CHAPTER – II

REVIEW OF LITERATURE

Though spices have much economic, historic, political and cultural significance, the academic community seems to have neglected the sector. This may be the reason why very few researches have been carried on the marketing aspects of spices. Another important point is that majority of the published research works do not have much significance now due to the rapidly changing cultivation practices and trading environments. However the researcher went through the available published works to obtain a clear theoretical background for the present study. The findings of the literature review are briefly produced below.

Besides, cardamom cultivation has increased employment opportunities while it restricts the migration from hill areas to Terrain. **Ranjit and Deward (1975)**, in their field document have reported that cardamom cultivation has increased the economic status of the cardamom farmers. Cardamom requires cool shade and abundant moisture in the soil but it does not tolerate water logging \(^1\).

**Jose (1978)** in his thesis ‘Problems and prospects of India’s major spices’ has made an overall study about the problems and future possibilities of our major spices, pepper and cardamom. This study analyses the problems in the agricultural sector in general and about the problems in the spices sector in particular. He found that pepper and cardamom have considerable significance in the economy of the State of Kerala and the problems of the sector will affect the foreign exchange reserves of India.\(^2\)

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**Thomas (1984)** in his report 'Standardization techniques for retention of green colour in pepper', explored the possibilities of maintaining green color in processed pepper by standardizing the techniques. The study has covered the market requirements of pepper particularly in European countries and proves that Europeans always prefer to get spices in their natural form and color. The findings of the study are still significant because the methods suggested are highly helpful to increase the export volume of processed pepper.

**Suresh (1984)** in his thesis 'Economics of cardamom plantation in Kerala', has made a detailed cost benefit analysis of cardamom cultivation, which throws much light into various cost components of cardamom production, processing and marketing. This study was primarily intended for analyzing the economics of cardamom plantation with special reference to high ranges in Idukki district. Various statistical tools have been applied to have a microscopic view of the cost components and the impact of each such element in the net revenue of cardamom plantation. However this study is more or less silent about the marketing problems of cardamom.

**Joseph (1985)** in his thesis 'Analysis of the marketing and price formation of cardamom in Kerala' studied the economic aspects of cardamom production and marketing by making a detailed analysis of the marketing methods, channels and price formation. The prime objective of the study was to observe the scope of cardamom plantation and its significance in the economy of Kerala, particularly in Idukki district. He describes the process of price formation of cardamom, using

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various economic parameters. In his opinion the price formation of the cardamom in the international and domestic markets is based on global supply. The peculiar nature of the auction system prevailing for cardamom has also been discussed in detail.  

**Swaminathan (1985)** in his thesis 'Trends in the area, production and export price of cardamom in Kerala, Tamilnadu and Karnataka', made a comparative study of the trends in area, production and productivity of cardamom in the three states of Kerala, Tamilnadu and Karnataka with the basic objective of projecting the probable future share of these states in the international cardamom market. He estimated an annual growth rate of 2.34 percent for cardamom. The researcher has also studied the trends in the export price of cardamom. The thesis focuses on the regional comparison of cardamom production and growth so that all other aspects of the field were left untouched. 

**Baby Jacob (1985)** in his thesis 'Export development of Kerala', studied the export performance of Kerala, analysing the trends and problems and made a comprehensive analysis of the then prevailing export policies of the Government. The performance of pepper and cardamom, being major export items were evaluated well and remedial solutions were recommended to the problems of major export items including pepper and cardamom. 

