CHAPTER VII

MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION

7.1 INTRODUCTION

7.2 MAJOR FINDINGS FROM THE SECONDARY DATA ANALYSIS (FROM 1970-71 TO 2013-14):

7.3 MAJOR FINDINGS FROM THE PRIMARY DATA ANALYSIS BASED ON FIELD SURVEY CONDUCTED IN THE YEAR 2013-14

7.4 A COMPARISON BETWEEN THE FINDINGS FROM THE PRIMARY AND SECONDARY DATA

7.5 SUGGESTIONS AND POLICY IMPLICATIONS

7.6 CONCLUSION
MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION

7.1 Introduction

The study is directed to examine whether reform policies adopted by the Government under the WTO regime have any impact on cardamom economy of Kerala. With this objective in view an attempt was made to make a comparative analysis of the major variables of cardamom economy both in pre and post-reform periods by using both primary and secondary data. The study shows WTO reforms applicable to the spice sector have opened opportunities to the cardamom economy. Small cardamom, which is indigenous to the South India, has better prospectus, even if IPR version is considered. A SWOT analysis shows the strength is in terms of its indigenous nature and the opportunity in terms of as the best quality in the world. The weakness is the inefficient government machinery and the threat is the climate and pest and viral attacks on plants. Threat is not critical as advanced science and technology in weather forecasting and use of both organic and advanced preventives are available. Weakness is with respect to the inefficient use of resources both men and materials. India is able to combat the challenges and the study points out the possible strategies which can be adopted to rescue cardamom economy from its ‘weaknesses ‘and ‘threats’. The findings of the study are expected to enable the cardamom economy to regain its earlier position in the world.

The main objective of the study is to analyze the trend of small cardamom production and its price both in the pre and post-reform period.
The sub objectives are:

- To make a comparative study of the area, production, yield, price and trade of cardamom in the pre and post-reform period in Kerala.

- To evaluate the opinion of farmers, traders, and exporters about the land area, production, yield and prices of cardamom in the pre and post-reform period.

- To find out the major problems faced by the farmers, traders and exporters of small cardamom.

- To evaluate the level of satisfaction of the farmers, traders and exporters in terms of production, productivity, prices and the role played by the Spices Board of India.

- To assess the role played by the Spices Board of India in the small cardamom economy.

- To analyze the future prospects of the small cardamom economy in Kerala.

Based on the objectives of the study the following major hypotheses were formulated and tested.

1. There is significant difference between the land area, production, productivity and prices of cardamom in the pre and post-reform period.

2. Farmers, traders and exporters differ significantly in their opinion about the conditions of cardamom in terms of production, marketing and price.
3. Farmers, traders and exporters do not differ significantly scale-wise and education-wise as regards the problems faced by them.

4. The role played by the Spices Board of India in terms of productivity enhancement, sustainable development, cost reduction, extension through capacity building and subsidies, crop improvement and plant protection and post-harvest operations and marketing is less than average.

5. The level of satisfaction of the respondents with regard to production, productivity and prices of small cardamom and the role played by the Spices Board of India is less than average.

6. Farmers, traders and exporters have good opinion about the future prospects of small cardamom economy in Kerala.

7. Both primary and secondary data were analyzed to derive the findings and conclusions. On the basis of the statistical inferences and observations, the following conclusions are made.

7.2 Major Findings from the Secondary Data Analysis (From 1970-71 to 2013-14)

In order to access the current situation of small cardamom economy and to compare the pre and post-reform situation of the small cardamom economy, it was essential to conduct a detailed analysis of the nature and behavior of important variables in the economy. The important findings from the secondary data analysis are the following.-
Major Findings, Suggestions and Conclusion

- Out of the two varieties of cardamom—large and small—small cardamom is produced only in three states of South India viz. Kerala, Tamil Nadu and Karnataka. Of the two cardamom varieties, small cardamom fetches high price in international market and thereby contributes a higher share in foreign exchange earnings for the country. Indian cardamom is famous from time immemorial for its high quality and has a bright future.

- Kerala holds the highest position in area-wise (58%) and production-wise (76%) in small cardamom in India. Of the cultivators of small cardamom, 90 percent belong to Kerala.

- Major importer of cardamom from India is Saudi Arabia (75%). Others include Kuwait, U.A.E, Pakistan, U.S and Japan.

