CHAPTER VII

SUMMARY OF FINDINGS AND SUGGESTIONS

In this chapter an attempt is made to recapitulate and summarise the findings of the study with a view to providing a basis for the policies that should be formulated for the growth in the production and development of foreign trade in natural rubber.

7.1. Summary of Major Findings

1. The global average of natural rubber production during 1995-'96 to 2009-'10 is 8100 thousand tonnes and Thailand comes in the first place with 32.11 per cent of it. This is followed by Indonesia (24.68 per cent) Malaysia (12.45 per cent) and India (08.62 per cent).

2. The production of natural rubber is indicating an increasing trend both at the global level and in India. The natural rubber production in India showed an upward trend recording a growth of 64 per cent from 1995-'96 to 2009-'10.

3. The global average of the consumption of natural rubber is 8121.5 thousand tonnes and China comes in the first place with 22.6 per cent of it. This is followed by United States of America (12.8 per cent), Japan (9.4 per cent),
and India (08.8 per cent). The consumption of the above four countries together comes to 53.7 per cent of the global consumption.

4. 97.21 per cent of the total production of natural rubber in India is made by Kerala, Tamil Nadu and Karnataka. The highest share is claimed by Kerala with 92.03 per cent and it is followed by Tamil Nadu (3.16 per cent) and Karnataka (2.02 per cent).

5. The state of Kerala with 89.4 per cent of the tapped area of natural rubber comes ahead of other states in India and the second and third place in this regard goes to Tamil Nadu and Karnataka. The variability in the tapped area across the period under review is found to be more or less similar in these states.

6. The state of Karnataka has recorded the highest rate of growth in natural rubber production from 1995-'96 to 2008-'09 (76.8 per cent). This is followed by Kerala (65.09 per cent) and Tamil Nadu (40.5 per cent).

7. The state of Karnataka has recorded the highest rate of growth in the yield of natural rubber from 1995-'96 to 2008-'09 (35.62 per cent). This is followed by Kerala (35.06 per cent) and Tamil Nadu (15.47 per cent).

8. The area under rubber cultivation, production and productivity has been on the rise over the years. The highest rate of yield (productivity) of natural rubber is recorded in Kerala with 1697 tonnes per hectare. This is followed by Tamil Nadu (1561 tonnes) and Karnataka (1227 tonnes).
9. Yield in terms of output and productivity from natural rubber has increased considerably, but the surplus domestic consumption necessitated importing of natural rubber.

10. The survey results from 1995-'96 to 2009-'10 indicated that the area under new planting in Kerala had a growth of 227 per cent, while that from re-planting was 47 per cent. The combined growth of new planted and replanted being 139 per cent.

11. When the share under natural rubber production in Kerala has decreased by 17 per cent that of holdings indicated an upward trend of 77 per cent. It is observed that 92 per cent of the total cultivated area of natural rubber in Kerala is from the holdings and only 7.92 per cent from estates. In other rubber producing areas in the country, holdings constitute 74.52 per cent while estates account for 24.48 per cent of the area under use.

12. It is thus observed that when the area under estates of natural rubber is gradually falling in Kerala, the same is found growing for the rest of India.

13. The area under rubber cultivation in Kerala is constantly increasing in absolute terms over the years; and so is the case with the whole of India. In spite of the positive annual growth in absolute terms for both Kerala and India as a whole, the percentage share of Kerala vis-à-vis the rest of India (other states) is gradually and constantly declining.
14. In respect of the growth rate in the area of cultivation (year on year), similar to absolute growth figures, there is constant positive values for both Kerala and the whole India. However, a closer analysis would reveal that the growth rate of Kerala though positive is at much a slower rate (not even half) than that of India as a whole.

15. There has been a significant positive growth in the area under cultivation, production and productivity of natural rubber during the period 1994-'95 to 2009-'10. The correlation between area under cultivation (in hectares) and productivity (Kg per hectare) over this period is quite high ($r = 0.8899$) indicating that productivity has been increasing along with increase in the area of cultivation over the years.