**Gopalakrishnan Nair (1987)** in his thesis, 'Problems and prospects of marketing cardamom in India and abroad', outlines the problems of marketing
cardamom inside and outside our county. The study has highlighted the future market possibilities abroad and suggested measures for increasing the export volume and enhancing the prospects of cardamom in India and abroad. He has analyzed the production problems of cardamom and made some important suggestions to solve such problems to a great extent.\(^8\)

**Muhammed Sajjad (1987)** in his report 'India's cardamom trade with Middle East' clearly points out the changing pattern of India's cardamom trade with the Gulf countries. With the support of statistical data, economics of cardamom cultivation and the future prospects of the sector have been discussed in detail. According to him, high price of Indian cardamom is the reason for declining export volume and competitive pricing strategy is the only solution to the problem.\(^9\)

**Gopinatha Menon (1988)** in his thesis 'Processing, procurement and marketing of pepper with special reference to co-operative sector', has made a detailed study of the various aspects of production, processing and marketing of pepper. He gives a detailed description of the cultivation practices, processing, channels of marketing, domestic and international market, problems and suggestions for improving the return of the producers and traders. However, the study was mainly intended to analyze the role of co-operative societies and to observe the future scope of cooperative sector in the field of pepper marketing. The

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study has not considered marketing problems of individual cultivators and traders.\textsuperscript{10} 

Meena Benjamin (1988) studied the problems and prospects of exports of value added spices in general and spice oils and oleoresins in particular, in her project report named 'Problems and prospects of Exports of Spices Oils and Oleoresins From India'. The study has covered the processing of spices, oils, major market trends in export, problems, export incentives, review of the export volume of producing countries, and distribution problems of value added spices. The study gives some valuable indications about the future possibilities of spices relating to processing and value additions.\textsuperscript{11} 

Sangraula (1989) states that at the beginning, cardamom was used by people only as the spices and goods for puja but now it is valued as important exportable cash crop. The cardamom farming can be a major source of getting foreign currency into the country. He states that hilly districts are suitable for cardamom farming. It restricts the migration from hill to Terrain\textsuperscript{12}. 

Among various economic sectors, the government of Nepal has indicated that agriculture is one of the most important economic sectors. In fact, the government of Nepal also considers the agriculture sector as the lead sector for the economic development of the country and with this sector; it is aimed to reduce the percentage of poverty to 14 percent in the nation. Also, the government's agricultural plan (20 years) seeks to increase the amount of agricultural loans,

\textsuperscript{12} Sangraula I P, (1989), Nepalma Alainchi Kheti PAC.Dhankuta
and expand irrigation areas. Furthermore, agro-economic growth rate and food availability per person will be increased to 3 percent from 0.5 percent and to 426kg from 270 kg respectively. Both eighth and ninth plans have declared large cardamom as one of the major agro-commercials for the economic development of the Nation (Sharma, 1999) but it has not mentioned policies and programs specific to cardamom\textsuperscript{13}.

Ramesh (1990) in his thesis 'Volume of trade and its impacts on the economic development of Kerala', made a comprehensive study of the role of trade in Kerala's economy, including the structure and composition of Kerala's foreign trade and the interstate commodity flows. Spices are prominent export products and hence their trade significance has been discussed in detail. This study points out the scope and potentials of the spices of Kerala and also highlights the comparative advantages of spices over the other agricultural products of Kerala.\textsuperscript{14}

Limbu (1996) proclaims that in Nepal from the early history of large cardamom, mainly four cultivated types existed such as Ramsey, Golsey, Sawney and Ramla. He mentioned that these types of large cardamom are locally called by different names in different places. According to Mandal (2063 B.S), though the farmers in the eastern part of Nepal have been cultivating cardamom for a long time now, they have not been able to identify the types of cardamom they are cultivating. In any event, Ramshahi, Golshahi, Saune and Dambarshahi are the types that are recommended for cultivation. However the researcher concluded that among different types of cardamom, Ramshahi, Golshahi,


Dambarshahi, Saune, Chibae and Kantidar are the types that are being cultivated by farmers in Nepal.\textsuperscript{15}

\textbf{FFTC (1998-2007)} states that cardamom, a perennial cash crop requires cool, moist upland environment. Jiméé (2013) has mentioned that shadow and humid land is necessary for cardamom plantations. Temperature of (8 to 20)°c is ideal for cardamom cultivation and favorable rainfall is 600 to 5000mm. Limbu (1996), opines that the large cardamom plants are usually grown in moist evergreen location at the altitude between 700 to 2000 meters above the sea level. Frosts and hailstorm are injurious to plants. According to him the lower altitudes of cooler area and higher altitudes of warmer areas are found well suited for its cultivation.\textsuperscript{16}

