CHAPTER II

SMALL RUBBER GROWERS AND RUBBER PRODUCERS' SOCIETIES IN KERALA

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Chapter II

SMALL RUBBER GROWERS AND RUBBER PRODUCERS' SOCIETIES IN KERALA

This chapter provides an overview of the history of natural rubber, small rubber growers, harvesting the crop, the role of different nodal agencies like, Rubber Marketing Societies and the Rubber Board, and the Rubber Producers' Societies, which are pertinent to the problem under evaluation. They are reviewed for constructing a theoretical background for the study.

In order to have a better understanding of the problems of rubber cultivation, the role of the Rubber Producers' Societies and their significance to the small rubber growers, a brief sketch of the history of rubber cultivation is necessary.

2.1 History of Natural Rubber

Rubber is the most useful material known to mankind on account of its wide range of application in everyday life. Natural rubber comes from the juice of the rubber tree. Synthetic rubber is made from chemicals. Rubber was originally named 'Cahuchu' (weeping wood). Rubber was first called so by Joseph Priestly, the discoverer of oxygen, considering its ability to erase pencil writing.
Europeans first heard of rubber from Christopher Columbus who found it in West Indies at the time of his second voyage during 1493-96. Trimen, Director of Botanical Gardens of Ceylon, made the first tapping of latex from cultivated trees (Hevia Brasilienses) in 1884. Natural rubber is found in the latex of over 895 species of plants. But Hevia Brasilienses is the most important commercial source of natural rubber. There is no single species of plant, which has influenced the life style of people around the globe as much as Hevia Brasilienses – the prime source of natural rubber.

Charles Good Year and Hancock found more uses of rubber with the invention of vulcanisation. During the periods from 1831 to 1843, manufacture of a variety of rubber goods commenced and the rubber industry achieved rapid progress in 1870. Goodrich started his programme of manufacturing rubber goods at Akron and later, this place turned out to be the leading rubber manufacturing centre in the world. P.T. Baver made a detailed study on the growth of rubber industry, area wise distribution of rubber, establishment of international regulations on rubber, plantation about etc.

P. Schidrowity and T.R. Dawson traced the history of rubber industry in the world. They examined the origin of the industry, scientific and technical developments in the rubber goods manufacturing industry and raw materials.

In an analysis on the efficiency of the rubber marketing system in Thailand, Lawrence D. Stiefel made the opinion that the government
should take steps to increase the producers' bargaining power, encourage standardization of product and quality improvement, and to augment transportation facilities to make competition more workable.

M.G. Kanbur and J.L. Morris⁷ have analysed the short-term fluctuations in the NR price of the important rubber markets of the world, with a view to measuring the cycles of NR price. The study revealed the existence of price cycles of thirty months duration.

T.A. Chew⁸ conducted an important study of the Chinese small holding sector. He conducted two field surveys in 1964 and 1978 covering around 355 small holders in various regions of China and the study came to the conclusion that the rate of technology progress in the small holding sector is capital augmenting type.

2.2 World Supply of NR

At present, natural rubber is mainly produced in 12 countries and nearly 90 percentage of the total output comes from five leading natural rubber producing countries, viz., Thailand, Indonesia, India, Malaysia and China. Details of the production of Natural Rubber in different countries are given in Table 4.
TABLE 4
Production of Natural Rubber in Different Countries in 2001-2002

<table>
<thead>
<tr>
<th>Country</th>
<th>Production ('000 Tonnes)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>2525</td>
<td>36.70</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1567</td>
<td>22.78</td>
</tr>
<tr>
<td>India</td>
<td>629</td>
<td>9.14</td>
</tr>
<tr>
<td>Malaysia</td>
<td>615</td>
<td>8.93</td>
</tr>
<tr>
<td>China</td>
<td>445</td>
<td>6.46</td>
</tr>
<tr>
<td>Philippines</td>
<td>67</td>
<td>.97</td>
</tr>
<tr>
<td>Nigeria</td>
<td>63</td>
<td>.91</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>88</td>
<td>1.27</td>
</tr>
<tr>
<td>Vietnam</td>
<td>269</td>
<td>3.90</td>
</tr>
<tr>
<td>Cote D’Ivoire</td>
<td>113</td>
<td>1.64</td>
</tr>
<tr>
<td>Liberia</td>
<td>127</td>
<td>1.84</td>
</tr>
<tr>
<td>Brazil</td>
<td>72</td>
<td>1.04</td>
</tr>
<tr>
<td>Other countries</td>
<td>300</td>
<td>4.42</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6880</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>


The above table shows that the twelve natural rubber-producing countries produce 95.6 per cent of the total rubber production. The remaining 4.46 per cent of the natural rubber is produced in those countries, whose role is almost negligible. Among the 12 countries, Thailand produces 36.76 per cent of the total natural rubber production in the world. India comes in the third position in the world output with a percentage share of 9.14.
Natural rubber is treated as an Asian product as its production is geographically concentrated in Asia, which accounts for 92.86 per cent of the world production. Some African and South American countries contribute the remaining 7.14 per cent. Asian countries such as Thailand, Indonesia, India and Malaysia produce 36.70 per cent, 22.78 per cent, 9.14 per cent and 8.93 per cent of the world output respectively in the year 2001-2002 and these four countries together control about 75.6 per cent of the world production of NR. While the small holding sector is predominant in countries such as Indonesia, Thailand, Malaysia and India, estate sector is prominent in China and Sri Lanka.