16. It is observed that the climatic and seasonal variations directly affect the production of natural rubber. A look at the month-wise production of natural rubber in India made it clear that the peak production period for natural rubber is from October to January, accounting for about 45 per cent of the total production.

17. It is also observed that from the month of August onwards, the production increases steadily and the maximum yield is made in the month of December. When the month of December claims the highest yield with 12.3 per cent of the total production, the month of March with 5.23 per cent of the total production, records the lowest yield in the year.
18. Though natural rubber production is observed in all the fourteen districts of Kerala the contribution of districts in Central Kerala is found to be more significant compared to other regions.

19. In terms of output, Kottayam with 23.5 per cent of the total production comes ahead of other districts. This is followed by Ernakulam (12.3 per cent) and Pathanamthitta (10.4 per cent). The total output from these three districts comes to 46 per cent of the total production in the state.

20. Though the relative contributions of the districts of the northern districts of Wynad, Kannur and Kasargod and that from the southern district of Alappuzha are low, their growth rate is quite high. The growth rates observed being Wynad (185 per cent), Kannur (126 per cent), Kasargod (115 per cent) and Alappuzha (119 per cent).

21. The major schemes extended by the Rubber Board for the promotion of the natural rubber cultivation and production in India include the Replanting Subsidy Scheme (since 1957), and Rubber Plantation Development (RPD) scheme. Other incentives include Insurance for Plantations, Price Stabilisation Fund and Personal Accident Insurance Scheme (PAIS).

22. One of the major reasons for the decrease in production of natural rubber during the recent years has been the adverse weather conditions that prevailed in Kerala, and also decline in the number of tapping days.
Besides, there has been the general problem of price fluctuations particularly since 1996-'97.

23. Various policies that influence the trade in natural rubber in India, include primarily the ASEAN, SAPTA and Indo-Sri Lankan Free Trade Agreement.

24. China with 21.15 per cent of the world import of natural rubber comes ahead the importing countries. This is followed by USA (18.4 per cent), Japan (13.4 per cent), Germany and France. India comes in the 15th position but the variability observed being the highest in this regard.

25. The major exporters of natural rubber are Thailand, Indonesia, Malaysia and Vietnam. The position of India comes in the ninth but the variability is observed to be the highest, since export from India is exclusively based on demand for the last few years.

26. The major factors influencing the trade in natural rubber include international and domestic prices which have strong positive correlation of over 90 per cent in respect of the major grades of natural rubber (RSS 1 and RSS 4). The regression results show that one unit change in international price would lead to 0.877 unit change in domestic price for RSS 1. Similarly, one unit change in international price would lead to 0.918 unit change in domestic price for RSS 4. This indicates a significant cause and effect relationship between the prices of natural rubber prevalent in international and domestic markets.
27. There is a direct relationship between crude oil prices and synthetic rubber price, suggesting that an increase in crude oil price influences the synthetic rubber price and finally the natural rubber price. The correlation coefficient between crude oil prices and prices of natural rubber is observed as 0.94.

28. Natural rubber trade in India is influenced by Tariff Barriers and Non-Tariff Barriers.

29. There has been a steady and positive growth in the consumption of natural rubber in India. The average growth rate at 2010 is being 7.92 per cent and 4.20 per cent for synthetic and natural rubber respectively when compared to the base year 1995.

30. The sustained growth of automobile industry in India has a positive impact on the natural rubber industry. Of the different types of automobiles, passenger cars and two-wheeler show the highest levels of growth prospects.

31. The production indices of rubber are much higher than the indices of other crops in all the years; as high as 129 per cent. The productivity of rubber also showed a marked increase over the years and ranks first among plantation crops as well as food grains and non-food grains when productivity is considered.

32. The area under cultivation of natural rubber is higher than any other major plantation crop in Kerala, and it has been growing over the last five years.
On an average there has been an increase of 7795 ha per year for the last five years as evinced from the regression results.