However, cardamom is more commonly used as spices. Because of its attractive scent, it is used in tea, coffee, bakeries, meat, and drinks for flavoring. It can be used for Ayurvedic preparation. It can be the good medicine for diseases like Asthma. Some people use it as a symbol of invitation in religious functions. The elevation; moisture and shade are the fundamental factors for successful cultivation of cardamom. Hence, the cardamom area mainly lies in the higher elevations of the eastern mountains of Nepal (Sharma, 1999).\textsuperscript{17}


\textsuperscript{16} FFTC (1998-2007), Sustainable agriculture in upland areas of Asia. Food and fertilizer technology center.

Forest gardens of cardamom are lower in biodiversity value than wild forests, as cardamom replaces a number of under-story species. This can affect not only the availability of other plant species but also of animal species feeding on such plants. *(Foppes et al 2000)*.

**Sharma et al (2000)** mentions that Large Cardamom, a plant native to Sikkim Himalaya has been a boon to the mountain people of the area. It is a perennial cash crop grown beneath the forest cover on marginal lands.

A good Himalayan example of a cash crop is the large cardamom (*Amomum subulatum*), which perfectly meets the mountain specificity requirements. This is a perennial cash crop grown under tree cover as agroforestry, providing the mountains with both agricultural and forestry benefits. The practice helps in soil and water conservation while maintaining tree biodiversity. Environmentally, it provides the supporting services contributing to both regulating and provisioning roles, most desired for both the mountain communities and downstream communities. *(Thapa and Sharma (2003))*.

**Damodaran (2000)** in his paper ‘WTO agreements on agriculture, implication for Indian plantation sector’, studied the consequences and probable impacts of WTO agreements on Indian plantation sector. It has special significance in the context of globalization particularly in the spices sector because spices are export oriented agricultural products. The AMS (Aggregate Measures of Support) and QRs (Quantitative Restrictions) imposed as a result of the WTO agreements.

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was analyzed- The developments in various rounds of WTO negotiations were analyzed in detail and arrived at the conclusion that there are some issues of concern to our country particularly to the spices sector because the problems of pesticide residue was ever a problem to the Indian spice which may get aggravated and there is a possibility of developed nations using some of the provisions of WTO agreements against our country.\textsuperscript{21}

\textbf{Sreekanton Thampy (2002)} in his article `Bio terrorism and changing trade patterns`, substantiates the impacts of `The Public Health Security and Bio Terrorism Preparedness & Response Act of 2002 passed by the United States of America consequent to the attack on world trade centre and Anthrax events. Bio terrorism is the intentional use of infectious biological agents or germs to cause illness, used as agents of terror. He establishes that U.S.A is the prime importer of Indian spices and so any restriction imposed by them will have definite impacts on the Indian spices exporters and consequently the sector as a whole. The legislation will compel the companies exporting food materials to U.S. to reveal their formulations and mixes and even the sources of materials. The article is particularly relevant because it underlines the urgency of changes hi the production, processing and marketing of spices to survive in the export market.\textsuperscript{22}

It was found during the literature survey that there are number of research publications and other published works relating directly or indirectly to spices but lacking an exclusive study of the marketing problems of the spices was specifically noticed. This is definitely a gap in the field of research and the attempt of the


researcher was to fill this gap by exploring the cultivation and marketing problems of spices with special emphasis on cardamom. The present study is thus envisaged as an effort to go deep into the cultivation and marketing problems of cardamom, domestic traders and exporters with the basic aim of projecting the future of Indian spices and device strategies suitable to regain the glory of Indian spices in the international market.

