A STUDY ON MARKETING OF GREEN CARDAMOM WITH REFERENCE TO CUMBUM CITY (THENI DISTRICT) – TAMILNADU

PROJECT REPORT

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In Partial Fulfillment of the Requirements for the Award of the Degree of Master of Commerce

Department of Commerce

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MAY 2023

CERTIFICATE

CERTIFICATE

I certify that the thesis entitled **"A STUDY ON MARKETING OF GREEN CARDAMOM WITH REFERENCE TO CUMBUM CITY (THENI DISTRICT) – TAMILNADU"** submitted for the degree of **Master of Commerce** by Ms. P. Namitha is the record of research work carried out by her during the period from December 2022 to May 2023 under my guidance and supervision, and that this work has not formed the basis for the award of any Degree, Diploma, Associate ship, Fellowship or other Titles in this institute or any other University or institution of Higher Learning.

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Signature of the

Head of the Department

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Signature of the Supervisor

Signature of the Director

DECLARATION

DECLARATION

I declare that the thesis entitled " A STUDY ON MARKETING OF GREEN CARDAMOM WITH REFERENCE TO CUMBUM CITY (THENI DISTRICT) – TAMILNADU" submitted by me for the degree of **Master of Commerce (M.Com.)** is the record of work carried out by me during the period from December 2022 to May 2023 under the guidance of **Dr. K.Abirami M.Com., M.Phil., SET., Ph.D., Assistant Professor, Department of Commerce with professional Accounting**, Avinashilingam Institute for Home Science and Higher Education for women, Coimbatore and has not formed the basis for the award of any Degree, Diploma, Associateship, Fellowship, Titles in this institute or any other University or other similar institution of Higher Learning.

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CHAPTER I

CHAPTER-I

INTRODUCTION

"Spice" is a word which came from the term "spices" which is given to different types of varies food stuff during the Middle Ages, and also all aroma foods. It is also used as an ingredient in incense or perfume. Even during this modern age people use it as a additive agent in foods and drinks. Spices have been used for ages and its marketing and trade have been going on for period. During the ancient times spices from India and Eastern Asia were very demanding during the ancient times. By the use of procession they used to travel from India to China to exchange spices. And also they go through the ports of the Mediterranean Sea and to the marketplaces to Athens, Rome and other places. The uses of spices have become a sign of status during the year of 1200. Later on spices from India became well known for its medical quality and it was used to upgrade health. There are about 63 or more spices in India.

Which are grown in India due to its good condition. In this modern age other countries have started to produce spices by creating suitable environment for the plants in order to satisfy their local consumers and to earn more money. But those spices are not logical as the spices that naturally grow in India. Those spices are less powerful and less perfumed compared to Indian spices. Cardamom is an ancient spice, which exists in India for over thousands of years. Its scientific name is Genius (rhizomatous herb) Elettaria cardamom which is derived from the Tamil name for cardamom seeds. Its origin comes from the Western Ghats in southern India. Since it has many medical values the ancient Greek physicians thought highly about cardamom.

And even two Greek physicians Hippocrates and disharmony noted its medicinal values, specially identifying its digestive aid. During 126 CE cardamom became a high demand in ancient Greece and Rome, it became a famous luxury business that it was eligible for import tax in Alexandria. During the 16th century, the Portuguese people started involving in this trade, but it was not a major interest of trade compared to other countries. During the 19th century this trade came into practise again that it started to flourish in Europe Cardamom is a spice that comes from various plants from the ginger family. Just for its strong impression and aroma a little of it would go very long. Cardamom is mostly used in

Indian and eastern cookery for its unique impression. It is also considered as one of the oldest spices.

Cardamom is wide spread in almost all parts of the world because of its multiple usages. It has different names in different places for example in Tamil its name is Elam, India it is known as chhoti elachi, French, German and Spanish it is called as cardamom, in Burmese it is known as phalazee, in Chinese its known as ts'ao-k'ou, in Indonesian it is known as Kapulaga, in Malay it is known as buah pelage, in Sinhalese it is known as enasal and in Thai it is known as grawhn or kravan. The people of these places are one's who uses cardamom mostly to get its impression into their foods and also for other medical purposes. There are also false cardamom and true cardamom. The false cardamom pods are disgusting compared to the true pods impression. But the leaves and flowers of the false cardamom plant can be used for its aroma and for cake decorations or salad decorations as it is edible.

Most cultivators show interest in growing false pods because they can grow at any temperature not like the true cardamom, because the true cardamom grows mostly in places that are hotter. The false cardamom doesn't give the same impression and aroma compared to the true cardamom. Black cardamom (large) has much larger pods, unlike green cardamom (small) that is comparatively very small in size. The output of cardamom is influenced exclusively by the physiographic and the specific climatic parameters of the region. Hence, the depletion of natural forests, constant encroachments, weather change, water shortage, drought, flood, soil erosion etc. Conversion of forests to other forms of land management has been the general trend in mountainous areas. The land management in the catchments and watersheds of mountainous region like the Himalaya essentially relates to the ecosystem services that they provide to the mountain people and downstream populations.

Cardamom is a traditional and important spice produced and exported from India. The percentage share of cardamom to the spices export during 1980-81 was 31.30. But since 1980-81 the share shows a declining trend, and during 2001-02 it was only 3.74 per cent (CMIE, 2002).Every time spices export from India, small cardamom creates record, with consignment of 5680 tonnes value at Rs. 609.08 Crores. It is more than 3per cent of the last financial year spices export. The current study analyzed the cardamom farmer's individual's life, culture, values concludes about their typical livelihood. Cardamom is one of the component in culinary, soft beverages, medicinal purpose both in allopathy and homeopathy

and alcohol. Cardamom impression coffee is famous in Saudi, Oman, Dubai, and the like. During 1979-80 India was the pioneer in cardamom production, but of late, lost its domination to Guatemala.

As the international market becomes increasingly competitive, only 'high productivity' and 'low cost of production per unit area' would ensure the survival of cardamom industry in India. Cardamom is the most expensive spice next to saffron. It is marketed globally in the form of whole fruits and to a lesser extent as seeds. The cardamom grew as wild spice in Western Ghats of India till 19th century. Now a day it is a commercial produce. The main alien consumer in the global market is Middle East. Chinese medicine in China, Ayurveda in India, Pakistan, Japan, Korea and in Vietnam. In Ayurvedic medicine cardamom is used to take care of disorders of the stomach and urinary system, asthma, bronchitis and heart tribulations. Among the different districts, Idukki leads both in area (33076 ha) and in production (9286 tonnes) (Kerala Agricultural Statistics 2016).

Unfortunately, cardamom cultivating in Idukki district is really suffocating due to a variety of problems, generally the production and marketing problems. Any upward trend in the price of cardamom should benefit the producer. Spices like cinnamon, cardamoms, whole garam masala, mint, cilantro, etc are highly used for doing special aroma and taste in the recipes. Indian cooking and tasty recipes are widely prepared with these spices. They are not just ingredients but in fact they have been used for doing magics and creating the charm, impression and aroma in Indian food.

1.1 STATEMENT OF THE PROBLEM:

Finance Support:

The absence of adequate funding is the main issue with cardamom cultivation. The equivalent of over 90 per cent of the livelihood of the cardamom farmers is based on agricultural income. Thus, their main source of revenue spent on their personal costs. As a result, the amount of inputs needed for the effective cultivation of cardamom. Similarly, the price of fertilisers has doubled. No bank is willing to provide a loan without security. There are many procedures and paperwork that must be completed in order to obtain a loan.

Organic cultivation method:

In this method is also used for cultivation cardamom. The usually used organic cultivation methods are Neem cake, waste leaf and such other natural wastes, i.e., earth worm compost. The study reveals that 100 per cent of growers are using the organic cultivation method for their cultivation of cardamom. Most of the growers reported that if cultivation method alone is used next year's production will show a decreasing trend and may also cause loss of their plantation due to several diseases. At the same time growers are aware about the side effect of fertilizers which may cause for different types of diseases for men and decreases the fertility of land etc. They argue that cardamom cultivation must be transformed into organic cultivation method.

Fertilizers:

Fertilizers are applied in the month of June/July. Generally used chemicals are Phosphorous, Potash and Factomphose 20-20-0-15. Fertilizers are applied twice in a year. The second part is given in the month of December/January. Most of the growers use both fertilizers and organic manure simultaneously.

Irrigation Source:

There is no particular irrigation scheme for the cultivation of cardamom. No financial aids are provided from the Spices Board to up-bring water requirement and to upgrade cardamom cultivation and so they have to depend on the natural facilities in the form of ponds, check dams etc.

Absence of Open Market:

All most of the farmers are of the opinion that they are not getting reasonable price for their product because of the auction method. The farmers have no voice in deciding the price of their product. They argue that if there is open market it will lead to high price for their product.

Labour Problem:

Lack of labours and high wages demanded by the labourers are other problems faced by the farmers. For marginal farmers, works are done by themselves and for large and small farmers hired labourers are needed. But now-a-days, the number of labours is very less and they demand high salary.

1.2 OBJECTIVES: `

1. To examine the development and trend of India's cardamom yield, area and production.

2. To research the challenges that the Theni district cardamom cultivators' is facing and to recommend solutions.

3. To examine price behaviour and price transmission mechanisms.

4. Examine the difficulties brought on by various drivers of change, especially ecological and climate change.

5. To suggest actions that can be taken to boost the output, efficiency and financial success of cardamom plantations in the Theni district.

1.3 Cardamom Producing Countries in the World:

1. Guatemala	6. Bhutan
2. Indonesia	7.Tanzania
3. India	8.Grenada
4. Nepal	9.Sri Lanka
5. Laos	10.Malaysia

In the global food business, there is a rising need for caraway fruits and oil. There are numerous varieties. Currently, the main countries where caraway is grown commercially are Finland, Russia, the Netherlands, Germany, Morocco, Egypt, Canada, and the United States. The long summer days appear to produce the fruit with the largest concentration of

aromatic oils, and it is considered to benefit from northern climates. Caraway is becoming a more significant crop in Finland and Canada as a result of these factors. Moreover, it is grown in Kashmir and the northern Indian Himalayan foothills.

India produces two different kinds of cardamom. As it is not traded on the futures market, the first type, which is the huge one, is not very significant. The country's north eastern region is where it is grown. The second kind is made in the states in the South and is sold on the futures market. Most of these are grown in Kerala, Tamil Nadu, and Karnataka. Only 7mm quality was previously traded in exchanges in accordance with future market regulations. Later, though, the rules were modified, and today 6mm quality is also traded on the markets. The only more costly spice after saffron is cardamom. There are two primary types of Indian cardamom:

Cardamom from Mysore and Malabar. The Mysore cultivator is more aromatic because it has higher amounts of cineol and limonene. Up until the 1980s, India was the top producer and exporter of cardamom in the world. Guatemala became the top producer and exporter of cardamom by the 1990s. From August and February is when cardamom is primarily harvested in India. After two years of cultivation, cardamom reaches the yielding stage. In addition to Bodynaikkanur and Cumbum in Tamil Nadu, the main physical markets for cardamom are Kumily, Vandenmodu, Jhekkady, Puliyarmala, and Vandenmodu in Kerala. Cardamom is mostly produced in Kerala, which produces up to 60 per cent of global output. Almost 25 per cent of the world's cardamom is produced in Karnataka, majority of Tamil Nadu's cardamom is produced in Ooty, which accounts for between 10 per cent and 15 per cent of the state's total production. In addition to India, Guatemala also produces over 2,200 tonnes of cardamom. Nonetheless, India produces close to 1,000–2,000 tonnes of cardamom annually. Guatemalan cardamom is of inferior grade, thus it may still be found for less money.

1.4 SCOPE OF THE STUDY:

More than fifty different types of spices are produced and sold in India, and they are exported to more than 150 different nations worldwide. The breadth of the study is just too broad to include a discussion of the issues and future prospects of all these spices. The two spices known as the "King" and "Queen" of spices, pepper and cardamom, respectively, are dominant both in terms of importance on the global market and in home production.

All other spices pale in comparison to pepper in terms of value because it accounts for more than 40 per cent of the export revenue from spices. In Kerala, cardamom is a significant plantation crop with significant economic significance and an unusual marketing strategy. The majority of the production and trade of spices is made up of the value-added items produced by these two. Thus, only these two types of spices are the subject of this investigation.

Similar to this, practically every state in India produces one or more spices, but Kerala plays a notable role in the production of pepper and cardamom. It should be noted that Idukki, Theni, and Wayanad District generate the majority of the high-quality spices produced in Kerala. As a result, the current study focused on the cardamom production in the Theni districts at Cumbum valley.

1.5 RESEARCH METHODOLOGY:-

RESEARCH GAP:

A review of about 30 studies has been done. These studies have a general connection to marketing strategies used to cardamom species with relation to Theni District of Cumbum valley. Aspects like how different conditions affect the growth of cardamom species in Cumbum, however, were not the subject of many studies. Also, the questions were modified, and the respondents were asked to identify their demographic groupings and other data. Marketing and distribution have a vital part in the profit of cardamom species. In order to get deeper awareness of the study field and gain more depth insights into it, a small attempt is made below to examine papers that are pertinent to the issue. The examination of the literature that follows identifies a critical research gap that the thesis will address. Also, the research is proud to have the concept to begin his or her investigation in Theni District in southern India. The current study is an effort to fill in the missing data and knowledge for future development.

LOCATION OF THE STUDY:

In 1997, Theni District and Madurai District were split off. Theni district has a total population of 12,45,899 in 2011, with 5,75,418 living in the rural areas and 6,70,481 in the cities. The figures were 10,93,950., 5,02,109 and 5,91,841 in 2001, respectively. The area is

well-known for its "Cumbum Valley," or the rich fields irrigated by the River Periyar. The district is bordered on its western side by the state of Kerela, on its eastern side by Madurai District, on its northern side by Dindigul District, and on its southern side by Virudhunagar District.

There are two revenue divisions in the district: Periyakulam and Uthamapalayam. The district is divided into five taluks: Andipatti, Bodinayakanur, Periyakulam, Theni, and Uthamapalayam. Moreover, the district has six municipalities, including one parliamentary district (Periyakulam) and five assembly districts (Periyakulam, Andipatti, Theni, Bodinayakanur, and Kambam). The district consists of 98 villages, 22 town panchayats, and 6 municipalities. The district once consisted of a single revenue division (Periyakulam) made up of three taluks. Bodinayakanur and Theni taluks, making a total of five taluks, were created after the division, and Uthamapalayam and Bodinayakanur taluks formed another revenue division.

❖ RESEARCH DESIGN:

A research design is the set of methods and procedures used in collecting and analyzing measures of the variables specified in this research. The research design used for this study is a systematic approach. The data has been collected through a standard questionnaire from respondents.