33. There has been an increasing trend in governmental revenue from trade in natural rubber in the form of Cess over the years. Besides, there has been an increasing trend in respect of employment generation, recording an increase of 38 per cent in 2008-'09 from the level in 1994-'95.

34. The Gross State Domestic Product (GSDP) of Kerala has been growing at a slightly faster pace than the Gross Domestic Product (GDP) of India, suggesting a relatively better growth performance of Kerala vis-à-vis India.

35. The imports of natural rubber to Kerala has been growing at a slightly slower rate than the imports to India as a whole, suggesting a relatively slower trade (imports) performance of Kerala vis-à-vis India as a whole. Similarly, exports of natural rubber from Kerala has been growing at a slightly slower rate than the exports from India as a whole, suggesting a relatively slower trade (exports) performance of Kerala vis-à-vis India as a whole.

36. The export of natural rubber is contributing to GSDP of Kerala state to the extent of about 3 per cent and this increasing trend was observed over the years. In imports of natural rubber account for about 1.4 per cent of Kerala’s GSDP, has also indicated a growing trend but faster than that of exports. This establishes that foreign trade in natural rubber plays a significant role in
Kerala’s economy and the same is bound to increase still further in the days to come based on the trends in imports and exports.

37. Exports of natural rubber from India are positively influenced by pattern of global exports of natural rubber whereas the same is negatively influenced by domestic consumption of natural rubber. Besides, the trend variable time also positively influences the exports of natural rubber, suggesting that the export of natural rubber from India varies (increases proportionately with time). This may be due to the growth of the economy in recent years. It is worth noting here that as high as 65 per cent of the changes in export of natural rubber from India are explained by the three factors because the coefficient of determination ($R^2$) is at the level of 0.65.

38. It is observed that 60.50 per cent of the cultivators are selling the natural rubber produce in the form of sheets, while 32.50 per cent sell it in the form of latex and another 7 per cent sell it in other forms.

39. It is found that 56.50 per cent of the cultivators are selling their produce to rubber dealers, 31.50 per cent to RPSs, 07.50 per cent directly to the manufacturing companies and another 4.50 per cent to the exporting firms and local agents.

40. The survey revealed that when 85 per cent of the cultivators opined that labour shortage adversely affecting the production of natural rubber, another 15 per cent didn’t agree to that. When 75 per cent of the cultivators
demanded for the increase in the rate of subsidy, another 25 per cent disagreed.

41. The survey has revealed that only 12.5 per cent of rubber cultivators are fetching market price for their produce, while a 3.5 per cent of them are getting newspaper price.

42. When 73 per cent of the cultivators had the feeling that the services of the Rubber Board need to be improved further, another 27 per cent doesn’t agree to it.

43. When upgrading of quality was insisted by 90 per cent of cultivators, support measures desired for tapping was proposed by 83 per cent, total support for cultivation by 81 per cent and processing and distribution by 73 per cent of cultivators.

44. When 72 per cent of the cultivators agree that the foreign trade policies of the Government need to be improved, another 28 per cent does not feel the need for any change in the Governmental policies towards foreign trade.

45. It is noted that the awareness of cultivators is the highest in respect of International Price (score of 39.81), followed by that of Grading and Standardization (score 39.05), Information from Media (score 38.90) and lastly Research and Development (R&D) in the field of rubber cultivation and allied activities (score 25.00).
46. 97.5 per cent of the cultivators feel that adverse weather negatively affects rubber production and the rest 2.5 per cent feels otherwise.

47. On account of the investment options, investment in home appliances is the topmost priority of the respondents and is followed by investments in housing, vehicle, higher education etc. in that order. The respondents are interested in investing gold also. The least preference is that for bank investments.

48. When 63 per cent of the cultivators feel that real estate sector is posing a challenge to the natural rubber industry, another 37 per cent feel that there is no such threat from the real estate sector.

49. The survey among the intermediaries shows that the sources from which they procure the natural rubber is from the Cultivators which is the majority (62.50 per cent) followed by Agents (25 per cent) and then by Other Sources (12.50 per cent).