- Guatemala is the leading producer of cardamom (38,000MT) and India ranked the second (15,000 MT) in 2013. Only in labour cost, Guatemala has got the comparative advantage. Quality and the geographic origin are the primary concerns of the consumers. To take advantage of these India should comply with W.T.O provisions.

- Kerala’s plantations account for about 40 per cent of the area under plantation crops in the country and contribute 46 percent of the value of India’s total annual plantation produce. The area under small cardamom comes 5.9 percent of the total plantation area in Kerala. The total number of cardamom farmers contributes to 2.12 percent of the total plantation growers and 3.24 per cent of plantation labour.
Cardamom contributed 5.37 percent to total spices exports from India. It contributed Rs.860 crore to the exchequer in 2014-15. (Source: UPASI).

World export of cardamom was around 51,000 MT in 2013 and India’s contribution was around twenty to thirty percentage on an average throughout the years from 2009 onwards.

More than 90 percent of cardamom production is domestically consumed and used mainly for preparing ayurvedic medicines, for baking industry and used as an important ingredient in making pan masala. Around 80 percent of domestic consumption of cardamom in India comes from North-West India.

A comparison of cardamom production in the pre and post-reform period in absolute terms, the variable showed an increasing tendency in the post reform period. While it was 3170 MT in 1970-71 it increased to 15000 MT in 2013-14. Moreover, the CAGR of production is 0.0412 in the pre-reform and it rose to 0.813 in the post-reform period.

Similarly a comparison of yield in the pre and post-reform period in absolute terms, the variable showed an increasing trend in the post-reform period. While it was 46 Kg/Hectare in 1970-71 it increased to 286 Kg/Hectare in 2013-14. Moreover, the CAGR of yield is 0.0.267 and 0.0.497 in the pre reform and post reform period respectively. The increase in yield could be seen the aftereffect of the use of High Yielding Varieties by the farmers.
Comparison of price in the pre and post-reform period in absolute terms, the variable showed an increasing trend in the post-reform period. While it was Rs.58.76/Kg in 1970-71 it increased to Rs.649.29 /Kg in 2013-14. The increase in price is not worth mentioning vis-à-vis inflationary factor. The CAGR of price is 0.0979 and 0.0545 in the pre-reform and post-reform period respectively. This showed a declining trend.

A comparison of the area in the pre and post-reform period in absolute terms, the variable showed a declining tendency in the post-reform period. While it was 91480 hectares in 1970-71 it decreased to 69970 hectares in 2013-14. Moreover, the CAGR of area was -0.0057 and -0.0068 in the pre-reform and post-reform period respectively. This showed a declining trend.

When we compare the export performance of cardamom, we could see a declining trend after 1985 and after 2011, it showed an increasing trend. While it was 1705 MT in 1970-71 and declined to 270 in 1987-88. But after 2009 export showed an upward tendency and in 2013-14 it was 3600MT. And the CAGR of export was -0.699 and 0.0553 in the pre-reform and post-reform period respectively which showed an increasing tendency. This trend indicates a bright future for Indian cardamom.

As far as the domestic consumption pattern is concerned, it showed an increasing trend after 1985. This indicates two things. On the one hand, on *ceteris paribus*, an increased consumption is the result of increased income
and on the other hand increased use of the commodity for new purpose or already existing product.

- Only a negligible part is imported from abroad. For example one to seven percent is the maximum on an average is imported from abroad and a slight increase can be seen after 2012. And this import has not influenced the price of Indian cardamom.

- A comparison of export and domestic consumption of cardamom shows that more than ninety percent on an average of production is domestically consumed especially after 1986 and the pattern remains stable after that.

- The relation between export and import showed that they are not much correlated. Export mainly depends on the domestic production and consumption on the one hand and on the other the international demand. Import mainly depends on the production in major producing countries, which mainly depend on the climatic other conditions of production in those countries.

- The trend of annual average auction price from 1970-71 to 2013-14 showed that a “cob-web” pattern. It is mainly related to production or conditions of supply proved the Kalecki’s exposition that conditions of supply play a major role in determining the price of agricultural commodities. Another major factor is the international demand for the commodity, which in turn mainly depends on the quality maintenance provisions of W.T.O like SPS measures.
Major Findings, Suggestions and Conclusion

- A comparison of organic cultivation of cardamom with conventional method on the basis of cost, it is the organic method which is cheap and the quality wise, it is the best and will fetch high price in the international market.

- The export of organic cardamom is very meagre in its composition in total export of cardamom i.e. only around 0.5MT of total cardamom export on an average for the recent years.

