export foring 2008-2009 has been 470520 tonnes valued Rs. 5300.25 crores ( 1168.40 million US$) Chilly contributed 20 per cent followed by cumin ten per cent, pepper eight per cent turmeric five per cent and fennel and fenugreek one per cent each. The exporters of seed spices have shown an increasing trend both the quality and value as compared to last year. The export of major seed spices like cumin, coriander, fennel and fenugreek has recorded all time high both in volume and value during 2008-2009. the exports of seed spices together accounts for 28 per cent in value of the total export of coriander seed during 2008-2009 has been 30,200 tonnes valued Rs 203.79 crores.65

The spices board stall was located at area vantage point with maximum visibility from two sides. The colourful posters depicting Indian spices, which formed area beautiful backdrop with the range of spices arranged in glass panels, attracted the curious onlookers and businessmen. There were several visitors ad businessmen from Sudi Arabia besides from Dubai, Kuwait, Sudan and Jordan. Most if then expressed that Indian cardamom is the vest in terns of flavour and aroma.  

Garlic is one of the important spices cum vegetables crop commercially grown in India. Garlic (Allium Saltivum.L) is classified in the family Amaryllidaceous as the decorative plants Amaryllis Ormirhogoum, and the edible crops onion , chive, leek. Garlic is revered medicinally and as an essential culinary ingredient. It has area characteristic pungent, spicy flavour that mellows and sweetens considerably with cooking. India ranks second after china in world’s garlic production.

Lingaraja revealed that, Bydagi chilles are long, thin,deep in red colour, hotter and tasty other than in Byadagi, farmer in other areas are also now growing this crop. The research activities at the

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University of Agricultural sciences, Dharwad has helped in developing new varieties of Byadagi chillies. But the traditional variety is being grown only in areas of Hubli taluk.

The few black pepper cines available in the country are probably of early unorganized introductions from the nearly Brazil. These plants are seen trailed on area variety of assorted live or even dead standards on the backyards without any proper care. Cultivar diversity is very low and cultivars have no any identity/ name. Cultivation is mow initiated.\(^{69}\)

The export during September 2009 is also higher in both quantity and value when compare to the export during August 2009. the export in September 2009 has increased by 11 percent in quantity and 12 per cent in value as compared to August 2009. The current export figures show that the changes in export as compared the last year is narrowing down months after months.

Based on the past the studies reviewed in this chapter, the present study on the “impact of trade liberalization on the marketing of spices in Tamil Nadu” is analysed in the forthcoming chapters.