50. When 62.67 per cent of the Intermediaries feel that technically qualified graders are not available, for the gradation of rubber, the rest 37.33 per cent opined that they are available. The intermediaries feel that export quality sheet is available only 33.33 per cent. The rest responded that they are not getting enough export quality sheets. The survey has revealed that 17.33 per cent of the intermediaries have opined that they are getting field coagulum where the rest responded the non availability of the same.
51. It is observed that 69.33 per cent of the total deals made by the intermediaries take place at below the market price. Another 8 per cent occurs at newspaper price, while 22.67 per cent takes place at market price.

52. When 77.33 per cent of the total intermediaries have got the requisite facility for conversion of raw sheets into graded sheets, another 22.67 per cent are lacking such conversion facilities.

53. The most significant problem (score 17.10) faced by the intermediaries is the one arising from fluctuations in rubber prices. This is followed by competition in the market (score 16.48) and the problem of mismatch between the time when the demand arises and the time when it is actually supplied by the intermediaries.

54. It is found that 68 per cent of the exporters are sourcing natural rubber from the intermediaries, 24 per cent from cultivators and the balance from other sources.

55. The major form in which natural rubber is collected by the exporters is end products (52 per cent), latex (20 per cent), sheet rubber (20 per cent) and other forms of natural rubber (8 per cent).

56. Among the problems faced by exporters, malpractices in the field of sheets and rubber bought by them, improvement of export promotion measures, international agreements, and quality of rubber, market intervention and insurance were the major ones. However, the import of rubber has not been felt as a major problem by the exporters.
7.2. Suggestions

In the light of the present study, the researcher proposes the following points by way of suggestions in order to strengthen the foreign trade in natural rubber in Kerala.

1. As the field-based study has revealed that there is a growing tendency to convert rubber estates (plantations) for real estate purpose, measures are required from the part of the government to ensure more incentives (like subsidies) to rubber cultivators.

2. Measures to create awareness for producing graded variety of natural rubber of export quality need to be imparted to the cultivators.

3. As customers are becoming increasingly discerning and many a foreign government growing quality-conscious, there is a need to promote the quality of Indian rubber products for gaining better share in the global trade in rubber, side by side with other promotional measures. (All the exporters who have been interviewed have opined that quality is one of the most important factors influencing foreign trade in natural rubber).

4. There is gradually increasing trend in respect of area under cultivation, production and productivity (yield) of natural rubber in India over the years in absolute terms. But, the growth rates on a year to year basis are gradually on the decline over the years. Thus, further enhancements in production are possible only through productivity improvement. This fact
points to the need for promotion of higher-end technology in the development of plants (like, cloning).

5. As labour shortage is identified as a problem there is utmost significance for mechanisation in the field of rubber cultivation, processing and allied activities.

6. Measures for value addition of the produce by the cultivators may be initiated by the Government for enabling the cultivators to obtain better returns for their produce.

7. Proper monitoring mechanism of the Rubber Board on the exporters is required for promotion of exports of natural rubber.

7.3. Concluding Remarks

In view of the growing demand for natural rubber, particularly from automobile and various other rubber-based domestic and industrial goods, the prospects of Indian natural rubber is possibly one of the best in the world. Indian natural rubber has carved out its own superior brand name in the world markets. The productivity of natural rubber production in India is already the best in the world. The policies of the Government from different fronts have tremendously benefited India in achieving the best position in respect of productivity. The growing share of foreign trade in natural rubber in Kerala in the GSDP of Kerala, and also the similar trend in respect of foreign trade of natural rubber in India to India’s
national GDP, indicate the growth potential of natural rubber in India in general and Kerala state in particular.

Promotional measures can eventually lead India bettering its international position in natural rubber production from the present fourth to that of first, in due course of time. Area under cultivation in respect of states other than Kerala has been noted to be growing fast year after year, while the same in respect of Kerala is growing only slowly because the state has almost consolidated its position over the years.