- Comparison of both India and Guatemala in our study, it is proved that, India has got comparative advantage in all factors except in labour cost. While the ecological conditions for both are almost the same, the high quality of the Indian cardamom and its nativity in Western Ghats of India is the major advantage that India possess.

- Share of decline in export and export earnings cannot be attributed to Guatemala factor alone. One major factor is that domestic consumption is almost equal to domestic production. So only less is available for export. Second and the most important factor is the failure of Indian cardamom in maintaining and keeping the international specifications and quality standard.

- Recently in November, 2015, Government of India announced the minimum price for import as Rs.500/Kg and 70 % as import tax to curb the import of cardamom from other competing countries. It is done with the purpose of protecting the home producers. Since only small amount is imported to India, how far this measure will help to protect the industry is doubtful. If India wants to be competitive in the field, efforts should be concentrated to employ
the cost reducing technology of production. It is a fact that India cannot withstand with subsidized program for a long period, as India is one of first signatories of the WTO agreement.

7.2 Major Findings from the Primary Data Analysis Based on Field Survey Conducted In The Year 2013-14

7.2.1: Findings based on the Profile of the Farmers

Majority of the farmers belong to the age group of below 40 years. Most of the (53.4 per cent) of the farmers have secondary level education. All the respondents do agriculture as their major source of revenue. Most (77.1 per cent) of the respondents cultivate cardamom in an area less than five acres. Majority have Patta land and their nature of cultivation (81.1 per cent) is mono crop cultivation. 92.3 percent of the farmers have 250 to 500 plants in their land and majority of the farmers get 3000 to 6000 kilograms of dried cardamom as yield per year. Majority of the farmers incur two to four lakhs rupees as cardamom production cost per year. More than 62 percent earn Rs.75000 to Rs.150000 as annual profit.

7.2.1.1 Relation between yield, cost and profit.

It is clear that the correlation coefficient between yield and cost is 0.73. It indicates that 73 percent positive relationship exists between yield and cost and the same is significant at one percent level. As cost increase by 100 percent (or by one unit) the yield will increase by 73 percent (or by 0.73 unit). The correlation between cost and profit is -0.69. It means that 69 percent negative correlation is there between cost and profit. That is, one unit increase in cost will result into 0.69 unit reduction in profit and vice versa. The correlation between yield and profit is 0.86. It means that
86 percent positive correlation is there between yield and profit. That is, one unit increase in yield will result into 0.86 unit increase in profit.

### 7.2.2 Findings based on the Profile of the Traders

Majority of the traders belong to the age group of ‘40-50’ years and having secondary level of education. 56.7 percent of the traders have an experience of trading less than 10 years. The level of average annual trading of the majority of the traders is between 25000 to 50000 kilograms. The annual income of the majority is in between 1 crore to 2.5 crores. Most of the traders earn profit in the range of five to ten lakhs. Fifty percent of the traders collect cardamom from other traders. The trading relationship of the majority (60 per cent) is with wholesalers.

#### 7.2.2.1 Relation between Annual trading, Income and Profit

The correlation coefficient between cardamom trading and income is 0.83. It means that 83 percent positive relationship exists between cardamom trading and income. The same is significant at one percent level of significance. One unit change in trading will result into 0.83 unit change in income. The correlation between trading and profit is 0.88. It means that, there is 88 percent positive correlation between trading and profit. As one unit, increase in trading will result into 0.88 unit increases in profit. The correlation between income and profit is 0.74. It means that 74 percent positive correlation exists between income and profit. One unit increase in income will result into an increase of 0.74 unit in profit.
7.2.3 Findings based on the profile of the Exporters

Majority of the exporters belong to the age category of above 50 years and have secondary level education. Only 10 percent of exporters doing corporate form of business. Fifty percent of the exporters run sole proprietorship business and forty percent of the exporters run partnership business. Only 20 percent of the exporters have more than twenty years of experience. Majority of the exporters have an export up to 100 tonnes on an average every year and seventy percent of the exporters generate in between 100 and 110 lakhs rupees as annual revenue. Fifty percent of the exporters incur between 100 and 110 lakhs respectively as annual expenditure of export business and majority of them generate up to Rs.20 lakhs every year as profit.