❖ SOURCES OF DATA:

The information for this study has been collected from Primary data and Secondary data.

• Primary Data:

Primary data has been collected from selected individuals cultivators by administering questionnaire method.

• Secondary Data:

Secondary data has been collected from various Journals, Magazines and Websites.

❖ **PERIOD OF STUDY:**

The period of the study has been from January 2023 to May 2023.

❖ **SAMPLE SIZE:**

A total of 100 Cardamom cultivators have been chosen as sample respondents from Cumbum valley for the study.

❖ **SAMPLING TECHNIQUE:**

Convenience random sampling technique has been adopted to select sample respondents for the study.

1.6 STATISTICAL TOOLS USED:

ANOVA:

The one-way ANOVA compares the means between the groups and determine

whether any of those means are statistically significantly different from each other.

T-test:

The t-test is any statistical hypothesis test in which the test statistic follows a Student's t-distribution under the null hypothesis.

Chi-Square:

The chi-square test statistic can be used to evaluate whether there is an association between the rows and columns in a table. Chi-square is used to determine the association between two or more variables.

Percentage Analysis:

Percentage analysis is the method to represent raw streams of data as a percentage for better understanding of collected data.

Descriptive Statistics:

Descriptive statistics are used to represent numerous data in simpler form. It provides a summary on the collected samples and measures used in the study.

1.7 LIMITATIONS OF THE STUDY:

• The sample size of the study is limited to 100 respondents, due to time management and it is enough to meet the requirements of statistical analysis.

• The scope of the research is limited to the Theni district at Cumbum valley.

• The accuracy of the data depends on the answers given by the respondents.

1.8 CHAPTER ARRANGEMENT:

This study is classified into five chapters

- **Chapter I - Introduction**

Chapter One deals with Introduction, Statement of the Problem, Objectives, Countries that produce cardamom in the world, Scope, importance, Location of the study, Limitation of the study, Research Methodology and Chapter Scheme.

- **Chapter II - Literature Review**

Chapter Two consists of the review of literature relating to the previous year of study.

- **Chapter III - Overview of the study:**

Chapter Three provides the detailed explanation about individual cultivators.

- **Chapter IV- Analysis of the study**

Chapter Four Exhibits the analysis and interpretation of the data using statistical tools and with the help of data collected from the respondents.

- **Chapter V- Finding, Suggestion, and Conclusion**

Chapter five provides the summary of findings, suggestions and conclusion of the study.

CHAPTER II

CHAPTER II

REVIEW OF LITERATURE

Sreekumar- 1990 *"*The test launch study of Milma Cardamom. Milk *",* discusses the effectiveness of test launching of cardamom milk by Milma. The researcher has used both primary and secondary data, Period of study was from 1998 to 2002, Stratified random sampling was adopted for the collection of data from the sample respondents**,** Various statistical tools like averages, percentages, ratios have been extensively used for the cross examination of the data. Chi-square test is used as the prime tool for analysis. The study shows that, He says that though the study was a failure for now there is still more time in the future that will create many more opportunities for better production and that will be beneficial to the producers.

Sreekumar- 1990 "The test launch study of Milma Cardamom. Milk" ISSN: 2320-5407 Int. J. Adv. Res. 9(11), 722-733.

P.K. Varghese- 2007 "Economics of Cardamom Cultivation in Kerala" 36 sample growers were selected for the study. Secondary data is used for analysing the export competitiveness of cardamom. The data collected relate to the agricultural year from June 2003 to May 2004,Stratified random sampling design is made use of for the study. The study shows that, In this paper an attempt was made to estimate the costs, returns and relative profitability of cardamom based on the primary survey conducted in selected centres and to make an analysis of export competitiveness. The researcher has employed a more scientific method of cost estimation. The empirical results emerging out of the analysis portrays that the cost of cultivation is significantly high in Kerala with regard to this major spice.

P.K. Varghese- 2007 "Economics of Cardamom Cultivation in Kerala" Vol. 62, No.1, Jan.-March 2007.

Collins Marfo Agyeman-2014 "Consumer's Buying Behaviour towards Green products: An Exploratory study" The Data have been collected from 200 respondents, The researcher has used both primary and secondary data, data collection period for the study was undertaken from September 2013 to December 2013. Regression and Chi-square Analyzes tools were applied . The study shows that , Consumers want eco-friendly products from those

manufacturers which have positioned themselves as eco-friendly manufacturers and it is important that manufacturers aiming at developing new eco-friendly products ensure that those products perform competitively.

Collins Marfo Agyeman-2014 "Consumer's Buying Behaviour towards Green products: An Exploratory study" ISSN 2319-345X Vol. 3, No. 1, January 2014.

Dr. Meghna Sharma-2016 "Various Green Marketing Variables and Their Effects on Consumers‟ Buying Behaviour for Green Products " The Data have been collected from 238 respondents, The researcher has used Secondary data, Percentage tools were applied. The study shows that, the companies involved in "green washing" should be punished to give a message to the consumers that they can reply on the claims of the green companies as the "fake green companies" are taken at hand. The marketers also need to focus on the demographic profile of their consumers. Most of the marketers don't consider it vital while making green marketing strategies. But the variation in age, income, gender and literacy creates a big difference for the unbeatable implementation of the green marketing strategy. So, it is of utmost importance to do a thorough invest irrigation of the impact each factor has on consumers‟ mind before going ahead with the planning of the marketing strategy.

Dr. Meghna Sharma-2016 "Various Green Marketing Variables and Their Effects on Consumers‟ Buying Behaviour for Green Products " ISSN 2278 – 2540 Vol V, Issue I, Jan 2016.

Dr. C. Muniyandi and R. Mohan- 2016 "An Economic impact of Cardamom processing and Marketing companies in India" The Researcher has used Secondary data, The period of two years from 2010 and 2011. Percentage for the purpose of analysis and interpretation of the data. The study shows that, A firm came maximum price its value through increasing its minimum price level, an increase of amount beyond the limit will not necessary result in the quantity remained unless, quantity sold and quantity arrived an increased for quantity and market. The company position needs to examine and eliminate the unnecessary in all months.

Dr. C. Muniyandi and R. Mohan- 2016 "An Economic impact of Cardamom processing and Marketing companies in India" ISSN: 2319-961X; Vol. 4- Mar 2016.

C. Vijayabanu, V. Vijayanand, M. Pratheesh, R. Jenifer Rethna Ranjitham and M. Naveen Sharma-2016 “A Study of Marginal Cardamom Farmers Livelihood and Occupational Pattern in Munnar District ”The Data have been collected from 75 respondents, The researcher has used primary data. simple random sampling method were applied. The study shows that , about the livelihood of cardamom farmers in Munnar District, we conclude that income has a greater impact on livelihoods and this study also will help the government to provide effective measures to improve their livelihood.

C. Vijayabanu, V. Vijayanand, M. Pratheesh, R. Jenifer Rethna Ranjitham and M. Naveen Sharma-2016 “A Study of Marginal Cardamom Farmers Livelihood and Occupational Pattern in Munnar District ” ISSN:0974-6846; 0974-5645- Vol 9 (27), July 2016.

Sujith T S-2017 “Awarness of Green Marketing and Its Influence on Buying Behaviour of Consumers in Kerala ”The Data have been collected from 100 respondents, The researcher has used both primary and secondary data. Statistical methods are used in this analysis such as mean and standard deviation. The study shows that, Price is the attribute that consumers reflect on when making a green purchasing decision. Consumers are less likely to purchase green products if they are more expensive. So efforts should make to reduce the price of eco-friendly products. Constant efforts should be taken by Government, NGOs, Educational institutions, Business houses and society at a large to create awareness among the consumers to promote eco-friendly buying behaviour.

Sujith T S-2017 “Awarness of Green Marketing and Its Influence on Buying Behaviour of Consumers in Kerala ” ISSN : 2321-3418 Vol 5 Issue 07.

George.M.,& Cherian, E- 2017 “Emergent Global Marketing Challenges for Kerala Cardamom producers vis –a-vis role of the spice board of India” The researcher has used both primary and secondary data. The study shows that, The Spices Board should create new marketing strategies to facilitate new consumer interest in Indian Cardamom. Even though the Spices Board of India has to take care of other Indian Spices, giving the importance and history of Cardamom and the income it brings to the national economy. The Spices Board should give priority to expand the demand of Cardamom in both domestic and international markets by creating awareness in customers and support farmers to produce international quality Cardamom.

George.M.,& Cherian, E- 2017 "Emergent Global Marketing Challenges for Kerala Cardamom producers vis –a-vis role of the spice board of India" vol-1 2017, Emergent global marketing challenges for Indian spice.

Dr Leena Mathew, Princy P Jame-2017 "Problems and Prospects of Cardamom Cultivation in Idukki District " The Data have been collected from 50 respondents, The researcher has used both primary and secondary data. Statistical tools like percentage and average have been used for analysing the data. The study shows that, Cardamom is cultivated in the high ranges of Western Ghats. Elevation, cool climate and high rainfall are essential for good growth and economically viable yield of cardamom. However, it grows profusely under shade with irrigation in low ranges also, Inadequate irrigation facility and unfavourable weather conditions are other problems faced by farmers, which will lead to low productivity.

Dr Leena Mathew, Princy P Jame-2017 "Problems and Prospects of Cardamom Cultivation in Idukki District " ISSN: 2393 – 9125 – Volume 4 Issue 6 June 2017.

Keshav Prasad Shrestha- 2018 "Profitability of large cardamom enterprise in Nepal?: Evidence from financial analysis" The data were collected from 30 randomly selected growers, 10 from each domain in each district, hence total sample were 90. The data were collected during May-July 2017. Stratified random sampling design used off for the study. The sample results, as per the findings of financial analysis as well as sensitivity analysis, we can conclude and recommend that there is no risk and farmers can adopt this enterprise as it is profitable and feasible enterprise. Therefore, cultivation can also be done and will be profitable even in the condition of contract farming.

Keshav Prasad Shrestha- 2018 "Profitability of large cardamom enterprise in Nepal?: Evidence from financial analysis" ISSN: 2661-6270 (Print), ISSN: 2661-6289 (Online); Journal of Agriculture and Natural Resources (2018) 1(1): 76-89.

Avicha Tangjang and Amod Sharma- 2018 "Problem Faced by the Large Cardamom Growers during Production and Marketing: A Case Study of Tirap District of Arunachal Pradesh, India" The Data have been collected from 100 respondents, The researcher has used both primary and secondary data, Mean and standard deviation were applied. The study shows that, It would help the growers to increase the production and productivity of the crop

if the Spice Board of India would lend them help in the form of technology and technical knowhow.

Avicha Tangjang and Amod Sharma- 2018 "Problem Faced by the Large Cardamom Growers during Production and Marketing: A Case Study of Tirap District of Arunachal Pradesh, India" ISSN: 2319-7706; Vol 7 Apr (2018).

Nirajan Bhandari and Thaneshwar Bhandari- 2018 "Marketing and Socioeconomics Aspects of Large Cardamom Production in Tehrathum, Nepal " Simple statistical tool were applied. Parameters such as Descriptive and econometric analyses were used. The study shows that, The productivity of cardamom in the district is influenced mainly by number of active family members involved, farming period, area, intercultural operations, variable cost and depreciated fixed cost. If the large cardamom could be produced using more recent technologies avoiding the diseases and pathogens with known marketing channel and destinations probably this crop could retain the youth migration from hills to various countries in search of employment opportunities.

Nirajan Bhandari and Thaneshwar Bhandari- 2018 "Marketing and Socioeconomics Aspects of Large Cardamom Production in Tehrathum, Nepal " ISSN: 2392-4535; Vol. 4: 79-85; Apr 2018.

Dr. K. Kumar and M. Saravana Kumar - 2018 "The Study on problem and Challenges faced by the Cardamom growers in Tamilnadu". The Data have been collected from 50 respondents, The researcher has used both the primary and secondary data. Co-efficient correlation tools were applied .The study shows that, it is necessary to ensure some kind of stability in price, particularly for the small growers, who otherwise seem to have very little incentive for cultivating the crop. Efforts should be made in improving the productivity, and production and there buy attaining a lower unit cost of production together with implementation of appropriate market development strategies will keep Cardamom industry in the direction for overall growth in the years to come.

Dr. K. Kumar and M. Saravana Kumar – 2018 "The Study on problem and Challenges faced by the Cardamom growers in Tamilnadu". vol - 7 | issue - 12 | sep – 2018.

Dr. K. Kumar, M. Saravana Kumar-2018 "A Study on Challenges of Marketing Strategy and Production Issues in the Perception of Cardamom Growers in Tamil Nadu" The Data have been collected from 100 respondents, The researcher has used both primary and secondary data, Oneway ANOVA tools were applied. The study shows that, India is dominant country in cardamom production and export which means second largest producer of cardamom. They are not only facing production related problems but marketing related problem like low price, influence of intermediaries, lack of government intervention, and so on. Cardamom farmers are facing these kinds of problems. It is causing low level of productivity.

Dr. K. Kumar, M. Saravana Kumar-2018 "A Study on Challenges of Marketing Strategy and Production Issues in the Perception of Cardamom Growers in Tamil Nadu" Vol-04, Issue-09, Dec 2018.

Arianis Chan -2019 "Green Marketing: A Study of Consumers' Buying Behaviour in Relation to Green Products in Indonesia" The Data have been collected from 97 respondents**,** Quantitative method using descriptive and verification approach, Simple linear regression , Person correlation, Significance test, Coefficient of determination, Hypothesis testing tools were applied. The study shows that, These results indicate that consumers of the Re-Kankan bag are individuals who are sensitive to ecological issues, they are aware of their role to environmental sustainability and have a responsibility to participate in it.

Arianis Chan -2019 "Green Marketing: A Study of Consumers' Buying Behaviour in Relation to Green Products in Indonesia" ISSN: 2304-1013 Vol. 8, Supplementary Issue 3.

Nija KC-2019 " Problems of cardamom cultivation in Idukki district, Kerala " The Data have been collected from 600 respondents, The researcher used Stratified Sampling Method. The study shows that , because of the peculiar parameters essential for its growth, the cultivation is limited only to very few pockets in the country, where Idukki ranks the prime position. So, in order to recapture India's past glory in its production and trade, superfluous concern should be given by the government and other responsible agencies to tackle the issues persisting in the cultivation of cardamom. For that, rigorous attempts should be taken to improve its productivity not only through developing high yield varieties, but also through the process of constraint mitigation.

Nija KC-2019 " Problems of cardamom cultivation in Idukki district, Kerala" ISSN: 2455-2070; Volume 5; Issue 1; January 2019.