**Fernando (2003)** says that the correlation between cardamom and the lush green forest is ironic. Cardamom is undergrowth, which needs the shade of forest canopy for its survival. However, the cultivation necessitates clearing of the shrubs and undergrowth, which prevents the growth of saplings of the large canopy trees. Again, the fuel wood for kilns used for cardamom's processing is another contributory factor to the destruction of forests.

Similarly **Magraw (2004)** says that intensive management in cardamom plantations appears to be the greatest factor, causing lower species diversity in the forest. Management directly influences the entire plant community. Diversion of water to cardamom plantations makes the habitat more favorable to mesic species. The ground cover in cardamom plantations is thinned several times yearly to reduce inter specific competition and increase flower production, pollination and hence food production. This keeps the vegetative ground cover comparatively low and depletes species richness. Thus the cardamom plantations are not viable conservation alternatives for primary forest.

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23 Fernando V, (2003). Knuckles threatened by ‘Cardamom invasion’
Buckingham (2004) mentions that cardamom has a market in Northern Vietnam and Southern China for its culinary and medicinal use. It contains a number of aromatic and active ingredients. Cardamom is mainly used as spices. It is also used in Ayurvedic preparation and is used as symbol of invitation to neighbors and relatives in any marriage or religious functions. It has medicinal values for different diseases. Its seeds are useful even in scorpion sting and snakebites Limbu (1996)²⁵.

According to the University of Edinburgh (2005), cardamom cultivation requires that the farmers select a suitable forest patch, clear the lower levels of vegetation and replace them with cardamom plants. Once the cardamom plants are fully grown, the farmers must continue to weed the area, removing all other competing vegetation, preventing any natural reproduction of the forests²⁶.

According to ANSAB (2005), there are sixteen varieties of cardamom in the world. Among them five types of large cardamom are in farming practices across Nepal - Ramsey, Golsey, Sawney, Chibesey and Dammersey. Cardamom oil is a precious ingredient in food preparations, perfumery, health foods, medicines and beverages. Cardamom seeds serve as an astringent, tonic, appetizer and diuretic²⁷.

Ansari and Thapa (2005) states that Ramshahi, Golshahi, Dambarshahi and Saune are the types of large cardamom that have been found cultivating in Nepal.

Reyes et al (2006), affiliated with Viikki Tropical Resource Institute, Tanzania proclaims, Cardamom growing in natural primary forest is not sustainable in the long run. It also accelerates forest clearance. Since farmers argue that forest areas already thinned for cardamom cultivation are easier to clear completely afterwards for annual crops. Cardamom crops are still economically so tempting that sustainable cultivation method available should be considered seriously to prevent further land degradation and aggravation of poverty. A combination of well managed multiple use of agro forestry with protected natural forests and additionally, perhaps with intensively managed forest plantations, could contribute both to better livelihoods and to better management of biodiversity that depends on primary forest and is still directly threatened by cardamom cultivation.

Sharma (2006) mentions that the large cardamom is a perennial cash crop grown beneath the forest cover on marginal lands. It is widely cultivated under the nitrogen-fixing Himalayan alder (Alnus nepalensis), a practice modified by people to maintain soil fertility and increase productivity. The capsules (fruit) of cardamom produced are used widely as a spice condiment and contain about three percent of essential oil rich in cineole. This plant also possesses the medicinal value. The net income from large cardamom is higher than from other cash crops.

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throughout the period. The income from the large cardamom has been substantially higher than for other livelihood options. It has been the boon to the people of Sikkim for a very long time\textsuperscript{30}.

Jose et al. (2006) in their paper 'Geographical differences in spice use', describe the geographical differences in spice use giving clear indications for improving export market of Indian spices. They argue that spice consumption is directly correlated to the temperature levels and cultural background of the country. Hot climate often produces large microbial population in foodstuffs. Since spices have anti-microbial properties, use of spices is more in tropical climate. The spice use per recipe is more in such countries. The paper also establishes that spices are powerful against all microorganisms causing toxic effect to foodstuffs and their use is indispensable in reducing food born illnesses and poisoning.\textsuperscript{31}

Maitra (2007) believes that cardamom is a very versatile spice having a wide range of culinary and therapeutic uses. It is an indispensable part of daily cooking rightly called the “queen of spices”\textsuperscript{32}.