7.2.4. Opinion of the farmers with regard to Land area, Production, Productivity and Prices of cardamom in the pre and post-reform period

Using Five point scale and paired samples t-test, it is proved that there is significant difference between the opinion of the traders as regards the i) land area, ii) production, iii) cost iv) productivity, v) price, vi) availability of spices board assistance and vii) government policies and support in the pre-reform and post-reform period. Farmers opined that the production, cost, productivity, price, availability of spices board assistance and government policies and support are high in the post reform period. But with regard to the land area, there is no significant difference between the land area in the pre and post reform period. It implied that even though the farmers seemed to be unsatisfied with price, production conditions and international competition, they are not ready to give up this crop or ready to sell their property, they expect a bright future for the commodity.
7.2.4. Opinion of the traders with respect to Land area, Production, Productivity and Prices of cardamom in the pre and post-reform period

Using Five point scale and paired samples t-test, it is proved that there is significant difference between the opinion of the exporters as regards the i) land area, ii) production, iii) cost iv) productivity, v) price, vi) availability of spices board assistance and vii) government policies and support in the pre-reform and post-reform period. The opinion of traders on availability of land area was high in the pre-reform period. But the cardamom production, production cost, productivity, spices board assistance, government policies and support is high in the post reform period. According to them prices was less than average in the post reform period.

7.2.5. Opinion of the exporters regarding to Area Production, Productivity and Prices of cardamom in the pre and post-reform period

Based on the comparison of the mean values of these variables in the pre and post reform period, it is high after the post reform period. Hence it can be interpreted that production, productivity, spices board assistance are improved in the post reform period. According to the exporters, the production cost is also increased in the post reform period. There is no significant difference between the land area, prices and government policies and support in the pre and post reform period.

7.2.6 : Opinion of farmers with respect to the present status of Production, Marketing and prices

Using Five point scale - one samples t-test, it is proved that the responses of the farmers as regards the present conditions of production, marketing and price are not equal to average. Based on the comparison of the mean value with the preset
value, it can be interpreted that the responses of the farmers as regards the production conditions price conditions and market conditions is poor or bad.

7.2.7: Opinion of traders with respect to the present status of Production, Marketing and prices

Using Five point scale- one samples t-test, it is proved that the responses of the traders as regards the present conditions of production, marketing and price are not equal to average. Based on the comparison of the mean value with the preset value it may be interpreted that their opinion about the production, price and market conditions is less than average.

7.2.8 Opinion of exporters with respect to the present status of Production, Marketing and prices

Based on the comparison of the mean value with the preset value it may be interpreted that their opinion is less than average for the present conditions of production, marketing and price and the opinion about the output factors like quality of labour, cropping pattern, cropping intensity, support system prevailing in the economy and research and extension is above average.

7.2.9 Problems of Farmers

The most important problems faced by the farmers are i) illegal import of cardamom to India, ii) Stiff competition from other countries and iii) high productions costs.

7.2.10 Problems of Traders

The most important problems faced by the traders are i)price fluctuation, ii) stiff competition and iii)illegal imports
7.2.11 Problems of Exporters

The most important problems faced by the exporters are i) competition from other exporters, ii) problems of financial settlement, iii) legal formalities of export and iv) exchange rate fluctuations.

7.2.12 Role of Spices Board

The role of the spices board concerning (i) product development, (ii) sustainable development, (iii) cost reduction, (iv) capacity building, and (v) post-harvest operations is below average. But with regard to crop improvement, the role is equal to average.

7.2.13 Level of Satisfaction of farmers

The level of satisfaction among the farmers as regards the policies and support of the spices board, role of spices board, planting material cost, fertilizer cost, labour cost, other production cost, prices and price fluctuation is not equal to average.

7.2.14 Level of satisfaction of Traders

The level of satisfaction among the traders as regards the (i) licensing policy of the government, (ii) prices of cardamom (iii) policies and support of the government, (iv) price fluctuations, (v) role played by the spices board, (vi) production and productivity of cardamom (vii) functions of intermediaries (viii) cardamom quality standards and (ix) demand supply trends is not equal to average.
7.2.15. Level of satisfaction of Exporters

The level of satisfaction among the exporters as regards the licensing policy of the government, prices of cardamom, policies and support of the government, price fluctuation, role played by the spices board, production and productivity of cardamom, functions of the intermediaries, cardamom quality standards and demand supply trends is not equal to average.

7.2.16 Future Prospects of Cardamom Economy

Farmers, Traders and Exporters have similar opinion that cardamom economy has got a bright future.