Indhushre. A –2019 "Dynamics in prices and trade of Indian small Cardamom and its implications on producers" The Data have been collected from 160 respondents, The researcher has used both secondary and primary data, Export and Import of small cardamom for the period from 1970-71 to 2017-18, state-wise and district-wise area and production of small cardamom from 1980-81 to 2017-18. The study shows that, To study the economics of small cardamom marketing, various marketing channels were identified and the marketing costs, margins, price spread and efficiency for each channel were estimated. The study also aimed at analysing the trade performance and export competitiveness of the commodity followed by analysing the implications of changes in prices and trade on producers.

Indhushre. A –2019 "Dynamics in prices and trade of Indian small Cardamom and its implications on producers" (2016-21-027).

Manisha Gadtaula- 2019 "A Study on the production of Cardamom farming of Ilam district, Nepal" The researcher has used primary data . Study period from 18 September 2018 to 9 October 2018. Simple statistical tools were used to estimate frequency, percentage from the collected data. The study shows that, The reason behind this is the multiple uses of cardamom that ranges from flavour enhancer to medicinal purpose. Because of its uses, cardamom has huge demand in international market, particularly Nepali cardamom. Nepali cardamom sets aside from other cardamom produced in the world because of its shape, size, fragrance and taste. The major market of Nepali cardamom is India. India is the sole buyer of Nepali cardamom and thus it has solo buying power over Nepali cardamom making it a monopoly market.

Manisha Gadtaula- 2019 " A Study on the production of Cardamom farming of Ilam district, Nepal" Vol 5, Issue 3 (p 449).

M. Saravana Kumar- 2019 "A Comparative study on Marketing problems of Cardamom Growers with special reference to Tamil Nadu and Kerala" ,The researcher has used both primary and secondary data, The researcher has adopted the random sampling method. The data were analyzed using Percentage analysis, Chi-square test, Anova – oneway and T-test. The study shows that, The cardamom export market can give higher contribution towards the

national economy. The Government should provide the marketing facilities through the appropriate organizations to increase the rate of exports of cardamom especially for Theni and Idukki district cardamom growers and cultivators in the States of Tamilnadu and Kerala respectively.

M. Saravana Kumar- 2019 "A Comparative study on Marketing problems of Cardamom Growers with special reference to Tamil Nadu and Kerala" Vol 09, Issue 37 - Apr 2019 ; ISSN: 0975-9999 (P), 2349-1655(O).

B.Sudha-2019 "Performance of Indian Cardamom industry-An Analysis" The study period 2011-12. The researcher has used Secondary data. Coefficient of variation tools were applied. The study shows that, Indian Cardamom Industry is performing well. We are one of leading cardamom producing country and stands in second place in global market next to Guatemala. However productivity is low compared with Guatemala. Consumption is also increasing day-by-day. Export shows an upward trend. Import is also increasing substantially. Indian Cardamom Industry has potential to increase its production.

B.Sudha-2019 "Performance of Indian Cardamom industry-An Analysis" ISSN: 2249-2496 Vol. 9 Issue 5, May 2019.

M.Anbuchelvi-2019 " Import and Export of Small Cardamom in India" The Data have been collected from 50 respondents, The researcher has used primary data , Percentage, Mean, Standard deviation and Co-efficient of variation tools were applied. The study shows that, Most of the financial risks are not predictable. The changes in the international market are hazardous and difficult to anticipate. Suitability and acceptability of the product in the global market is rather difficult to gauge. Variations in supply and demand conditions are more unpredictable as a result; the traditional cardamom industry suffers for survival.

M.Anbuchelvi-2019 " Import and Export of Small Cardamom in India" Shanlax International Journal of Arts Science and Humanities · July 2019.

Dharmendra Kalauni, Arati Joshi-2019 "Production economics, marketing and critical success factors of Large Cardamom in Bhojpur, Nepal" The Data have been collected from 120 respondents, Descriptive statistics such as frequencies and percentage were applied. Cost analysis was estimated using the total cost of production and gross return. The study shows

that, it is recommended to promote production of large cardamom through suitable subsidies and support in input materials, associated technical aspects, post-harvest processing and marketing activities. Also government is suggested to have proper and adequate market intervention by various means such as price determination, recognition of potential foreign market (other than India), and facilitation in direct export to third country.

Dharmendra Kalauni, Arati Joshi-2019 "Production economics, marketing and critical success factors of Large Cardamom in Bhojpur, Nepal" ISSN:2331- 1932; Nov-2019.

Dr. S Kamalaveni – 2019 "A study on cardamom production and exports: Queen of spices" The researcher has used Primary data, Co-efficient of correlation were applied, The study shows that, Cardamom plants normally start bearing fruits two years after planting. Two major commercial varieties of small cardamom in the world are the Malabar and the Guatemalan. Indian cardamom is slightly smaller but more aromatic. Guatemala, India, Tanzania, Sri Lanka, Vietnam, Laos and Cambodia are the major cardamom growing countries, India can reclaim the first place in cardamom trade soon, provided the Indian government pays more attention to cardamom cultivation, marketing activities, export promotional activities and minimum support price to farmers.

Dr. S. Kamalaveni – 2019 "A study on cardamom production and exports: Queen of spices" ISSN Print: 2394-7500 ; ISSN Online: 2394-5869; 16-Sep-2019.

Kalauni - 2019 "Production economics, marketing of Large Cardamom in Bhojpur, Nepal" The Data have been collected from 120 respondents, Both primary and secondary data were applied, The study shows that, This clearly signifies the importance of high value large cardamom to the livelihood of mid-hill Bhojpur district of Nepal. So, it can be concluded that export potential crops like cardamom are important in uplifting the socio-economic status of the farmers in the rural part of Nepal. Thus, it is recommended to promote production of large cardamom through suitable subsidies and support in input materials, associated technical aspects, post-harvest processing and marketing activities.

Kalauni 2019 "Production economics, marketing of Large Cardamom in Bhojpur, Nepal" 30 Nov 2019.

Dr. O C Aloysius-2019 "Production and Price Behaviour of Small Cardamom in India: An Evaluation" Statistical tools such as averages and percentages were used. Karl Pearson's Coefficient of Correlation, One Sample t-Test and Paired Sample t -test were applied. The sample results, The present e auction system also failed to provide fair prices on the basis of quality of the product as there are wide fluctuations in the prices of the same quality product in the same auction. The movement of prices on a day/in two auctions is detrimental to the farmers. For the continuation of this cultivation, a good pricing mechanism is the need of the hour.

Dr. O C Aloysius-2019 "Production and Price Behaviour of Small Cardamom in India: An Evaluation" ISSN: 2319-7064- Vol 9 Issue 12, Dec 2019.

Dr. S. Jerome-2019 "A Study On Problems in Cultivation and Business Dealings Of Cardamom in Tamilnadu" The Data have been collected from 50 respondents, The researcher has used both primary and secondary data , Rank tools were applied .The study shows that , Compare to other countries in Asia, so many developments are happen in field of agricultural. In our country farmers facing many challenges like follow traditional way of cultivation, lack of marketing knowledge, poor transportation, low cultivation land, and so on. The government takes necessary steps in order to reduces problems of cardamom growers to improve the standard of living of the cardamom farmers.

Dr. S. Jerome-2019 "A Study On Problems in Cultivation and Business Dealings Of Cardamom in Tamilnadu" Vol-22- Issue-14-Dec-2019.

Nithin Raj K, Dr. Anooja Chacko-2020 "Struggle of Cardamom growers: local level study in Idukki District of Kerala" **,** The sample is 40, The data were collected during the month of Dec- Jan 2020. Statistical tools percentages have been used for analysing the data. The researcher has used both primary and secondary data, The study shows that, The cardamom farmers of Idukki district face so many problems in this sector. Out of the Production, marketing and other problems, production problems are the major issue of them. The yield and productivity are varying with their cultivating patterns. The return and profit of cultivation is not consistent. It is varying yearly because climate changes. The cardamom cultivation is very sensitive to climatic changes. The distinctive climatic parameters could have played a major role in the production of cardamom cultivation.

Nithin Raj K, Dr. Anooja Chacko-2020 "Struggle of Cardamom growers: local level study in Idukki District of Kerala" ISSN -2395-1877; Vol.6, Issue-2, Feb-2020.

Dr. Jaimol James-2020 " Economic Viability of Cardamom cultivation in Kerala" The Data have been collected from 100 respondents, The researcher has used both primary and secondary data. For the convenience in data collection, multi-stage sampling technique was used. The study shows that, Spices Board being the main outlet for the farmers to convey their concerns should take necessary steps to solve the crop related issues and Government should be cautious about the price volatility which may occurred due to competition, climatic change or smuggling. So to reap the benefit of the robust figures in cardamom production with somewhat stable demand , the Government with Spices Board should take stringent measures to curb the illegal import, stiff competition. Research & Development of Spices Board put more effort to mitigate the negative impact of pest attack and collaborate with National weather department for taking necessary action to nullify the climatic impact on the crop.

Dr. Jaimol James-2020 " Economic Viability of Cardamom cultivation in Kerala" ISSN: 2320-2882- Volume 8, Issue 3 Mar 2020.

Elsa Cherian- 2021 "The Challenges in Re-orienting Kerala Cardamom Farming Expertise to Augment Cardamom Merchandising Potentials through Global Market Repositioning and Patent-Branding" The Data have been collected from 342 respondents, The researcher has used primary data, total duration of the research is from 2014 to 2019 **.** Z test, One-Way Anova, Chi Square, Garrett's Ranking Technique and Correlation tools were applied. The study shows that , Availability of credit is to be ensured at the time of its requirement. Also it needs extensive help and advice from the Spices Board in promoting and protecting the interests of the Cardamom industry and the growers. In this IT age only a fraction of the effort of the past is required to usher in revolutionary measures to uplift the condition of cardamom growers, provided there is adequate utilization of existing resources and development of new strategies in tune with contemporary technology available in India.

Elsa Cherian- 2021 "The Challenges in Re-orienting Kerala Cardamom Farming Expertise to Augment Cardamom Merchandising Potentials through Global Market Repositioning and Patent-Branding" ISSN: 2320-5407 Oct-30-2021.

Dr. R. S. Lekshmi, Dr. K. Rajaman- 2022 “Expectation of Cardamom Planters and Marketing problems in Idukki” The Data have been collected from 100 respondents, The researcher has used both primary and secondary data, Mean and standard deviation. The study shows that, According to the study, the government should avoid undue intervention of middlemen, organise seminars for better adoption of modern practises, provide growers with the necessary training facilities for scientific cultivation, and train them in post-harvest handling of produce, such as sorting, grading, and curing, to avoid post-harvest losses.

Dr. R. S. Lekshmi, Dr. K. Rajaman-2020 “ Expectation of Cardamom Planters and Marketing problems in Idukki ” Vol. 71, Issue. 01, No.02, Jan-Mar: 2022.

CHAPTER III

CHAPTER-III

Overview - History of Cardamom

Common Name: Cardamom
Latin Name: Elettaria Cardamomum
Other Names: Capalaga, Ilachi, Green Cardamom, True Cardamom, Ceylon Cardamom.

3.1 Description:

A variety of plants in the ginger family produce seeds that are used to make the spice cardamom. It is indigenous to Southern India and is grown there as well as in Guatemala, which is the world's biggest producer and exporter of this spice. It smells strongly of something like cloves. The flavour is extremely powerful; some people have compared it as a blend of ginger and cinnamon. Others claim it has a more distinct, minty flavour with lemon undertones. One of the most costly spices by weight is green cardamom. A little does, however, go a long way because it has such a strong flavour. Middle Eastern and Indian cuisines both use this spice.

3.2 History:

Cardamom is considered to be one of the world's oldest spices. The use of this spice dates back at least 4000 years. Ancient Egyptians used Cardamom for many medicinal purposes, as part of rituals and even for embalming. They chewed cardamom pods as a way to help keep their breath minty and to help clean their teeth.

Because to its strong scent, cardamom was used by the Greeks and Romans. It was a key component of fragrances and aromatic oils.

This spice was first discovered by the Vikings, who carried it back to Scandinavia.

Originally, cardamom was harvested from untamed plants in Southern India's Western Ghats. This location became known as Cardamom Hills because the plants thrived there in such great numbers.

Many of the green and black cardamoms that we still use today come from plantations of cardamom that British colonists established throughout the 19th century.

The largest commercial producer of cardamom is Guatemala. It is viewed as an even more valuable crop in some regions of Guatemala than coffee.

3.3 History of Cardamom – 'The queen of spices':

One of the earliest spices in human history is thought to be cardamom. a wild plant that was first discovered in South West India's Western Ghats. It belongs to the ginger family and has several therapeutic benefits. It was a naturally occurring forest product that was regarded as a wild plant and was picked by the tribal community when they travelled through the jungle in search of nourishment. It was sun-dried and exchanged for linen and salt by the locals. The locals living close to the forests sold it to traders who transported it to the port and exchanged it for goods with seafarers who came at various ports along the Malabar coast.The locals living close to the forests sold it to traders who transported it to the port and exchanged it for goods with seafarers who came at various ports along the Malabar coast. From here, it travelled to a variety of civilizations that existed at various points in human history. From the highlands to the ports, some of the well-known trading routes included

Munnar (hills) - Kothamangalam (foothills) - Kodungallur (Port town) -Kumily (Cardamom hills) - Pullumedu (foot hills) - Alleppey (backwaters) - Kodungallur (Port Town)

Similar to how rubber and vanilla were introduced to the subcontinent, many people think that cardamom was a crop that travelled from other areas of the world to the Indian mainland. But the reality remains that cardamom is mostly indigenous to the Western Ghats, which are among the world's top ecological hotspots. Several historical works have made reference to cardamom from South India's higher elevations. Cardamom was specifically mentioned in Arthashatra, the advisor to Chandragupta Maurya, written in the 4th century BC. They used to refer to it as "Chaurnayam" and described it as "A green pearl found in the banks of the river Periyar in the South West mountains."Several names of cardamom are listed in the Amarakosha, a dictionary of Sanskrit roots composed by "Amarasimha," a Buddhist who lived in the eighth century AD. Since 1000 BC, cardamom has been mentioned as a therapeutic component in numerous Ayurvedic texts. Cardamom is referred to as "Elam" or "Ellakka" locally. Its Dravidian origins call it "El," but as Sanskrit language influence grew over time, it evolved into "Ella" (Ae-la). Several South Indian languages adopted the word Ella, becoming Yela Kulu in Telugu, Ellaki in Kannada, and Ellakkai in Tamil. The Greek words "Ella" and "Kardamum" were combined to create the scientific name "Elettaria

Cardamom" for green cardamom. Since the Egyptian Pyramid era, cardamom's usage have been documented and are mentioned in numerous historical works. It was utilised by the Egyptians as a medicine, a breath refresher, and even as the main component of oils used in the mummification process. According to some accounts, cardamom is said to have been the primary ingredient in the preparation of the aromatic oils mentioned in the Bible. Through Arabia, cardamom was introduced to the Romans and Greeks. The terms "amomum" and "kardamum" refer to the cardamom that originated in the southern Indian Hills of the present day.

