Chapter 2

Review of Literature

The available studies and literature relating to the topic under study are reviewed and highlighted briefly in this chapter.

**Kumaresan** and **Baskara (1991)**, 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 collecting detailed information on cardamom from the auction centre at Vandanmettu, Idukki District, Kerala. The study indicated that the present thrips damage and intensity co-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 alone directly influenced the price structure of the cardamom.

**Premkumar** and **Madusoodanan (1995)**, in their study on “Immature Fruit Fall in Small Cardamom,” covering the 1994 season immature capsule shedding, found that a single factor or a combination of factors is responsible for the immature fruit drop. The important factors that contributed to the immature fruit drop discussed in this study were a) pollination, b) varietal characteristics, c) nutritional deficiency, d) pathological conditions, e) un-favourable climatic conditions, g) physiological imbalance, h) use of bio-fertilizers and use of the plants. The study concluded that though many reasons can be attributed to the widespread immature fruit shedding, the most important factors would be lack of pollination. In *Cerana indica*, the main contributor to the process of pollination in small cardamom, recorded a meager presence in the plantations during 1994 flowering season mainly due to the viral diseases seen affecting the maintenance of sufficient bee population, selection of suitable varieties, application of balanced
dose of fertilizers and Znso M Zn deficient soils. The study suggested timely
application of pesticides and fungicides at correct dosage, irrigation during dry
seasons, etc measures that the farmers may adopt to combat this menace.

Korikanthimath and Venugopal (1996), in their study on “Cardamom
production-a success story” studied the research and promotion attempts made at
the NRCS Cardamom Research Centre, Appangala, Kodagu, Karnataka, and some
selected plantations. The study revealed that, by intensive scientific management,
cardamom production can be stepped up significantly. Based on this lead, a
strategy for intensive cultivation was tested in farmers’ fields. In one of such
demonstration plots (viz., M/s, Chettoli Estac, Chetialli Worth/Coorg) wherein the
scientific method of cultivation was adopted from 1982 onwards, a modest yield
of 290 kg/ha was obtained in 1984 (2 years after planting) followed by the highest
yield of 1625 kg/ha recorded in 1985 (3 years after planting). This was followed
by 400, 715 and 800 kg/ha of dry cardamom in 1986, 1987 and 1988, i.e., 4th, 5th
and the 6th year after planting respectively. Because of the adoption of scientific
cultivation practices, it was possible to produce an average of 778 kg/ha of dry
 cardamom which is 13 times more than the national average yield of 60 kg/ha. The
recurring cost of cultivation of cardamom for an average crop yield of 750 kg/ha
was Rs.30,000/ha which works out to be Rs.40.00 for production of one kg of
 cardamom. The net returns excluding the cost of cultivation would be
Rs.60,000/per hectar per year. The results showed a vast potential for increasing
the yield at a relatively reduced cost of production.

George and Mathew (1998), in their study “Cardamom Development Past
and Present” found that the cardamom plantation industry had passed through very
tiring periods in the past on account of lack of attractive price, problems of land
tenure, remoteness of plantations with its attendant transport problems, lack of
scientific advances in the method of cultivation, ravages of pests and diseases and
vagaries of nature. The cumulative effect of these factors had resulted in the
neglect of plantations and a steady decline with unthrifty production for many years in the past. Highlighting the recent efforts, the study reported that presently the Cardamom Board has developed promotion programmes such as: a) production and supply of quality planting materials, b) cardamom replanting scheme, c) irrigation and land development programme, d) supply of plant protection equipments, e) supply of cardamom sieves and construction of eco-friendly cardamom driers and, f) regular quality improvement training for the up-gradation of the quality of cardamom and for post harvest improvement.

George and Koshy John (1998), in their study on “Future of Cardamom Industry in India”, observed that India has been the world’s largest producer of cardamom until 1979-80. The situation has since been changed and Guatemala is now the world’s leading cardamom producer and supplier accounting for about 30 per cent of the global trade while Indian production in the last two decades has shown a fluctuating trend. Guatemala’s production has been on a steady increase. They found that the future of cardamom in India depends on introduction of scientific cultivation which would help reduce the cost of production and also enhance the marketability within the country and abroad. The development programmes now being implemented by the Spices Board are for productivity increase resulting in further increase in production from the existing area. The increase in production will be absorbed if the present trend in consumption continues. Field studies indicate that the domestic demand is likely to be 9,500 MT by 2000 AD and 12,500 MT by 2005 AD added up with the possible increase in exports by taking up more propaganda and publicity programmes in the international markets.