7.3. Testing Of The Research Hypothesis With The Primary And Secondary Data :

1. **Hypothesis No.1** : There is significant difference between the land area, production, productivity and prices of cardamom in the pre and post reform period.

   - The findings from the primary data seemed to accept the hypothesis since the null hypothesis concerning majority of the variables are rejected and therefore the null hypothesis can be rejected & so , the research hypothesis is accepted.
   - Secondary data analysis showed that there exists significant increase in production, productivity and prices in the post-reform period vis-à-vis pre reform period. With regard to the area, there is no significant change during these periods. So the first hypothesis with respect to area is accepted and the rest is rejected.
Note: The discrepancy in findings between primary and secondary data may be due to some bias in primary data as primary data is based on opinion survey

2. Hypothesis No.2: Farmers, traders and exporters differ significantly in their opinion about the conditions of cardamom in terms of production, marketing and price.

- **Primary Data:** Using One Way Analysis Of Variance, the opinion of the traders or exporters in terms of cardamom production, marketing and price conditions do not differ. As far as the farmers are concerned, they do not differ significantly education wise about production, price, and market conditions. But they differ significantly age wise about the production conditions. The farmers do not differ significantly size wise as regards their opinion about market conditions and output factors of production conditions. As far as the other factors like physical factors and input factors of production condition and price conditions are concerned they differ significantly size wise in their opinion.

- **Secondary Data:** Data analysis showed that the conditions of production, marketing and pricing system improved a lot in the post-reform period. Use of high yielding varieties raised production and productivity of the cardamom crop to a great extent. The leading role played by the Spices Board is noticeable in this respect. The introduction of e-auction in cardamom in December 2007 has brought transparency in the auction process. Farmers as well as traders find the e-auction a welcome change compared to their traditional methods of transaction. The technology-aided
Major Findings, Suggestions and Conclusion

Auction mode, coupled with storage facility at the park, has helped the buyer and the seller to eliminate middlemen. Farmers have an opportunity to sell the produce at an optimum price at their convenience. The traders (both domestic and exporters) participating in the e-auction get a chance to physically verify and compare the lots available for auction. With regard to price, all members in the supply chain of the cardamom complained about the unstable price which might have occurred due to change in the domestic or international factors. Due to insufficiency of data the hypothesis is neither accepted nor rejected.

Note: The discrepancy in findings between primary and secondary data may be due to some bias in primary data as primary data is based on opinion survey.

Hypothesis No. 3: Farmers, traders and exporters do not differ significantly scale-wise and education-wise as regards the problems faced by them.

- Primary Data: By applying Friedman’s test, it is concluded that the farmers or traders or exporters do not differ significantly in the problems faced by them. Hence, the null hypothesis is rejected & research hypothesis is accepted.
- Secondary Data: From the secondary sources, it is clear that cardamom is a labour intensive commodity, and is very sensitive to climatic conditions. Price is very closely related to the cost and climatic conditions in both domestic and international market. And so the problems faced by all the three categories do not differ significantly. So the hypothesis is accepted.
Hypothesis No.4: The role played by the Spices Board of India in terms of productivity enhancement, sustainable development, cost reduction, extension through capacity building and subsidies, crop improvement and plant protection and post-harvest operations and marketing is less than average.

- Primary Data: The role of the spices board concerning product development, sustainable development, cost reduction, capacity building, and post-harvest operations is less than average & and the research hypothesis accepted in this case but its performance in crop improvement is above average.

- Secondary Data: This hypothesis is rejected as the facilities extended by the Spices Board is limited to registered cardamom growers.

Note: The discrepancy in findings between primary and secondary data may be due to some bias in primary data as primary data is based on opinion survey

Hypothesis No.5: The level of satisfaction of the farmers, traders and exporters with regard to the production, productivity and prices of cardamom and the role played by the spices board of India is less than average.

- Primary Data: Based on the comparison of the mean value with the preset value it is concluded that the level of satisfaction of the farmers & traders with regard to production, productivity, prices, government policies and support, licensing policy and the role played by the Spices Board is less than average & hence research hypothesis is accepted in their case. As far as the exporters are concerned, their level of satisfaction is equal to
average as regards the polices and support of the government and the functions of the intermediaries. Their level of satisfaction is above average regarding cardamom quality standards, production and productivity of cardamom.