In the writings of Plutarch and Hippocrates, who is regarded as the founder of modern medicine, Kardamum is referenced. The medical benefits of cardamom are thoroughly described in Pedanius Discords' material medical, a collection of books he produced between AD 40 and AD 90. Throughout various periods of ancient commerce, traders from Babylon, Mesopotamia, and Assyria had excellent marine trading links with the Malabar coast, where cardamom trade was highly significant. Cardamom was employed by the Babylonians in their religious rituals. During lavish Arab feasts, cardamom tea and coffee were exotic concoctions. Several rulers used cardamom as a gift to other kings when they paid them official visits.

Cardamom was considered to be a precious green gem for many civilizations, primarily due to its scarcity and its original medicinal and aromatic values which were found since ancient times. The difficulties to reach it far and vast lands made it more precious.

- **Culinary uses:**

Cardamom is a staple spice in Middle Eastern and Indian curries and is frequently used in those cuisines' customary spice mixes.

This spice is frequently used to prepare the traditional beverage cardamom tea in Asia.

In addition, it is a highly well-liked spice in many Scandinavian dishes, including mulled wine and log. It is a staple ingredient in all bread and sweet pastry meals.

- **Medicinal uses:**

Since ancient times, cardamom has been utilised for medical purposes. In indigestion, asthma, and foul breath treatments, it has most frequently been employed.

3.4 STORAGE:

1. It is best to store cardamoms in their entire pod form because if the seeds are loose, exposed, or ground and left out for an extended period of time, they quickly lose their flavour.

2. Store cardamoms in a cool, dry location.

3. Airtight containers work best for preserving the freshness of cardamoms.

4. With careful storage and handling, green cardamoms can retain their flavour for longer than six months.

3.5 CULTIVATION AND PROCESSING:

Although it is possible to gather wild cardamom fruits from plants that are native to the damp woods of southern India, the majority of cardamom is grown in India, Sri Lanka, and Guatemala.

Just before they reach maturity, the fruits are plucked or trimmed off the stems, cleaned, and dried in the sun or in a heated curing chamber. In the fumes of burning sulphur, cardamom can be bleached to a creamy white colour.

The tiny stems of the capsules are eliminated by winnowing after curing and drying. Cardamom that has been decorated comprises of dried, husked seeds.

3.6 CARDAMOM SIDE EFFECTS:

1. **Allergies due to cardamom:**

Cardamom may cause some inexplicable adverse reactions if used frequently and in big doses. Cardamom overconsumption can result in a common type of skin rash called as contact dermatitis. If a person accidentally consumes cardamom but is sensitive to it, they could also develop hives. Once more, some of you might have severe allergies to cardamom.

If you eat cardamom in large quantities, you can also encounter some sort of respiratory issue. When cardamom causes respiratory allergic responses, you may notice the following symptoms.

2. Gallstone complications due to cardamom:

Did you know that consuming cardamom in excess might cause gallstones? The majority of anecdotal investigations indicate that gallstone issues can result from consuming cardamom in excess. It is frequently observed that cardamom is not entirely absorbed by our digestive system. The same seeds become sediment into our bodies as a result. Gallbladder stones eventually develop as a result of this procedure. Also, if you already have this issue, you should avoid getting it. Patients with gallbladder stones must strictly avoid eating cardamom. If you happen to consume too much cardamom, the discomfort from gallstones becomes really severe. In addition, consuming cardamom while having gallstones increases the risk of bleeding and infection. There isn't much research on this, though.

3. Drug interactions of cardamom:

If you are on any kind of medical regimen, you should take cardamom with awareness. This is true because certain medications may negatively interact with cardamom and have detrimental effects on one's health. If you ignore this circumstance, the disorder for which you are taking medications could get worse. Many of us continue to consume cardamom frequently while being unaware of this connection. Those who engage in the same routine behaviour without understanding the consequences are more likely to experience medication interactions. If you are on any of the following medications, stay away from using this as a mouthwash.

3.7 COVID-19 Lockdown: Cardamom Planters and Daily Wage Workers in Distress in TN’s Theni dt:

The farmers, who own plots of land between one and three acres, anticipate that Kerala would cooperate with Tamil Nadu in order to gain access to their farms.

Theni district's cardamom growers, who also own tiny farms in Kerala's neighbouring Idukki district, are facing a grim future in the midst of the nationwide lockdown. Due to the lockdown, almost 40,000 daily wage workers who depended on

these lands have lost their jobs and may do so for several months if the plants are not preserved over the summer. When required to spray pesticides every 22 days, several hundred cardamom planters are unable to get to their farms to water them and do so.

The farmers, who own plots of land between one and three acres, anticipate that Kerala would cooperate with Tamil Nadu in order to gain access to their farms. To their disappointment, the Theni district government still refuses to comply with their requests.

- **LOSS WILL CONTINUE FOR TWO- THREE YEARS:**

To prevent the plants from wilting, the state borders are closed, making it illegal for planters and labourers to cross. The Kerala government has placed limitations on the labourers' ability to work in the cardamom plantations. One acre of a plantation can have two people watering and applying insecticides at once. To keep their plants, the planters in Tamil Nadu are hoping for the same exemption. The Kerala landslides and torrential rains in 2018 severely damaged these plants, which were only just beginning to recover.

In an interview with News Click, Idukki district plantation owner Suresh Babu stated, "If we don't water the plants during the summer, the trees will wither away. For a yield, cardamom plants must grow for two to three years. Hence, if we don't save the plants today, we won't get any returns in the following two years and will need to invest more in planting new saplings.

- **IDENTIFY FARMERS TO REACH FIELDS:**

The risk of entering the neighbouring state while it is under lockdown is well understood by the planters. After speaking with their Idukki colleagues, they have requested that the district government identify the planters and allow them access to their fields. "We are aware that allowing all of the workers and planters to cross the borders poses a significant danger and is not now feasible. Lenin, a small planter headquartered in Cumbum in the Theni district, told News Click that if the district administration could make arrangements in consultation with the Idukki administration and permit the planters and at least one or two labourers with them, the harm may be minimised.

He also mentioned how planting and raising cardamom plants require far more labour than many other revenue crops. Cardamom is harvested from July to December,

and numerous tasks must be completed in the months of April and May in order for this to happen. The planters stand to lose one to one and a half lakh rupees per acre in the event that the plants wither, and it would be impossible to recover those losses.

- **LABOURERS LOSE JOBS:**

Planters from the Cumbum, Cuddalore, and Palayam parts of Theni district own around 50 per cent of the small and marginal cardamom plantations in the Idukki district. These plantation owners used to employ Theni labourers to work in their fields. Almost 40,000 people depend on these fields for their livelihood. Many of people have lost their employment and are confined to their homes without any means of support. None of the state government's assistance initiatives include these workers on a daily salary.

One of these employees remarked, "We realise the lockdown's necessity, but the government should take our difficulties into account as well. Now that we have lost our source of income, many of us risk losing our jobs for several more months if the factories are not preserved. The district administration and the state government should address this matter.

Theni district's farm labourers rely heavily on agricultural labour in both Theni and Idukki districts. The growers and the workers will suffer a serious financial setback if the cardamom plantations are not saved in a timely manner.

3.8 BENEFITS:

1. Green cardamoms help to increase appetite and treat bad breath.

2. It promotes healthy digestion and aids in lowering acidity and gas issues.

3. It works wonders for those who are experiencing constipation.

4. It aids in enhancing the blood flow to the lungs.

5. It's recommended for bronchitis and asthma.

6. To relieve hiccups, combine a few mint leaves and a few cardamom pods in warm water.

3.9 USES:

1. Cardamoms have a special ability to impart a distinct flavour to a variety of desserts, including rabdi, gulabjamun, gajar ka halwa, kheer, puddings, and many other dishes of the same type.

2. Refreshing tea and coffee can be made with crushed cardamoms.

3. Green cardamom is a typical and essential component of garam masala, which gives a variety of pulaos, biryanis, curries, and numerous gravy recipes their rich flavour.

4. Both vegetarian and non-vegetarian Indian dishes use cardamoms as the foundation of a perfect whole garam masala.

5.A lot of green cardamoms are required to make curry powder.

6. People in India frequently use cardamom when making paan.

7. The green cardamom is used to flavour a variety of kebabs, biryanis, and fish dishes.

3.10 Cardamom's (Elaichi) Health Benefits:

This exotic spice is incredibly nutrient-rich and will nourish your body. Cardamom has been a well-liked medicinal plant for over 5,000 years, according to herbalists.

Although there are three different kinds of cardamom, green cardamom is by far the most widely used in both food and medicine. It has significant concentrations of vitamin A, vitamin C, and other micronutrients, as we previously described.

Together, these vitamins and minerals give cardamom a wealth of health advantages. In the next part, a few will be covered:

1. Antioxidant Properties May Reduces High Blood Pressure:

Cardamom is known to regulate high blood pressure with daily intake due to its diuretic effect. Since it is rich in antioxidants, it helps detoxify the blood and expel water collected around important organs by promoting frequent urination.

A research study published by the Indian Journal Of Biochemistry and Biophysics describes the daily consumption of cardamom and elaborates on its role to control blood pressure levels.

The study also observed a decrease in the systolic (measures the pressure in your arteries when your heart beats), diastolic (measures the pressure in your arteries when your heart rests between beats) in stage 1 hypertension patients.

2. Corrects Digestive Ailments:

Indians use Cardamom in almost every dish because it aids in proper digestion. Cardamom is known to be a digestive stimulant and carminative.

This spice contains essential oil menthone that helps in alleviating gastrointestinal problems like clearing stomach ulcers, acid reflux and other problems. Its anti-inflammatory properties ease the burning sensation in the stomach and even eliminate nausea. Some people still use it to reduce motion sickness.

3. Fights Bad Bacteria:

Cardamom is an age-old home remedy, used as a natural breath freshener. It is rich in antioxidants and other bacteria-fighting properties, and your oral health will be great if you consume it regularly.

The spice contains cardamom oil called cineole, which is known for its antimicrobial properties. It kills the unhealthy bacteria present on the palate and tongue, thus promoting oral health.

Chewing cardamom seeds is known to effectively balance the pH level of the mouth, preventing the development of serious cavities and even gum diseases

4. It Calms You:

Due to its antioxidants, cardamom has a soothing impact on people. Also, it prevents cortisol from building up in your body, which lowers stress and encourages easy breathing.

Cardamom is a relaxing herb that can be used to relieve tension by inhaling the essential oil or chewing a piece. Cardamom is also a well-liked component in aromatherapy and has assisted in boosting the airflow to the lungs, supplying more oxygen to the body, although being viewed as premature in comparison to other evidence-based science. It is thought to support physiological reactions during exercise.

5. Post-Surgery Recovery:

Due to anaesthesia, the hours following surgery are difficult and full of confusion and dizziness. Nonetheless, it typically relies on the extent of the anaesthesia and the individual's physical makeup.

The combination of ginger, lemon, and lavender with cardamom and essential oils helps you feel calm and comfortable while you are awake.

6. Calms and Reduces Inflammation:

Cardamom also aids in sinus clearing to make breathing easier. Cardamom's antioxidants may be able to eliminate any infection, germs, or idea if you have a type of respiratory inflammation.

Also, it shields cells from harm and reduces bodily inflammation, which can result in chronic illnesses. As a result, it can be regarded as a calming agent that is rich in anti-inflammatory ingredients.

7. Eases Respiratory Conditions:

The spice contains a compound called cineole, which functions as an antimicrobial to prevent bacterial infections of the lungs.

Enhancing respiratory health is made easier with black cardamom. Cardamom can be used in addition to conventional medication to lessen asthma and wheeze.

To facilitate easier breathing, it aids in phlegm removal from the chest and nasal passages. It contains flavonoids that increase oxygen absorption by assisting your lungs in relaxing so you can breathe deeply and for a long time.

8. Cardamom's Skin and Hair Benefits:

Clear Skin - Cardamom is a potential cure-all for skin that is prone to breakouts. It eliminates blemishes and stops outbreaks. It regulates sebum production and unclogs all congested pores. Its anti-inflammatory components help reduce eliminate skin irritability and balance out skin tone.

Softer Lips - Because to the antioxidants in cardamom, chapped lips are no longer a problem. Cardamom essential oils are included in lip balms to provide flavour and soothe the lips.

3.11 CARDAMOM DISADVANTAGE :

Given that it is consumed in a certain amount, cardamom is one of the natural herbs that is safe to consume. Cardamom must therefore be handled in a specific way when cooking; nevertheless, when using it as a food supplement, it is important to seek medical advice to limit any potential harm.

1. **It is advised not to eat high quality of cardamom during pregnancy:**

To protect the mother's health and prevent miscarriage, it is not advised that pregnant women take significant therapeutic doses of cardamom. It is okay to consume it in moderation as a cooking condiment, though.

It is advised to avoid it during lactation because there aren't enough studies on its safety during this time.

2. **Do not take it in large quantity for people with gallstones:**

Cardamom has the significant drawback of having the potential to seriously aggravate colic in persons with gallstones.

Studies have also shown that consuming significant amounts of cardamom has an impact on our digestive systems. Gallstones may form as a result of the body's inability to digest cardamom grains.

3. **Allergies are one of the main disadvantages of cardamom:**

Cardamom usage might cause adverse responses if done frequently and in big doses. When cardamom is consumed in excess, a common type of rash called contact dermatitis develops on the skin.

Cardamom might make some people extremely sensitive. if you take too much cardamom. The following signs of a respiratory allergy could be present:

1. Chest or throat tightness

2. Uncomfortable sensation

3. Chest ache

4. Breathing difficulty

5. Breathing problems

3.12 Types of Cardamom:

The form of cardamom differs depending on how the seed pods are handled. There are five types of cardamom:

1. Green cardamom

2. Cardamom seed

3. Black cardamom

4. Ground cardamom

5. White cardamom

1. Green cardamom:

In India, green cardamom pods are the most popular type of this spice. It was harvested when it was young and dried in the sun to maintain its vibrant green hue. Due in part to their higher capacity to hold aroma and flavour longer, green cardamom pods are more difficult to locate and more expensive than the other varieties of cardamom.

2. White cardamom:

In order to obtain its colour or lack thereof white cardamom that was widely accessible in North America and Europe had been bleached. Because of how well it keeps light coloured batters, sauces, and confections from fading, it is used in baking and some desserts. White cardamom is the result of the bleaching process, which also significantly reduced cardamom flavour.