Korikanthimath (1998) has taken up a study on “Crop combination and Yield Pattern in Coffee Mix Cropped with Cardamom”. The compatibility and yield pattern of robusta coffee and arabica coffee both as mono and mixed crop with cardamom was studied in Kodagu, Karnataka. Robusta coffee mix cropped
with cardamom recorded 1988 kg/ha as against 2626 kg/ha as a mono crop. Cardamom as a mixed crop with robusta coffee in double hedge recorded the highest yield of 1400.5 kg dry capsule/ha during the fourth year of its planting and the average of seven crop seasons was 672.30 kg/ha. On an average the gross and net returns were more by 5.17 and 4.06 times in mixed cropping respectively compared to mono cropping. The Net Present Worth (NPW) and Benefit Cost Ratio (BCR) were higher in mixed cropping by 232.72 and 74.18 percent respectively which indicated the profitability of mixed cropping of robusta coffee with cardamom over mono cropping of robusta coffee. Dry yield per plant and per hectare of arabica coffee as a mono crop was significantly higher compared to the mixed cropping with cardamom. Dry cardamom capsule yield was the highest during the third year of its mixed cropping with arabica coffee. There was reduction in the yield of arabica coffee per hectare in mixed cropping with cardamom as the population of arabica coffee retained was exactly half by removing an alternate row (1134 plants/ha). The encouraging yield of cardamom obtained in the mixed cropping systems, greatly compensated the total productivity and returns per unit areas as revealed by economic analysis. Wet return was higher by 303.1 per cent in the mixed cropping as compared to mono cropping.

Korikanthimatfa and Padmini (1999) studied the “Efficient Management of Ever Green Forests for Cultivation of Cardamom (Elettaria Cardamom).” An attempt is made in this paper to cover various facets of agro forestry system with cardamom viz., existence of cardamom in a natural forest flora, impact of shade trees on cardamom, ideal shade trees, shade regulation to suit cardamom cultivation, recycling of organic wastes, production potentialities of cardamom with economic analysis, diversification of cardamom with coffee (mixed cropping), afforestation of cardamom with coffee (mixed cropping), afforestation with redgum for climate in cardamom growing tracts. This study also found the
future thrust and concluded with the need for creating awareness amongst planters in maintaining adequate shade and stopping indiscriminate felling of trees. The study also suggested identification and screening of fast growing shade tree species for planting in vacant and open areas, afforestation and bringing up of the low lying water logged areas for profitable cultivation of cardamom, as the effective strategies for cardamom cultivation.

Rajagopal and Padmanabhan (1999) conducted a study on cardamom and cardamom products with the objective of analyzing the problems in cardamom marketing in the absence of scientific and modern cultivation methods. They found India has recorded a decline in the production of cardamom unlike Guatemala and Tanzania where there is an increase of cardamom production in recent times. They found that various uses of cardamom, in particular medical, food, and other uses. Cardamom has excellent food value. It is low in fat and high in protein, iron and vitamins A, B and C with distinctly sweet and moderate pungent aroma. It is widely used as a flavouring agent in food, meat, beverages and liquor. The other uses of cardamom include health care products and beauty aid cosmetics and perfume deodorants. The study also indicated that the failure of cardamom industries as a whole and that of India, in particular mainly depended upon its food and nonfood industries and the marketing of those diversified products.

Madan and Tamilselvan (2001), in their study on globalization and spices economy of India discussed the impact of globalization on world spice industries in general and Indian spice industries in particular. The UR-GATT agreement necessitates reduction of distortions in agriculture trade and gradual establishment of fair and free market oriented agriculture trading system by adopting the disciplinary rules with respect to market access, domestic support, export competition, sanitary and phytosanitary measures and other trade related agreements. The above discussions brought out the need for different measures to
reduce the impact of free trade or globalization on spice economy of the country. The retail price of spices in the consumption centers is ruling high, while net price crashed to the disadvantage of producing countries. So it was felt that the need of the hour was that the producing countries, instead of competing with each other to produce and export the same product, should specialize and regularize the production to maintain stability. Import of low grade spices from other countries for re-export under the Indian banner should be discouraged to maintain the name and fame earned by Indian spices in the world market and also introduction of low cost mechanical equipments is essential in on farm processing of spices to reduce the level of aflotoxin and foreign matters. Introduction of potential new crops from traditional areas to nontraditional areas in the state was also stressed by the study.

Chitra (2002) conducted a study on “Economics of cardamom production with reference to Bodimettu in Them District”, with the objective of studying and understanding the characteristics of sample cardamom planters in Bodimettu and identifying and analyzing cost and return in cardamom cultivation. Based on the findings, the study suggested that there should be integrated pest management in cardamom cultivation. It means small and marginal cardamom planters may adopt integrated pest management to reduce pest related crop loss. The cardamom planters shall share the ideas, experiences among themselves regarding cardamom and they may be instructed to make use of bio-fertilizers instead of chemical fertilizers. The government may provide concessions to the cardamom exporters by means of duty free exports.

Raja (2002) conducted a case study of Pattiveeranpatty Coffee cum Cardamom Growers’ Cooperative Bank. The major objectives of study were analyzing the business performance of the bank in tune with its objectives, and ascertaining the causes for the success or failure in the business performance of the bank. Based on the findings, the study suggested that the management of
Coffee cum Cardamom Growers" Cooperative Bank should take efforts to improve its profitability by reducing the expenditure. The bank should take efforts for increasing the local sale of cardamom and undertake processing of coffee. The valuable suggestion was that the bank should arrange for proper marketing facilities to the members.