- Secondary Data: Based on the analysis this hypothesis is accepted with regard to price level but rejected with respect to production and productivity. Because India is mainly a price taker in the field, since major producer being Guatemala, the production and price prevailed there play an important role. But with regard to production and productivity India improved a lot mainly because of the timely intervention of the Board in the field.

Note: The discrepancy in findings between primary and secondary data may be due to some bias in primary data as primary data is based on opinion survey.

Hypothesis No. 6: Farmers, traders and exporters have good opinion about the future prospects of cardamom economy in Kerala.

- Primary Data: It is found from the study that the farmers, traders and exporters have very good opinion about the future prospects of cardamom economy in Kerala. So here the research hypothesis is accepted.

- Secondary Data: Based on the analysis this hypothesis is accepted. Since Indian cardamom community have strong faith in the quality and integrity of the cardamom it produces, the crop has got a bright future. A similar
study has shown that quality-wise the Indian cardamom ranked the top based on laboratory experiments.¹

*Note:* The discrepancy in findings between primary and secondary data may be due to some bias in primary data as primary data is based on opinion survey.

### 7.5: Suggestions and Policy Implications

In the backdrops of the findings of the study, policy measures & suggestions suggested are the following

- The adoption of GAP (Good Agricultural Practices) promoted by F.A.O. is still at an infant stage in Kerala. Few growers follow these practices. So it is need of the time to take necessary action.

- Promotional measures to increase the use of cardamom in the existing markets and explore and find out new markets for the product. 65 per cent of Import goes to Saudi Arabia. They use cardamom mainly for coffee making. So there is the possibility import of processed cardamom powder that will fetch high price.

- There is a “hot trend” in spices in U.S & per capita consumption of spices is growing at an increasing rate, as stated by “United States Market”, the largest importer of spices in U.S. By following strict quality control, Indian cardamom also can capture good portion of the market.

- In U.S & European Union countries, where consumers prefer high quality product. What India need is to keep and maintain the quality our product, 

¹Jaleel Kizhakeyil et al.(2006)
both domestic and international. If we follow strict quality controls, & value added items, surely we can increase our export to those developed countries where exporters can expect more or less a stable market.

- We should follow organic cultivation of cardamom, surely, cardamom export will increase in any form- processed / non processed both to highly developed countries & gulf countries. Government should ready to give subsidy to those who practice organic cultivation at least in its infant stage. Spices Board can play an important role in this regard by recognizing and promoting it by giving awards and special incentives.

- Again, cardamom farmers will earn more income if they turn into organic cultivation. Not only foreign demand, but also domestic demand will increase. For e.g. in Kerala, being a consumerist state &the rise of strong middle class, who now bother more about quality than price. Spices Board & Government of India should take special attention & give proper incentives to organic cultivation of cardamom. Not only it is environment friendly, but also good quality product fetches high values both in international & national market & will improve the financial betterment of all the players in the supply chain of cardamom.

- The problem of the shortage of labour can be mitigated through the so called MGNREGP by the government. Of course it requires special skills but by giving proper training to its members, we can mitigate this problem.
• The so called “inclusive development” projected in the five year plans should start from the bottom level of the society. India being proud of a biggest democratic country should concentrate on the development of rural section, as our father of nation Mahatma Gandhi stated”, development should begin from the villages. What we need is a balanced development of all regions and sections of the country. Even our neighbour state, Tamil Nadu where Government provides all most all public amenities at free of cost, why the Government of Kerala lags behind?

• As a signing member of W.T.O. , we can’t no longer depend on subsidies, but we can increase the so called social security measures adopted by the Governments in developed countries. If labour cost is high, then instead of giving subsidies to the farmers, use the public fund to make social amenities like provide basic hospital, schooling, medical, etc.

• The growers always complaining about the tax imposed by the Government. but it is merely small amount as far as an estate owner is concerned. In 2014 Government announced a hike in plantation tax . It is applied only to those who have 4 hectares & above ie.RS.700/ hectare. Again with regard to land tax, Rs. 100/ha up to 2-4 hectare land and it is only 350/hectare as maximum. When comparing to the profits they earned and the facilities they enjoyed from the Government, it is not so high. But government should utilize the fund raised through tax for the upliftment of the farming community.

• Again, when we compare both India & Guatemala in our study, it is clear that India has got comparative advantage in all factors except in labour cost. But
we can’t reduce labour cost because cardamom is a labour intensive commodity and there exist a minimum wage for plantation workers in India. So what the Government can do is all other benefits to labour except wages should be made by Government through introducing welfare fund.