3. Cardamom seed:

Only the pure seeds of the cardamom remain after the outer pod, or cardamom fruit, was removed. Cardamom-decor is another name for this variety of cardamom spice. Before using, the seeds are crushed or ground, which gives off lots of cardamom flavour at a lower cost; in a recipe, use 12 seeds in place of one full pod.

4. Ground Cardamom:

For baking and other uses where the spice needs to be ground, ground cardamom is practical. Of course, when cardamom is ground, freshness and consequently quality are impaired because it quickly loses flavour. Cardamom should be ground before use in a spice mill, electric coffee grinder, or mortar and pestle to fully appreciate its flavour.

5. Black Cardamom:

The seed pods of species that are closely related to black cardamom are also aromatic and resemble authentic cardamom in appearance. It has a strong floral undertone and a lot of sweetness. It is an ingredient used both domestically and overseas to give some vegetarian foods a bacon-like flavour.

CHAPTER IV

CHAPTER IV

ANALYSIS AND INTERPRETATION

4.1 Percentage analysis

The percentage analysis is the method to represent raw streams of data as a percentage (a part in 100 – percent) for the better understanding of collected data. Percentage Analysis is applied to create a contingency table from the frequency distribution and represent the collected data for better understanding. It refers to a special kind of rates percentage are used in making comparison between two or more series of data. A percentage is used to determine relationship between the series.

4.1.1 AGE OF THE RESPONDENTS

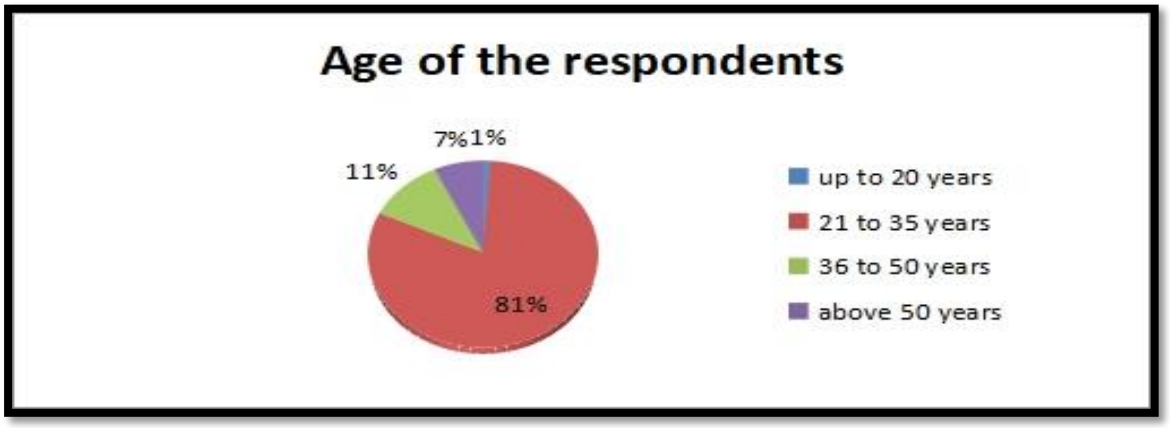
TABLE 4.1.1 Age of the respondents

Age	Frequency	Percent
up to 20 years	1	1
21 to 35 years	81	81
36 to 50 years	11	11
above 50 years	7	7
Total	100	100

It has been inferred from the table 4.1.1 that, 1 per cent of the respondents belongs to the age group of up to 20 years, 81 per cent of the respondents belongs to the age group between 21-35 years, 11 per cent of the respondents belongs to the age group of 36-50 years and 7 per cent of the respondents belongs to the age group of above 50 years.

Hence, it is found that more number of respondents belong to the age group between 21-35 years.

CHART NO.4.1.1



4.1.2 GENDER OF THE RESPONDENTS

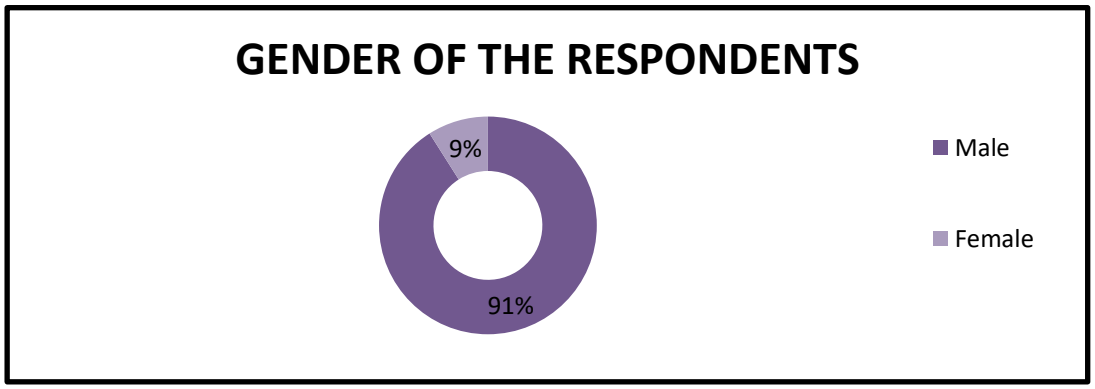
TABLE 4.1.2 Gender of the respondents

Gender	Frequency	Percent
Male	91	91
Female	9	9
Total	100	100

It has been inferred from the table 4.1.2 that 91 per cent of the respondents belongs to the male and 9 per cent of the respondents belongs to the female.

Hence, it is found that most of the respondents are male.

CHARTNO.4.1.2



4.1.3 MARITAL STATUS OF THE RESPONDENTS

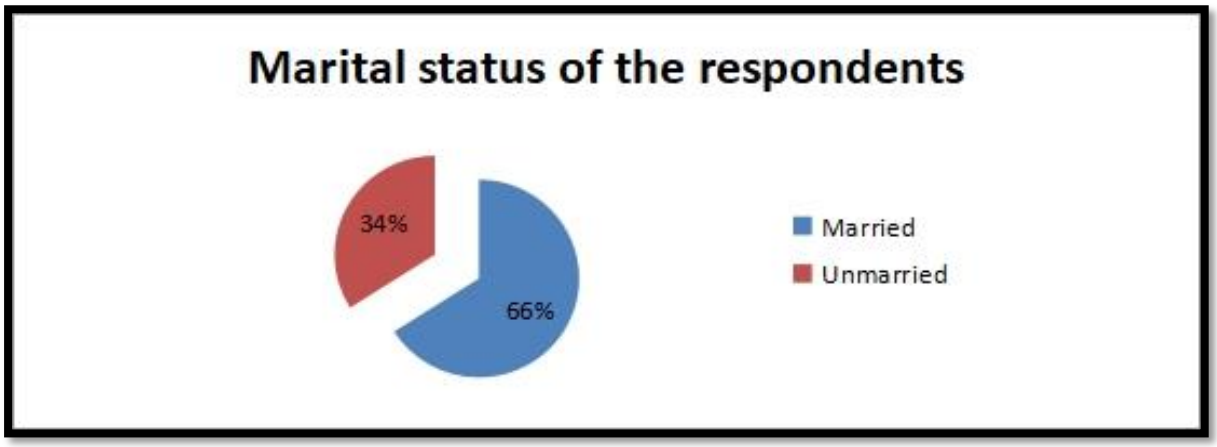
TABLE 4.1.3 Marital status of the respondents

Marital status	Frequency	Percent
Married	66	66
Unmarried	34	34
Total	100	100

It has been inferred from the table 4.1.3 that 66 per cent of the respondents belongs to the married and 34 per cent of the respondents belongs to the unmarried.

Hence, it is found that most of the respondents are married.

CHART NO.4.1.3



4.1.4 EDUCATION QUALIFICATION OF THE RESPONDENTS

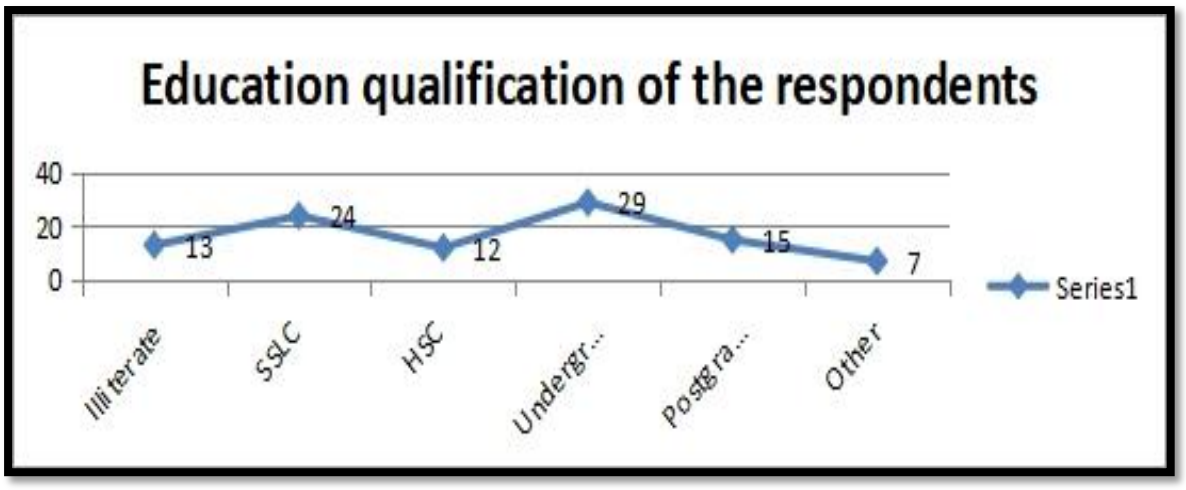
TABLE 4.1.4 Education qualification of the respondents

Education qualification	Frequency	Percent
Illiterate	13	13
SSLC	24	24
HSC	12	12
Undergraduate	29	29
Postgraduate	15	15
Other	7	7
Total	100	100

It has been inferred from the table 4.1.4 that 13 per cent of the respondents belong to illiterate, 24 per cent of the respondents belong to SSLC, 12 per cent of the respondents belong to HSC, 29 per cent of the respondents belong to Undergraduate, 15 per cent of the respondents belong to Postgraduate and 7 per cent of the respondents belong to the other.

Hence, it is found that most of the respondents are undergraduate.

CHART NO.4.1.4



4.1.5 MONTHLY INCOME OF THE RESPONDENTS

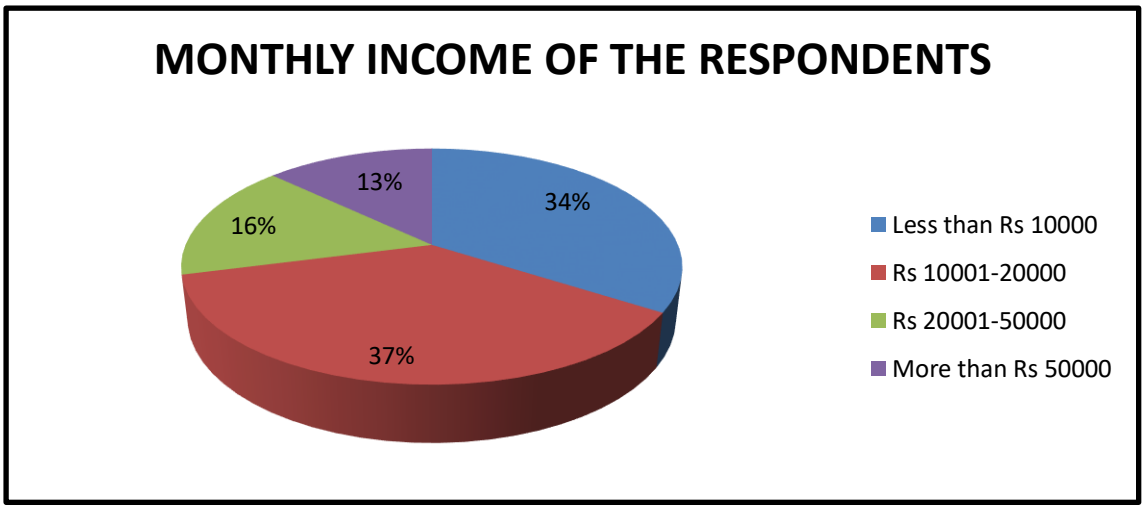
TABLE4.1.5 Monthly income of the respondents

Monthly Income	Frequency	Percent
Less than Rs 10000	34	34
Rs 10001-20000	37	37
Rs 20001-50000	16	16
More than Rs 50000	13	13
Total	100	100

It has been inferred from the table 4.1.5 that 34 per cent of the respondents belong to Less than Rs 10000, 37 per cent of the respondents belong to Rs 10001-20000, 16 per cent of the respondents belong to Rs 20001-50000 and 13 per cent of the respondents belong to More than Rs 50000.

Hence, it is found that most of the respondents are Rs 10001-20000.

CHAT NO.4.1.5



4.1.6 RESIDENTIAL AREA OF THE RESPONDENTS

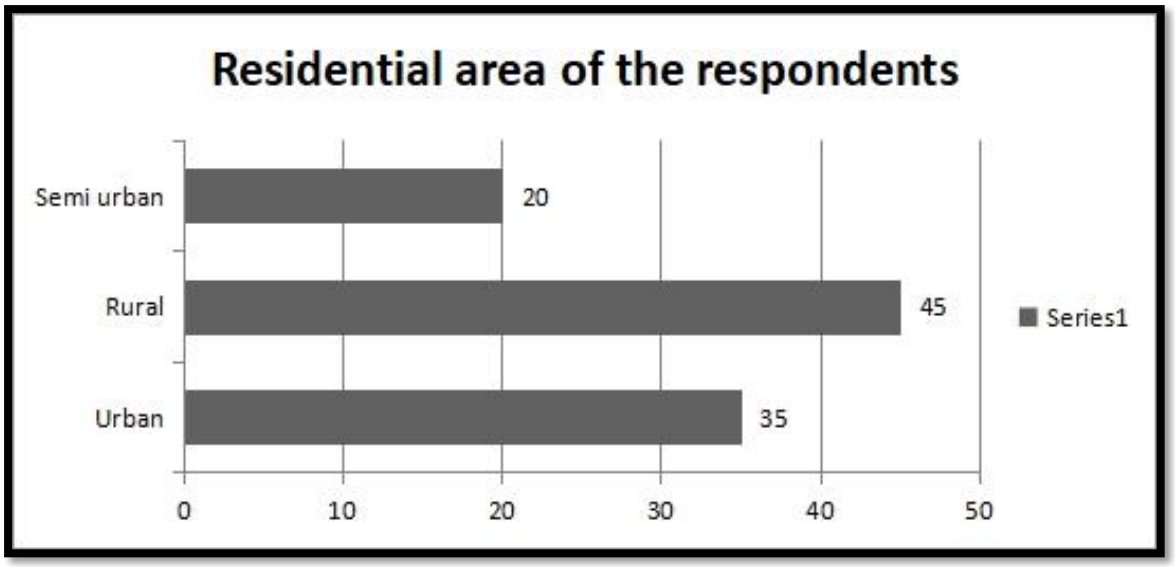
TABLE 4.1.6 Residential area of the respondents

Residential	Frequency	Percent
Urban	35	35
Rural	45	45
Semi urban	20	20
Total	100	100

It has been inferred from the table 4.1.6 that 35 per cent of the respondents belong to urban, 45 per cent of the respondents belong to rural and 20 per cent of the respondents belong to semi urban.