Koshy John and Venkatesan, (2003), in their study on “A composite look on cardamom technologies in Idukki District” revealed that Indian Small Cardamom Production has touched the highest production around 12,000 tonnes from 73,000ha in 2002-2003. The contribution from Idukki District was around 8000 tonnes from 32,000ha. The following technologies were observed in Idukki District for small cardamom cultivation: soil and climatic requirements, planting materials shade regulation, planting, and cultural operations methods, weed control, peaking and mulching, trashing, earthing up, soil and water conservation, irrigation management, fertilizer application, time and method of application, general tips on fertilizer application and bee management. The major observation of this study was that there was more application of inputs, particularly chemical inputs beyond the recommended levels.

Arimachalam and Wimpelupessy (2005), in their study “Investigating the possibility of Indian Cardamom Regain its Enviable Status” 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 indicate that the average annual productivity of cardamom in India ranged from 65 to 180 kg depending on the monsoon and seasonal and timely rain.

Arunachalam and Wimpelupessy (2005), in their study on “Cardamom Exports to the Netherlands” analysed a) the cost of raising the cardamom plantation, b) the annual cost of maintaining the plantation, c) calculation of
profits, and d) financial viability of cardamom plantation. The study adopted survey method and suggested that

1. To increase the present level of cardamom exports, the Government of India should work closely and meet the challenges commercially to improve marketing efforts internationally.

2. To increase India’s share in the Netherlands, a well-planned and sustained effort is necessary as many countries are entering spices production and offering cardamom at low prices.

3. As the Netherlands is becoming more health-conscious, it is important to improve the quality of cardamom exported from India.

4. Farmers must be encouraged to use bio-fertilizers and adopt bio-friendly and eco-friendly techniques of cultivation to increase cardamom production.

Peter, Nybe and Sujatha (2005),13 in their study on “touching an all-time high” 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 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.

Tharian George and Joby Joseph (2005)16 conducted a study on “Value addition or value acquisition? Travails of the plantation sector in the era of globalization” with the twin objectives of highlighting the core structural issues and for appropriate policy interventions. Accordingly, the paper is organized into four broad sections, viz., (i) status of the plantation sector and its regional dimensions, (ii) basic issues; (iii) tariff barriers and cheaper imports; and (iv) policy perceptions. The basic issues confronting the plantation sector were
broadly classified into two: (i) the operational local issues related to the proximate causes of the crisis and responses since the late 1990s; and (ii) the structural issues footed in the asymmetries evolved in the sector over time and accentuated in the context of trade policy reforms since the early 1990s. The major findings were: (i) steady increases in the cost of inputs without commensurate improvements in the yield and prices; (ii) the resultant erosion in profit margins or even losses; and (iii) a strategic vacuum of potential avenues for survival within the production sector in the context of growing market uncertainties.

Sivaprakasam and Gunaseelaprabhu (2006)\(^\text{17}\) conducted a study on “Recent Trends in Marketing of Cardamom” with the objectives of analyzing the recent trends in area under cultivation, production and productivity of small cardamom in Kerala, Karnataka and Tamilnadu. The study was descriptive in nature based on secondary data. They found that profits can be increased by increasing productivity, (ii) farm mechanization will be promising since there is shortage of agricultural labour in Kerala, (iii) modern practices, use of appropriate technologies and practices in the manufacturing, packaging were lacking and adoption of modern techniques was essential for boosting the competitiveness. (iv) futuristic marketing will protect the commodities from adverse price fluctuations. The following were the conclusions of their study: (i) produce clean spices: (ii) develop the new varieties of small cardamom (iii) adopt innovative technologies in the processing and marketing of cardamom; (iv) reduce the cost of production; and (v) encourage the export of graded varieties through authorized organizations: (vi) the international market and improve the domestic consumption for Indian cardamom by branding and certifying by the Spices Board.

Sivaprakasam and Gunaseelaprabhu (2006)\(^\text{18}\) studied the “plights of cardamom growers” in the Western Ghats of South India. The study found that (i) the cardamom planters are facing the problem of falling prices because of improper trade practices of the individual auctioneer’s who dumped huge quantity
of cardamom in the market imported from other countries., (ii) The cardamom growers are affected due to the continuous fall in prices, (iii) Sourcing cost of agricultural inputs coupled with high wages of labour had pushed up the cost of production making the cardamom cultivation non-remunerative. (iv) The vagaries of monsoon is another problem faced by the farmers. It affects the farmer’s schedules in the production and marketing of cardamom. Even the favourable monsoon also affects the cardamom growers due to the lack of production and market planning. They suggested that the systems developed for communication of information in relation to global as well as domestic market trends can reduce the plight of cardamom growers and encourage them to continue the cultivation of cardamom.

Thus, most of the studies have concentrated on cardamom production and marketing in a particular geographical area. No attempts have been made to study the plight of the cardamom growers especially in cardamom production and marketing practices covering the cardamom growing areas of Kerala, Karnataka and Tamilnadu. Hence the present study.
References


32