- Export of cardamom mainly depends on domestic production and consumption. As far as India is concerned, its demand is more or less stable & slight increase can be seen in festive season. The demand is more or less inelastic in the foreign market also. But from where they purchase depends on the “cheap and the best criterion”. So quality maintenance in accordance with the W.T.O standard is the need of the time. It can ensure through the e-auction center, where all the trading transactions are taking place, so that traders and exporters could able to ensure the quality of the product.

- The researcher would like to suggest that like in rubber plantation, Government fix a minimum price& maximum price. Government should form a fund pooling from the planters. And if it acts like the participatory pension fund, both planters and government are the contributors and the Government can provide necessary help to the farmers from the fund and the planters will get the benefit after a stipulated time period.

- An important provision in W.T.O agreement is with regard to Geographic Indication of Cardamom, which is indigenous to the Western Ghats of India. Indian cardamom growers has got the privilege. But inadequate support from the government stand as a hindrance. Government or Spices Board should take the initiative if the local farmers are ignorant of the procedures. There are
many local varieties developed by the indigenous farmers. Merely giving awards to the high yielding variety is not enough. Instead what we need is a strong initiative from the government to get the so called GIs for the varieties originated in India.

- New possibilities of irrigation should be used popularly to compact draught. Small farmers couldn’t afford the cost. The subsidy by the spices board is not enough. Even though, there are so many schemes for there to help the growers, either they are not aware or the amount is not enough. In Kerala, there are different types irrigational methods are used in large plantation, but initial cost is a bit high. So here the government can follow infant industry argument to protect the small and marginal farmers. So initiative from the part of Government is essential for helping the farmers, especially small farmers.

- We have a stable domestic demand and retail price of cardamom hire high price. But the benefit goes to traders and not to the tillers of the soil. So necessary policy should be taken in this regard so that growers also benefit from this. The fact is that even if price of cardamom is low in spot market, the price at retail shops will not come down accordingly.

- Instead of chemical fertilizers farmers are encouraged to use organic manure. For example practicing mulching improved soil carbon content on the one hand and on the other better yields could be harvested on a sustainable basis. It will reduce the cost of production on two aspects (a)less labour is needed owing to no weeding and (b)minimum external inputs were applied & with lesser use of chemicals, the natural enemies of pests was very high.
• More awareness regarding cardamom futures market should be created among the producers as well as traders as this will help to hedge against the risk of price fluctuations to a great extent.

• Trees like mangosteen, jackfruit, could provide not only shade, but also earnings to the grower.

• Government as well as Spices Board should take necessary steps to maintain the tolerance level of the pesticide residues as per the stipulations of W.T.O regulations. By ensuring this, we can ensure two things, one is more environment and people friendly and thereby going on the path of sustainable development and the second thing is secure an international standard for the product.

7.6 Conclusion

A holistic approach is needed to bring out the interrelationship among the various factors associated with the problems and prospects of the cardamom economy of Kerala. This study made an attempt to have a review all the important variables in the cardamom economy and then examined the impact of W.T.O reforms on these variables both in the pre and post reform period.

From the analysis of the primary data, it is revealed that majority stick on to this crop in the midst of severe crises and this fact is applicable to the majority of the groups in the cardamom sector. Even though, all the groups in the supply chain of the cardamom have severe complaints about the prevailing situation, they all expect a bright future for the cardamom economy.
With its superior quality, high productivity, India’s Small Cardamom can fetch high demand in the world market. Following GAP (Good Agricultural Practices), an efficient and socially responsible bureaucracy, using advanced weather forecasting system and high yielding variety, a well-organized and integrated market are very important for the survival of the cardamom economy. In India, domestic consumption is almost equal to its production. There is the possibility of gaining from retail trading also. In spite of the restrictions under W.T.O, the aim is to get the best quality product at cheap price to the consumers and thereby ensuring a fair trade. As a signing member of W.T.O, what India can do is to do her best in order to survive in the newly competitive world. The so called SPS under AoA provision is there to ensure good quality product to the consumers and aims to attain the so called sustainable development which is essential for the survival of future generation. So instead of criticizing and blaming the W.T.O reforms, what we need is to strive hard to improve the conditions of production in our country and attain the past glory of our ‘queen cardamom’.

“The time for change is now. The alternative is clear and dire. If we continue in the present mode, others in the world will overtake us”

– A.P.J Abdul Kalam & Y.S.Rajan (Beyond 2020)