Hence, it is found that most of the respondents are rural.

CHART NO.4.1.6



4.1.7 ACRES/CENTS AVAILABILITY FOR CULTIVATION

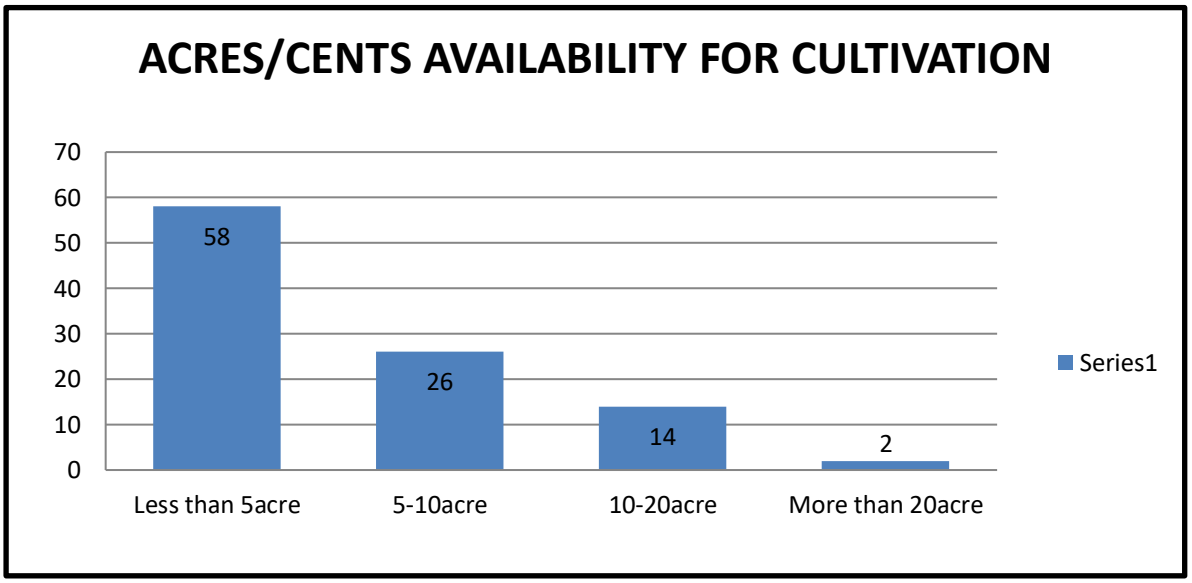
TABLE 4.1.7 Acres/cents availability for cultivation

Acres/Cents	Frequency	Percent
Less than 5acre	58	58
5-10acre	26	26
10-20acre	14	14
More than 20acre	2	2
Total	100	100

It has been inferred from the table 4.1.7 that 58 per cent of the respondents hold less than 5 acre of the land, 26 per cent of the respondents hold between 5-10 acre of the land, 14 per cent of the respondents hold between 10-20acre of the land and 2 per cent of the respondents hold more than 20 acre of the land.

Hence, it is found that most of the respondents hold Less than 5acre of land.

CHAT NO.4.1.7



4.1.8 OWNERSHIP OF AVAILABLE LAND

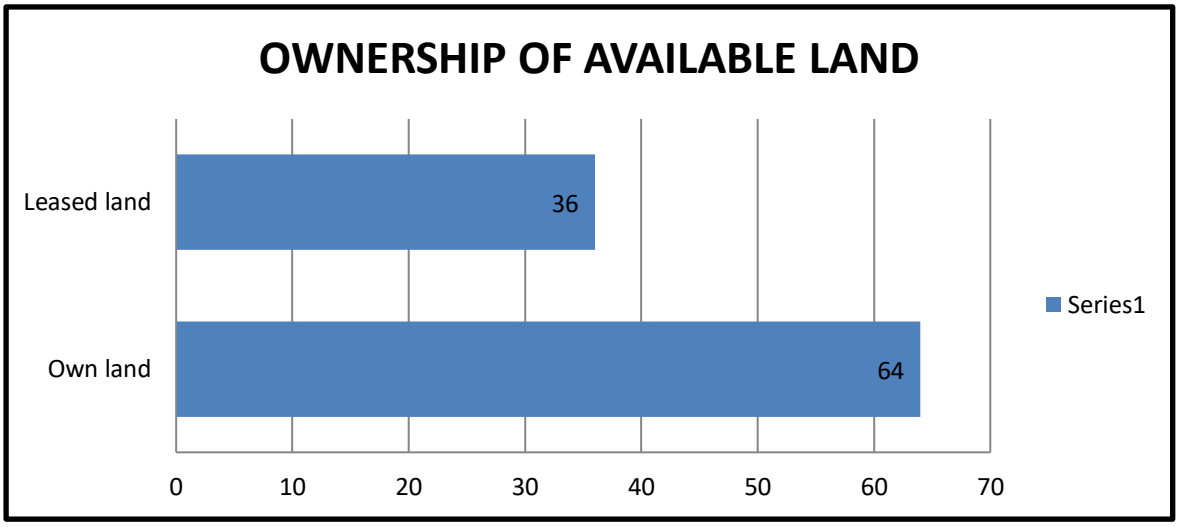
TABLE 4.1.8 Ownership of available land

Ownership of available land	Frequency	Percent
Own land	64	64
Leased land	36	36
Total	100	100

It has been inferred from the table 4.1.8 that 64 per cent of the respondents have own land and 36 per cent of the respondents are with leased land.

Hence, it is found that most of the respondents are Agricultural land owners.

CHART NO.4.1.8



4.1.9 MODE OF INVESTMENT

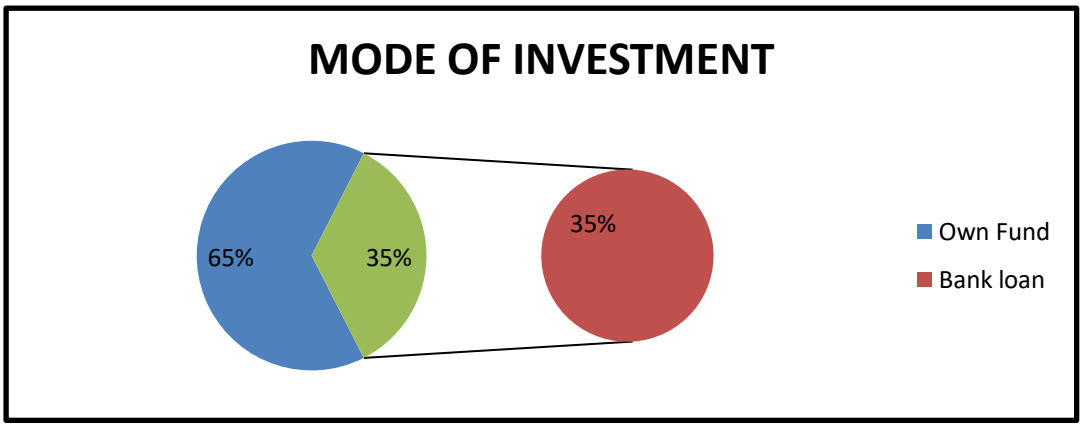
TABLE 4.1.9 Mode of investment

Mode of investment	Frequency	Percent
Own Fund	65	65
Bank loan	35	35
Total	100	100

It has been inferred from the table 4.1.9 that 65 per cent of the respondents invest their own fund for cultivation and 35 per cent of the respondents invest through bank loans.

Hence, it is found that most of the respondents use their own fund for the cultivation.

CHARTNO.4.1.9



4.1.10 WATER IRRIGATION REQUIRE FOR THE CULTIVATION

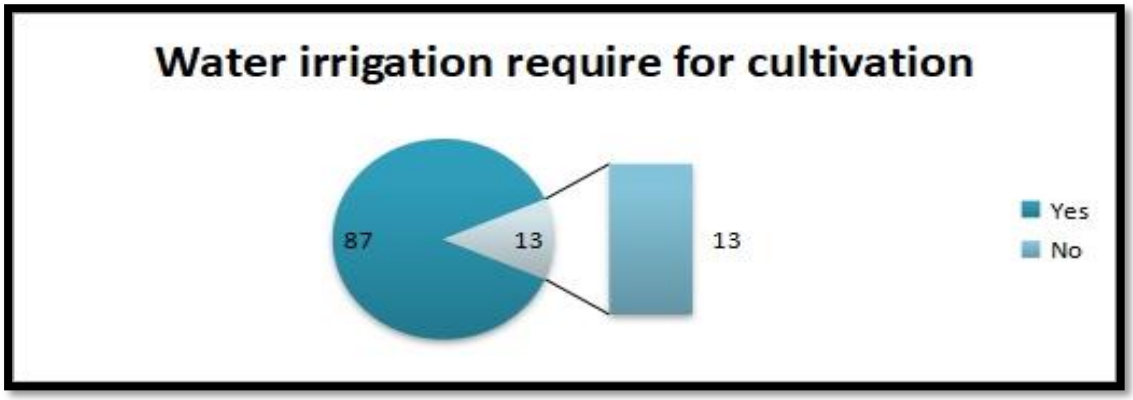
TABLE 4.1.10 Water irrigation require for cultivation

Water irrigation require for the cultivation	Frequency	Percent
Yes	87	87
No	13	13
Total	100	100

It has been inferred from the table 4.1.10 that 87 per cent of the respondents have stated that they require irrigation and the remaining respondents does not require water irrigation which is been supported by adequate rainfalls.

Hence, it is found that most of the respondents are requiring water irrigation for cultivation.

CHART NO.4.1.10



4.1.11 PRICE OF THE CARDAMOM IN MARKET

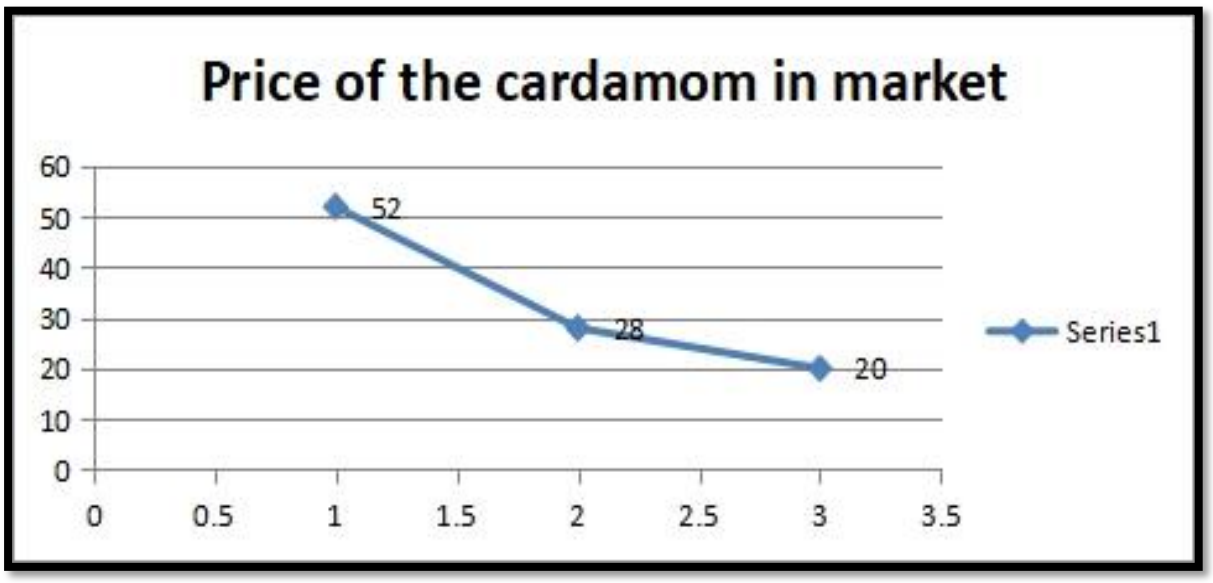
TABLE 4.1.11 Price of the cardamom in market

Price of the cardamom in market	Frequency	Percent
Rs 400-500 per kg	52	52
Rs 501-600 per kg	28	28
Above Rs 600 per cent	20	20
Total	100	100

It has been inferred from the table 4.1.11 that 52 per cent of the respondents have stated the price per kg of cardamom are between Rs 400-500, 28 per cent of the respondents as Rs 501-600 per kg and 20 per cent of the respondents as above Rs 600 per cent.

Hence, it is found that most of the respondents expect the price and sell the cardamom between Rs 400-500 per kg.

CHART NO.4.1.11



4.1.12 SUB CULTIVATION OF THE RESPONDENTS

TABLE 4.1.12 Sub cultivation of the respondents

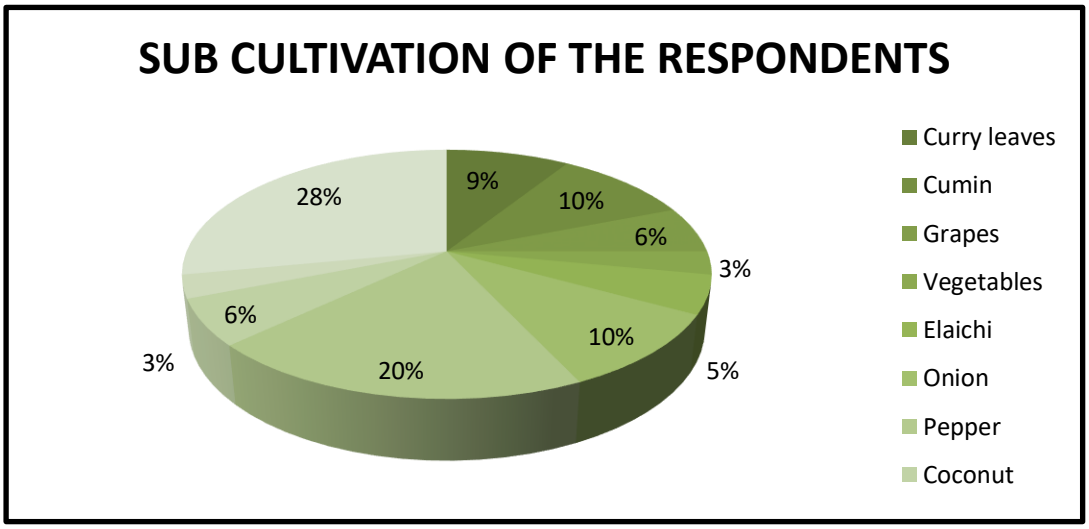
Sub cultivation of the respondents	Frequency	Percent
Curry leaves	9	9
Cumin	10	10
Grapes	6	6
Vegetables	3	3
Elaichi	5	5
Onion	10	10
Pepper	20	20
Coconut	6	6
Coffee	3	3
Nothing	28	28
Total	100	100

It has been inferred from the table 4.1.12 that 9 per cent of the respondents cultivate sub crop as curry leaves, 10 per cent cultivate cumin, 6 per cent of the respondents cultivate sub crop as grapes, 3 per cent cultivate vegetables, 5 per cent of the respondents cultivate sub

crop as elaichi, 10 per cent cultivate onion, 20 per cent of the respondents cultivate sub crop as pepper, 6 per cent cultivate coconut, 3 per cent of the respondents cultivate sub crop as coffee and 28 per cent of the respondents do not prefer sub cultivation.