Radha (2007) in their book ‘Marketing Management’, describes the normal channels of distribution of agricultural as well as industrial goods. In their opinion, the specific peculiarities of agricultural commodities make their distribution more difficult and so the normal channels followed for industrial products cannot be fully resorted for agricultural commodities. Multiplicity of intermediaries, loss of weight and volume in transit, lack of organization, forced village sales, perishable


nature of the produces, multiplicity of market charges, adulteration and market malpractices, inadequate storage, transportation and communication facilities etc are noted as the other major problems in agricultural marketing.33

Pillai R.S.N. et al. (2008) in their book 'Modern marketing', classified markets of agricultural commodities into different groups on the basis of specific characteristics and highlighted the major differences between the marketing procedure and features of manufactured goods and agricultural commodities. They have noticed the major defects of agricultural marketing and suggested remedial measures for solving such defects and problems. They have also described the importance of international marketing along with the major activities involved in the process including market and product selection, market entry, distribution channels, pricing in global markets, international marketing research etc.34

John and Roy (2008) in his thesis 'A study of the export trends of Kerala', evaluates the growth, commodity components and destinations of export trade including spices. He has identified the current practices and practical problems of exporters in general and studied the trends in the export markets of pepper and cardamom. The study encompasses all the major items of export from Kerala and depicts the declining export growth rate of Indian pepper and cardamom in the global market.35

George et al. (2008) in their article, 'cardamom development past and present', describe cardamom development in India, considering past performance and future possibilities in the world market. They observed that the emergence of

Guatemala as a major producing country is real threat to Indian cardamom. The major constraints in the Indian cardamom industry also have been investigated. The study also compares the area, yield, production, and productivity in India with that of Guatemala and suggests various schemes and programmers required to renovate the sector.36

**Sreekantan Thampy (2008)** in his paper organic the only way, advocates that organic farming is the only way for the escape of Indian spices from the impending failure. He aptly points out the changing attitudes of the developed nations towards agricultural products from developing countries, which may turn out to be harmful to our spices sector also in future. In his opinion the judicious exploitation of technology and adoption of eco-friendly cultivation practices will help us to regain the glory of Indian spices as in ancient periods.37

**Thomas (2008)** in their paper ‘A brief review of development of spices in India during post independent era’, have made an evaluation of development of spices in India during post independent era. This study covers the historical background of Indian spices and the achievements in the development of spices after the independence. It further says about the emergence of Cardamom Board and subsequently the Spices Board. A comparative study of developmental programmers during different five-year plan periods also has been made. It gives some important observations, conclusions and recommendations for the revival of the Indian spices sector.38

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Sreekumar (2009) in his project 'The test launch study of Milma Cardamom Milk, discusses the effectiveness of test launching of cardamom milk by Milma. The report reveals that the project was a failure. Defective marketing system with inadequate dealer push, inadequate distribution network, inadequate advertisements etc. are highlighted as the major reasons for the failure. Had the project been a success it would have been highly beneficial to the cardamom producers. The conclusion of the report indicates that even though the test launching was a failure the opportunity still prevails as untapped.39

Ojha (2009) has noted 21 types of cardamom. Among the different types of cardamom Ramshahi, Golshahi, Dambarshahi, Saune, Chibe and Kantidar are the types that are frequently used for farming in Nepal. He mentions that thirty different types of Ayurvedic medicines can be prepared by using large cardamom. According to him, large cardamom is also used in preparing different medicines for different diseases like Kamalapitta, Bath, Damkhoki etc. Similarly, it can be used for preparing energy producing and blood purifying medicines40.