Hence, it is found that most of the respondents do not prefer sub cultivation strategy due to more expenses.

CHART NO.4.1.12



4.1.13 PROBLEM DURING THE CULTIVATION PERIOD

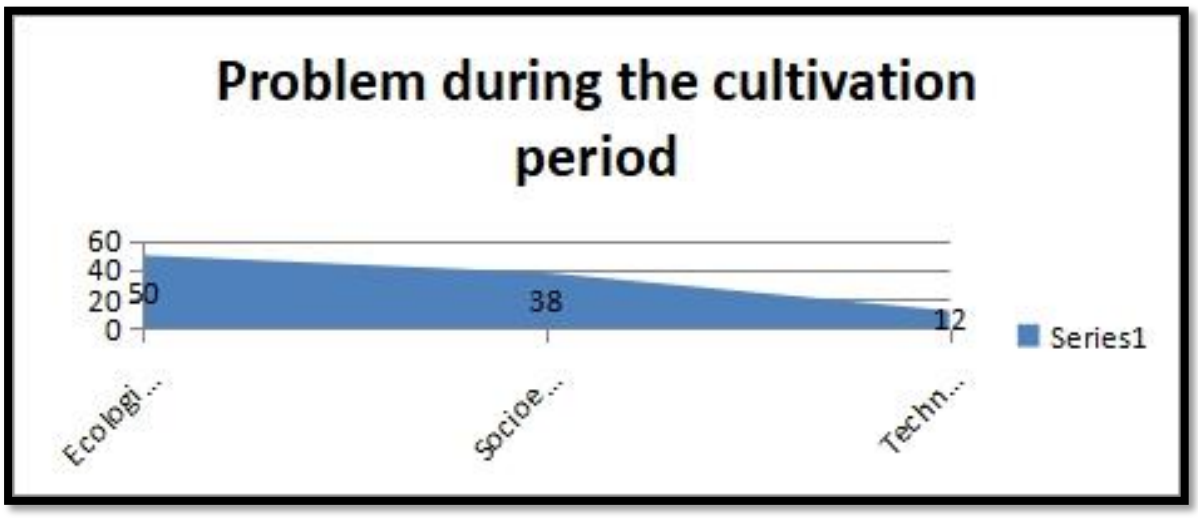
TABLE 4.1.13 Problem during the cultivation period

Problem during the cultivation period	Frequency	Percent
Ecological problem	50	50.0
Socioeconomic problem	38	38.0
Technology problem	12	12.0
Total	100	100.0

It has been inferred from the table 4.1.13 that 50 per cent of the respondents face ecological problem, 38 per cent experience socioeconomic problem and 12 per cent of the respondents struggle due to technology problem.

Hence, it is found that most of the respondents are facing ecological problem.

CHART NO.4.1.13



4.1.14 SUPPORT PROVIDED BY THE GOVERNMENT OF TAMIL NADU

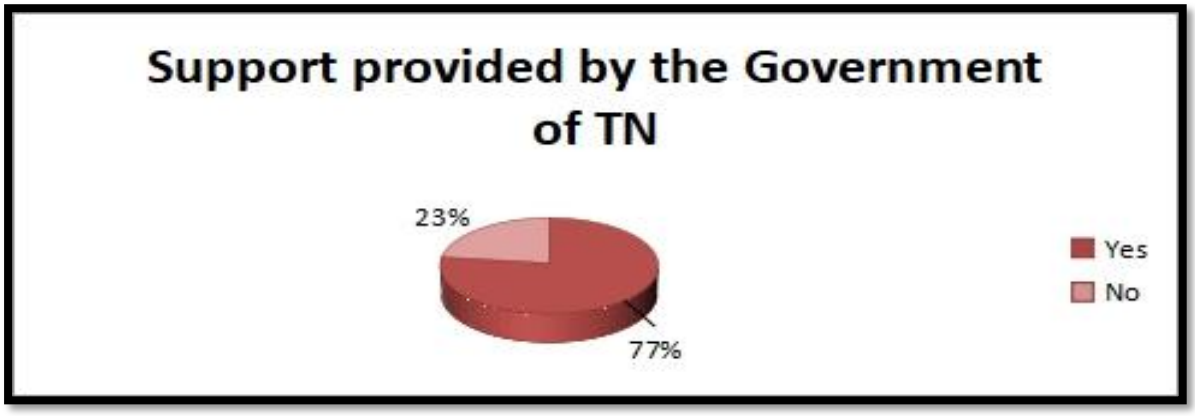
TABLE 4.1.14 Support provided by the Government of TAMILNADU

Support provided by the Government of Tamil Nadu	Frequency	Percent
Yes	77	77
No	23	23
Total	100	100

It has been inferred from the table 4.1.14 that 77 per cent of the respondents get support from the government and 23 per cent of the respondents refuse.

Hence, it is found that most of the respondents are provided support by the Government of Tamil Nadu.

CHART NO.4.1.14



4.2 DESCRIPTIVE STATISTICS

Descriptive statistics describe, show, and summarize the basic features of a dataset found in a given study, presented in a summary that describes the data sample and its measurements. It helps analysts to understand the data better.

4.2.1 LEVEL OF AGREEABILITY VS SOCIO ECONOMIC FACTORS

TABLE 4.2.1 LEVEL OF AGREEABILITY

		Ample availability of labour force	Traditional method of cultivation are followed	Decent salary and incentive are provided to the labour	Adequate availability of funds for cultivation
N	Valid	100	100	100	100
	Missing	0	0	0	0
Mean		2.8600	3.3600	3.2300	3.1100
Median		3.0000	4.0000	3.0000	3.0000
Mode		3.00	4.00	3.00	4.00
Std. Deviation		1.30283	1.16792	1.14464	1.23005
Minimum		1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00

It is seen from the above table 4.2.1 that the highest mean rating is 3.3600 for the item "Traditional method of cultivation are followed". That is on the average agreed level of the respondents is between agree and strongly agree. The second highest mean rating is 3.2300 for the item "Decent salary and incentive are provided to the labour". The lowest mean rating is 2.8600 for the item "Ample available of labour force". That is on the average that it has their agreed level between strongly disagree and disagree . It is also seen from the table that the rating of most of the items vary between minimum of 1 to a maximum of 5.

The analysis states that only traditional method of cultivation are being carried out even in the technology era with the great conscious of paying a decent salary and incentive to the labours. But due to insufficient labour force the cultivators struggle a lot during the cultivation period.

4.2.2 LEVEL OF AGREEABILITY VS MARKETING CHANNEL

TABLE 4.2.2 LEVEL OF AGREEABILITY

		Prefer various marketing channel for sale	Preference towards various marketing channel for cash sales	Expectation of high price through marketing channels	Deduction of storage cost and commission through marketing channel sales
N	Valid	100	100	100	100
	Missing	0	0	0	0
Mean		2.8700	3.1000	2.9500	3.0900
Median		3.0000	3.0000	3.0000	3.0000
Mode		3.00	3.00	3.00	3.00
Std. Deviation		1.33829	1.15907	1.27426	1.20684
Minimum		1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00

It is seen from the above table 4.2.2 that the highest mean rating is 3.1000 for the item "Preference towards various marketing channel for cash sales". That is on the average agreed a level of the respondents is between agree and strongly agree. The second highest mean rating is 3.0900 for the item "Deduction storage cost and commission through marketing

channel sales". The lowest mean rating is 2.8700 for the item "Prefer various marketing channel for sale". That is on the average that it has their agreed level between strongly disagree and disagree . It is also seen from the table that the rating of most of the items vary between minimum of 1 to a maximum of 5.

Hence it is known from the table 4.2.2 that most of the respondents agree prefer various marketing channel for cash sales with the expectation of high price for the crop.

4.2.3 LEVEL OF AGREEABILITY VS PROMOTION

TABLE 4.2.3 LEVEL OF AGREEABILITY

		Expectation of high transportation cost	Government subsidies for transportation	Satisfaction towards government subsidies for promotion	Support of social media for sales promotions
N	Valid	100	100	100	100
	Missing	0	0	0	0
Mean		3.0900	3.0600	3.0900	3.2000
Median		3.0000	3.0000	3.0000	3.0000
Mode		3.00	4.00	4.00	4.00
Std. Deviation		1.19844	1.23763	1.19844	1.18065
Minimum		1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00

It is seen from the above table 4.2.3 that the highest mean rating is 3.2000 for the item "Support of social media for sales promotions". That is on the average agreed a level of the respondents is between agree and strongly agree. The second highest mean rating is 3.0900 for both the item "Expectation of high transportation cost" and "Satisfaction towards government subsidies for promotion". The lowest mean rating is 3.0600 for the item "Government subsidies for transportation". That is on the average that it has their agreed level between strongly disagree and disagree . It is also seen from the table that the rating of most of the items vary between minimum of 1 to a maximum of 5.

In the promotion of Cardamom, comparing to government subsidies for transportation, most of the respondents depends on the support of social media for sales promotion.

4.2.4 LEVEL OF AGREEABILITY VS CULTIVATERS LEVEL SATISFACTION

TABLE 4.2.4 LEVEL OF AGREEABILITY

		Sales	Price	Demand	Investment	Govt. Subsidies
N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0
Mean		2.8900	3.0500	3.1100	3.1500	3.1100
Median		3.0000	3.0000	3.0000	3.0000	3.0000
Mode		4.00	3.00	4.00	3.00	3.00
Std. Deviation		1.27837	1.16667	1.29408	1.20918	1.21352
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00

It is seen from the above table 4.2.4 that the highest mean rating is 3.1500 for the item “Investment”. That is on the average agreed a level of the respondents is between agree and strongly agree. The second highest mean rating is 3.1100 for both the item “Demand” and “Govt. subsidies”. The lowest mean rating is 2.8900 for the item “Sales”. That is on the average that it has their agreed level between strongly disagree and disagree . It is also seen from the table that the rating of most of the items vary between minimum of 1 to a maximum of 5.

Due to the low level of satisfaction in sales the cultivators are forced to invest more during the cultivation along with government subsidies and fluctuating trend in the price.

4.3 ONE-WAY ANOVA

ANOVA is statistical test that looks for significant differences between means on a measure and t-test is the type inferential statistics used to determine if there is significant difference between the means of two groups. Here ANOVA and t-test are used to analyse

whether there is a significant difference between the socio demographic factors and the level of agreeability.

Ho: There is no significance association between the Socio demographic factors of residential status and the level of agreeability factors.

TABLE 4.3.1

		Sum of Squares	Df	Mean Square	F	Sig.
Auction centre	Between Groups	.186	2	.093	.056	.946
	Within Groups	161.454	97	1.664		
	Total	161.640	99			
E-auction process	Between Groups	.334	2	.167	.128	.880
	Within Groups	126.416	97	1.303		
	Total	126.750	99			
Wholesaler	Between Groups	1.594	2	.797	.559	.574
	Within Groups	138.366	97	1.426		
	Total	139.960	99			
Retailers	Between Groups	.729	2	.365	.267	.766
	Within Groups	132.271	97	1.364		
	Total	133.000	99			

Significant at 5 per cent.

Comparing the table 4.3.1 and 4.3.2 the value F is .056 which, reaches the significance of .946 is higher than the alpha value 0.05, this means, there is **no significance difference** between the means of factor "Auction centre" and residential status. The value f is

.128 which, reaches the significance of .880 is higher than the alpha value 0.05, this means, there is **no significance difference** between the means of factor "E-auction process" and residential status. The value f is .559 which reaches the significance of .574 and it is higher than the alpha value 0.05, therefore it has **no significance difference** between the factor "Wholesaler" and the residential status. The value f is .267 which has the significance of .766 which is higher than the alpha value 0.05, therefore there is **no significance difference** between the factor "Retailers" and the residential status. Hence, the hypothesis is accepted.

4.4 COMPARATIVE STUDY

A chi square ($\chi 2$) statistic is a test that measures how expectations compare to actual observed data (or model results). The data used in calculating a chi square statistic must be random, raw, mutually exclusive, drawn from independent variables, and drawn from a large enough sample. Chi- squared tests are often constructed from a sum of squared errors, or through the sample variance. Test statistics that follow a chi squared distribution arise from an assumption of independent normally distributed data, which is valid in many cases due to the central limit theorem.

Here the key result in the chi-square test table is the Pearson Chi-square.

Ho: There is no significance association between the price and their strategy of quick sales.

TABLE 4.4.1.1 Price of the cardamom in market * Following the strategy of quick sales

		Following the strategy of quick sales					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Price of the Cardamom in market	Rs 400-500 per kg	11	9	14	12	6	52
	Rs 501-600 per kg	5	3	7	8	5	28
	Above Rs 600 per cent	0	5	7	2	6	20
Total		16	17	28	22	17	100

TABLE 4.4.1.2 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.791[a]	8	.214
Likelihood Ratio	13.923	8	.084
Linear-by-Linear Association	3.128	1	.077
N of Valid Cases	100		

The value of the test statistics is 10.791. The corresponding p-value of the test statistics is p= .214. since the p-value is greater than our chosen significance level (a=0.05). There is no significance association between the demographic factors of the respondents and their strategy of quick sales. Hence, null hypothesis is accepted.

Ho: There is no significance association between the price and the space of warehouse and godown.

Significant @ 5 percent.

TABLE 4.4.2.1 Price of the cardamom in market * Enough space of warehouse and godown

		Enough space of warehouse and godown					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Price of the cardamom in market	Rs 400-500 per kg	8	9	16	10	9	52
	Rs 501-600 per kg	1	3	7	10	7	28
	Above Rs 600 per cent	3	2	6	4	5	20
Total		12	14	29	24	21	100

TABLE 4.4.2.2 Chi-Square Test			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.303[a]	8	.613
Likelihood Ratio	6.746	8	.564
Linear-by-Linear Association	1.414	1	.234
N of Valid Cases	100		

a. 6 cells (40.0per cent) have expected count less than 5. The minimum expected count is 2.40.

The value of the test statistics is 6.303. The corresponding p-value of the test statistics is p= .613. since the p-value is greater than our chosen significance level (a=0.05). There is no significance association between the price and the space of warehouse and godown. Hence, null hypothesis is accepted.

Ho: There is no significance association between the price and the expectation of demand in the marketing.

Significant @ 5 percent.

TABLE 4.4.3.1 Price of the cardamom in market * Expectation of demand in the marketing

		Expectation of demand in the marketing					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Price of the cardamom in market	Rs 400-500 per kg	9	8	16	14	5	52
	Rs 501-600 per kg	4	4	7	8	5	28
	Above Rs 600 per cent	1	4	7	5	3	20
Total		14	16	30	27	13	100

TABLE 4.4.3.2 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.322[a]	8	.913
Likelihood Ratio	3.660	8	.886
Linear-by-Linear Association	1.042	1	.307
N of Valid Cases	100		

a. 6 cells (40.0per cent) have expected count less than 5. The minimum expected count is 2.60.

The value of the test statistics is 3.322. The corresponding p-value of the test statistics is p= .913. since the p-value is greater than our chosen significance level (a=0.05). There is no significance association between the price and the expectation of demand in the marketing. Hence, null hypothesis is accepted.

Ho: There is no significance association between the price and Government interference in pricing.

Significant @ 5 percent.

TABLE 4.4.4.1 Price of the cardamom in market * Government interference in pricing

		Government interference in pricing					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Price of the cardamom in market	Rs 400-500 per kg	5	17	15	10	5	52
	Rs 501-600 per kg	0	7	10	8	3	28
	Above Rs 600 per cent	3	3	9	3	2	20
Total		8	27	34	21	10	100

TABLE 4.4.4.2 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.716[a]	8	.462
Likelihood Ratio	9.778	8	.281
Linear-by-Linear Association	.254	1	.614
N of Valid Cases	100		

a. 6 cells (40.0per cent) have expected count less than 5. The minimum expected count is 1.60.

The value of the test statistics is 7.716. The corresponding p-value of the test statistics is p= .462. since the p-value is greater than our chosen significance level (a=0.05). There is no significance association between the price and the Government interference in pricing. Hence, null hypothesis is accepted.

Ho: There is no significance association between the price and the Open market strategy for pricing.

Significant @ 5 percent.

TABLE 4.4.5.1 Price of the cardamom in market * Open market stategy for pricing

		Open market stategy for pricing					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Price of the cardamom in market	Rs 400-500 per kg	17	5	15	11	4	52
	Rs 501-600 per kg	5	4	9	7	3	28
	Above Rs 600 per cent	2	6	5	5	2	20
Total		24	15	29	23	9	100

TABLE 4.4.5.2 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.304[a]	8	.404
Likelihood Ratio	8.111	8	.423
Linear-by-Linear Association	1.388	1	.239
N of Valid Cases	100		

a. 7 cells (46.7 per cent) have expected count less than 5. The minimum expected count is 1.80.

The value of the test statistics is 8.304. The corresponding p-value of the test statistics is p= .404. since the p-value is greater than our chosen significance level (a=0.05). There is no significance association between the price and the Open market strategy for pricing. Hence. null hypothesis is accepted.

4.5 Ownership of the land vs the level of agreeability

T-Test

This tool is a statistical test that is used to compare the means of two groups. The testing uses randomly selected samples from the two categories or groups. Depending upon the parameters, the test is concluded, and the t-value is obtained as the statistical inference of the probability of the usual driven chances. The null hypothesis signifies that the difference between the means is zero and where both the means are shown equal. Alternate hypothesis implies the difference between the means is different from the zero. The hypothesis rejects the null hypothesis, indicating that the data set is quite accurate and not by chance.

Ho: There is no significance association between the Ownership of land and level of agreeability.

Significant @ 5 percent.

TABLE 4.5.1 Group Statistics

	Ownership of available land	N	Mean	Std. Deviation	Std. Error Mean
Sufficient rainfall for the cultivation area	Own land	64	3.3750	1.00000	.12500
	Leased	36	3.5556	.87650	.14608
Sub cultivation to protect the cardamom production	Own land	64	3.1875	1.24563	.15570
	Leased	36	2.9722	1.36248	.22708
Following of disease preventing measures	Own land	64	3.2969	1.07909	.13489
	Leased	36	3.4167	1.25071	.20845
Soil erosion issues in the cultivation areas	Own land	64	3.0469	1.23994	.15499
	Leased	36	3.3056	1.16667	.19444

TABLE 4.5.2 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95per cent Confidence Interval of the Difference	
									Lower	Upper
Sufficient rainfall for the cultivation area	Equal variances assumed	.337	.563	-.905	98	.368	-.18056	.19953	-.57651	.21540
	Equal variances not assumed			-.939	80.917	.350	-.18056	.19226	-.56311	.20200
Sub cultivation to protect the cardamom production	Equal variances assumed	.635	.428	.802	98	.425	.21528	.26845	-.31746	.74802
	Equal variances not assumed			.782	67.374	.437	.21528	.27533	-.33424	.76479
Following Of Disease Preventing Measures	Equal variances assumed	2.050	.155	-.503	98	.616	-.11979	.23820	-.59249	.35290
	Equal variance			-.48	64.194	.631	-.11979	.24829	-.61577	.37619

	s not assumed			2						
Soil erosion issues in the cultivation areas	Equal variances assumed	.125	.724	-1.023	98	.309	-.25868	.25297	-.76070	.24334
	Equal variances not assumed			-1.040	76.458	.301	-.25868	.24866	-.75388	.23652

In levene's test **p is greater or equal to 0.05**

We conclude that, the mean differences on **"Sufficient rainfall for the cultivation area"** with p=0.368, therefore it is **not statistically significant**.

For the mean difference on **"Sub cultivation to protect the cardamom production"** with p= 0.425, therefore it is **not statistically significant**.

For the mean difference on **"Following of Disease Preventing Measures"**, with p=0.331, therefore it is **statistically not significant.**

For the mean difference on **"Soil erosion issues in the cultivation areas"** with p= 0.616, therefore it is **statistically not significant.** Hence, null hypothesis is accepted.

CHAPTER V

CHAPTER – V

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

Percentage Analysis:

- 81 per cent of the respondents belong to the age group of 21 to 35 years
- 91 per cent of the respondents belong to male.
- 66 per cent of the respondents are married.
- 29 per cent of the respondents are under graduates.
- 37 per cent of the respondents earn monthly income of Rs 10001-20001.
- 45 per cent of the respondent's residential area is rural.
- 58 per cent of the respondents have below 5acre for cultivation.
- 64 per cent of the respondents have own land.
- 65 per cent of the respondents are investing their own land.
- 87 per cent of the respondents require water irrigation for cultivation.
- 52 per cent of the respondent's price of the cardamom is Rs 400-500 per kg.
- 28 per cent of the respondents does not use any sub cultivation.
- 50 per cent of the respondents have ecological problem during cultivation period.
- 77 per cent of the respondents need support by the Government of Tamil Nadu.

Descriptive Statistics:

Based on high mean ranking it has been concluded that most of the respondents followed traditional method of cultivation.

Based on high mean ranking it has been concluded that most of the respondents prefer various marketing channel for cash sales.

Based on high mean ranking it has been concluded that most of the respondents take the support of social media for sales promotions.

Based on high mean ranking it has been concluded that most of the respondents are highly satisfied on their investment which yield high return.

ANOVA:

Demographic factors vs the level of agreeability

The ANOVA results shows that there is no significant difference in the mean score of the factors influencing the level of agreeability and socio demographic factors namely , Auction centre, E-auction process, Wholesaler, Retailers. Hence the null hypothesis is accepted at 5 per cent level of significance.

CHI-SQUARE:

The level of agreeability vs price of the cardamom

The CHI-SQUARE results show that is no significant difference in the mean score of the factors influencing the level of agreeability and price of the cardamom namely, 0.214, 0.613, 0.913, 0.462 and 0.404. Hence the null hypothesis is accepted at 5 per cent level of significance.

T-TEST:

Ownership of the land vs the level of agreeability

The t-test result shows that there is no significant difference in the mean score of the factors influencing the level of agreeability and ownership of the land namely, Sufficient rainfall for the cultivation area, Sub cultivation to protect the cardamom production, Following of Disease Preventing Measures, Soil erosion issues in the cultivation areas. Hence the null hypothesis is accepted at 5 per cent level of significance.

5.2 SUGGESTION:

According to the responses, cardamom is expensive. People only use a small amount of cardamom because of this. People may begin to use cardamom more frequently if the price is reduced. Many individuals are unaware of the uses for cardamom. It is possible to promote

the use of cardamom by raising awareness of it. Cardamom serves as both food and medicine. The researcher advises using cardamom since it is a medication.

1. In order to boost output, modern techniques should be applied to cardamom growing.

2. Low-interest loans should be offered to cardamom producers so that they may readily repay them.

3. Cardamom farmers need to be aware of the weekly market price.

4. The Spice Board should assist in obtaining subsidies for the cardamom growers.

5. The cardamom growers may be granted credit and subsidies to help them with their replanting efforts.

6. The Cardamom Board ought to offer advice to cardamom producers about the cultivation, preparation, and selling of cardamom. For the advantage of the cardamom growers, scientific knowledge should be disseminated through lectures, discussions, field experiments, and advertising efforts.

7. Cardamom farmers should receive regular training and orientation sessions to keep them up to date on contemporary methods of growing the spice.

8. A process called curing is utilised to maintain the quality. It should be made financially possible for them to build their own curing cottages.

9. Government. The Spices Board may offer a number of workshops to educate planters on the proper timing for applying herbicides, fertilisers, and insecticides.

10. Spice producers might properly be connected with government organisations to benefit from the piggybacking approach of export promotion and expansion.

5.3 CONCLUSION:

Cardamom cultivation provides seasonal employment for the population, although there is a year-round demand for the spice in Cumbum (Theni District). The origin of cardamom and the price trend are shown in this investigation. The major drivers of rising cardamom

consumption are expanding cardamom planting and stoking growers' desire. The analysis was created using the respondents' perceptions on several aspects. According to the study, Cumbum's cardamom producers produce more owing to the region's favourable environment, and because of their extra output, they sell to other nations and increase the country's foreign exchange earnings. The study conclude that cardamom cultivation is highest in the rural area with average income of more than Rs.10,000 per month for the cultivators . It also reveal that Government provide subsidies and support for promotion of Cardamom helps cultivators ease to reach consumers and also helps in maximising profit. The cultivation is done through traditional method which ensures the quality of the cardamom. The study recommends that cardamom cultivation is one of the best agriculture practices for the upcoming cultivators in the near future, taking the support of all the favourable environmental factors into consideration.

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APPENDIX

QUESTIONNAIRE

I, P. Namitha M.com ,under the guidance of Dr K.Abirami M.Com., M.Phil., SET., Ph.D Assistant Professor, Department of Commerce, Avinshilingm University, Coimbatore doing a research on "A STUDY ON MARKETING OF GREEN CARDAMOM WITH REFERENCE TO CUMBUM CITY (THENI DISTRICT)-TAMIL NADU ". As it requires large number of information, I kindly request to spare your valuable time to response the questionnaire and give your suggestions and opinions. Information provided will be kept confidential.

PART-A

1. Name:_____

2. Address:_____

3. Age: a, up to 20 years b, 21 to 35 years c, 36 to 50 years

d, above 50 years

4. Gender: a, Male b, Female c, Transgender

5. Marital status a. Married b, Unmarried

6. Education qualification: a, Illiterate b, SSLC c, HSC d, Undergraduate

e, Postgraduate f, others

7. Monthly Income: a, Less than Rs 10000 b, Rs 10001-20000 c, Rs 20001-50000 d, More thanRs 50000

8. Status of the residential area a, Urban b, Rural c, Semi urban

9. Acres /cents availability for cultivation a, Less than5acre b, 5-10acre c, 10-20acre d, More than20acre

10. Ownership of the available land for cultivation a, Own land b, Leased

11. Mode of investment on cultivation a, Own money b, Bank loan

12. Is water irrigation require for cultivation a, Yes b, No

13. Any sub cultivating in addition to cardamom cultivation Please specify:_____

14. Average price for cardamom in the market

a, Rs 400-500 per kg b, Rs 501-600 per kg c, Above Rs 600 per kg

15. Problem during the cultivation period

a, Ecological problem b, Socioeconomic problem c, Technology problem

16. Is support provided by the Government of Tamil Nadu a, Yes b, No

PART-B

The factors and the variables given below are dealt with the marketing practices of cardamom crop .It is hereby requested to rate the same with the scale as:

S. NO	FACTORS	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
ECOLOGICAL FACTORS						
1.	Sufficient rainfall for the cultivation area.					
2.	Sub cultivation to protect the cardamom production.					
3.	Following of disease preventing measures.					
4.	Soil erosion issues in the cultivation areas.					
SOCIO ECONOMIC FACTORS						
5.	Ample availability of labour force.					
6.	Traditional methods of cultivation are followed					
7.	Decent salary and incentive are provided to the labour.					
8.	Adequate availability of funds for cultivation.					
PRICE						
9.	Open market strategy for pricing.					
10.	Government interference in pricing.					

11.	Expectation of demand in the marketing.					
12.	Enough space of warehouse and godown.					
13.	Following the strategy of quick sales.					
CHANNEL OF DISTRIBUTION(Sale preference)						
14.	Auction Centre					
15.	E-auction process					
16.	Wholesaler					
17.	Retailers					
MARKETING CHANNEL						
18.	Prefer various marketing channels for sale.					
19.	Preference towards various marketing channel for cash sales.					
20.	Expectation of high price through marketing channels.					
21.	Deduction of storage cost and commission through marketing channel sales.					

PROMOTION						
22.	Expectation of high transportation cost.					
23.	Government subsidies for transportation.					
24.	Satisfaction towards government subsidies for promotion.					
25.	Support of social media for sales promotion.					
CULTIVATORS SATISFACTIONLEVEL						
26.	Sales					
27.	Price					
28.	Demand					
29.	Investment					
30.	Govt.subsidies					

Suggestions if any:_____