Sivadasan (2010) in his paper 'Action plan/ proposals to evolve suitable strategies and adopt a common stand on the food safety standards in pepper’, compares the quality standards for pepper prevailing in major importing countries of black pepper. The ASTA, ESA and ISO specifications were analyzed and he has pointed out the urgency of the adoption of different methods by the producers and traders to fulfill such international cleanliness requirements. He also suggested

various action plans and suggestions deserve special significance in the context of world trade agreement under WTO because the provisions of WTO insist all the countries producing agricultural commodities to follow the minimum quality standards.41

Alagappan and Manoharan (2011) in their article 'Production of pepper in India, a global perspective’ evaluated the production of pepper in India in the global perspective. The study includes global production and consumption pattern of black pepper in different countries. They ranked the productivity in different origins and India has the least productivity ranking. The study arrives at a conclusion that India has much growth potential in the field but the present level of performance is extremely inadequate.42

Mandal (2011) says that abundant moisture and shady area is needed for cardamom cultivation. Trees like utis, malaejo, chilaunae and siris are used to provide shade. Suitable temperatures for their cultivation ranges from (10-25) degree Celsius and (2000-2500) millimeter annual rainfall is required43.

Niraula (2011) also mentions that though different types cardamom are found in Nepal, from a business point of view, Ramsahi , Golshahi, Chibeshahi, Saune types are mostly found to be cultivated. According to him, the same species of cardamom are known by different names in different places. On the basis of their nature, the large cardamom cultivated so far, in Nepal have been four types namely Ramsey, Golsey, Saune and Ramla. These types are locally called

by different names in different places. The common names used in Sankhuwasava district are Ramshahi, Golshahi and Chibeshahi. Other varieties are Dambershahi and Kantidar. Its cultivation is done in the sloppy areas. Even though its cultivation can be done at the altitude between 1800 to 6700 feet, from a business point of view, it is appropriate to cultivate this crop at the altitude between 3000 to 5000 feet\textsuperscript{44}.

Jimee (2012) has concluded that cardamom cultivation is flourishing especially in eastern part of Nepal and the living standard of the cardamom farmers have been gradually rising\textsuperscript{45}.

In Nepal, Ramshahi, Golshahi and Dambarshahi are the types of cardamom that is cultivated most by the farmers (Krishi Suchana tatha Sancharkendra, 2012)\textsuperscript{46}.

Peter (2012) in his article ‘Making of the global leader’, asserts a bright future of Indian spices in the light of the statistics relating to the global production and demand of the spices. He estimates an annual growth rate of 11 percent for black pepper and 5 percent for cardamom. In his opinion the global village in the new millennium will witness perceptible changes in the food habits, dietary patterns and values, which would offer ample scope for the spices sector, provided we are able to produce and supply as per the changing quality requirements of the buyers. He also analyzed the emerging scenario of the spices and the main production constraints. He also remarked about the spices based novel products. In

\textsuperscript{44} Niraula G S, (2011). “Large or Nepal Cardamom”. Alainchi tatha suho bikas karyakram, Khumaltar, Lalitpur.
his opinion the major policy decisions taken by the Central Government will help to boost production and export of spices in the years to come.47

**Sudarsan M (2012)** in his article 'White pepper a simple value addition to pepper', analyzed different methods of value addition to pepper for better prices and exploiting foreign market opportunities. The paper says about different methods of white pepper production, which are retting, steaming and milling. These methods are much labour and time saving when compared with the traditional methods. According to him, conversion of black pepper into white pepper is a simple value addition process, which the producers themselves can apply for making the pepper production more profitable.48

**Indira (2012)** in her article 'Indian cardamom handicapped by poor productivity', argues that unstable area and poor productivity are the major drawbacks of Indian cardamom. She substantiates the observation with a comparative analysis of the productivity of the major cardamom producing countries, India and Guatemala. Export trends points out the dismal performance of Indian cardamom during the last decade and highlights the urgency of immediate steps to regain the global market share.49

**Mandal (2013)** mentions that cardamom is used in religious rituals and for Ayurvedic medicine preparation. It is used in medicine like *dashamularista birendramodak* and *chawanprash*. It is also used in cake, biscuits, coffee and meat to add flavour.50

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