2.3 Natural Rubber in India

Rubber plantation in India began only in the 19th century. The then government of India under the British regime spearheaded the pioneering activities in rubber plantation. Calcutta was the seat of colonial administration and the Botanic Garden near Sibpur was selected as the place for planting rubber, but it was not successful. Sir Henry A. Wickham of India Office in London supervised the commissioning of the whole venture. The present day rubber plantations developed from these plant stocks and Sir Henry A. Wickham is rightly considered as the Father of modern rubber plantation in India.9

The Tariff Board10 and its successor, the Tariff Commission,11 have made a number of studies in connection with the cost of production, protection and assistance to the rubber industry with a view to fixing the price of natural rubber.

T.J. Mathew12 presented a scheme for the planned development of the rubber plantation industry in the country. He pointed out that while the
Central Government was advancing huge amounts for every other industry, the Rubber Board had failed to bring to their notice the importance of rubber industry, with special reference to the labour potential and national importance of the Indian Rubber Production. He also suggested that both for replanting and new planting the aid should be sufficient for proper planting and up-keep till it gives yield.

Arabinda Bhattacharya\textsuperscript{13} evaluated the success of the subsidy scheme for rubber plantations proposed by the Rubber Board in 1957. Historical development of rubber plantations in Kerala and the nature and rationale of the scheme are also included in his study. He is of the opinion that the subsidy is low, notified rate prices are not realised and that the impact of the scheme is different for the small and estate holdings. He concluded that an alternative subsidy scheme for the smallholdings is necessary.

D.S. Kulkarni\textsuperscript{14} studied the challenges and opportunities of the Indian Rubber Industry in the wake of liberalisation and globalisation. In his study, he clearly draws the picture of the present global rubber scenario together with Indian and South East Asian rubber scenarios. He is of the opinion that the Rubber Industry in India has maintained a prolific growth rate with easy access to major raw materials, rapidly expanding internal market, adequate government support, and technically qualified and experienced manpower. He concluded that the rate of growth of production in natural rubber would remain subdued with no prospect of growth in non-traditional areas of rubber production in India. He also stressed that the import of NR will become inevitable if domestic supply falls short of the demand. The following table shows the State-wise total area and production of natural rubber in India during 2001-2002.
### TABLE 5
State-wise Total Area and Production of Natural Rubber in India during 2001-2002

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Total Area</th>
<th>% Share</th>
<th>Production (tonnes)</th>
<th>% Share</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Traditional Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerala</td>
<td>474365</td>
<td>84.30</td>
<td>579866</td>
<td>92.05</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>13659</td>
<td>3.34</td>
<td>21134</td>
<td>3.40</td>
</tr>
<tr>
<td>Sub Total</td>
<td>493024</td>
<td>87.64</td>
<td>601000</td>
<td>95.45</td>
</tr>
<tr>
<td><strong>2. Non traditional region - a. North Eastern States</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tripura</td>
<td>25380</td>
<td>4.54</td>
<td>9312</td>
<td>1.50</td>
</tr>
<tr>
<td>Assam</td>
<td>13644</td>
<td>2.09</td>
<td>3867</td>
<td>0.46</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>3683</td>
<td>0.66</td>
<td>1690</td>
<td>0.27</td>
</tr>
<tr>
<td>Nagaland</td>
<td>615</td>
<td>0.29</td>
<td>159</td>
<td>0.03</td>
</tr>
<tr>
<td>Manipur</td>
<td>610</td>
<td>0.29</td>
<td>115</td>
<td>0.02</td>
</tr>
<tr>
<td>Mizoram</td>
<td>543</td>
<td>0.10</td>
<td>3</td>
<td>Neg.*</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>244</td>
<td>0.04</td>
<td>24</td>
<td>Neg</td>
</tr>
<tr>
<td>Sub Total</td>
<td>46719</td>
<td>8.01</td>
<td>15170</td>
<td>18.27</td>
</tr>
<tr>
<td><strong>b. Other States</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karnataka</td>
<td>20178</td>
<td>3.50</td>
<td>13209</td>
<td>2.11</td>
</tr>
<tr>
<td>Andaman &amp; Nicobar</td>
<td>931</td>
<td>0.17</td>
<td>700</td>
<td>0.11</td>
</tr>
<tr>
<td>Goa</td>
<td>839</td>
<td>0.15</td>
<td>215</td>
<td>0.03</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>180</td>
<td>0.03</td>
<td>74</td>
<td>0.01</td>
</tr>
<tr>
<td>Orissa</td>
<td>408</td>
<td>0.07</td>
<td>6</td>
<td>Neg.</td>
</tr>
<tr>
<td>West Bengal</td>
<td>285</td>
<td>0.05</td>
<td>30</td>
<td>0.01</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>98</td>
<td>0.02</td>
<td>1</td>
<td>Neg.</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>8</td>
<td>Neg.</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Sub Total</td>
<td>22927</td>
<td>3.99</td>
<td>14235</td>
<td>2.27</td>
</tr>
<tr>
<td>Grand Total</td>
<td>562670</td>
<td>100</td>
<td>630405</td>
<td>100</td>
</tr>
</tbody>
</table>


*Neg – Negligible*
From the dismal situation that prevailed in rubber plantation industry up to 1955-56, an all round progress was registered during the period of the next 45 years i.e., up to 2000-01. The position was summed up by P. Mukundan Menon as follows:

- The area under rubber cultivation went up from 97339 hectares in 1956-57 to 562670 hectares in 2000-01, an increase of 4786 per cent.
- The proportion of area planted with, low yielding varieties of rubber to high yielding varieties improved from 79:21 at the close of 1955-56 to 2:98 by 2000-2001.
- Productivity gain, which was 333 kg/ha during the period 1956-57 improved to 1576 kg/ha in 2000-01, which represents a handsome rise of 37.36 per cent. India now ranks first among all the major rubber producing countries in average yield per hectare.
- Production consequently shot up by 26 times from 24060 to 630405 tonnes. This had brought up India’s rank in production among the natural rubber producing countries from 11th in 1956 to 3rd in 2002.

The remarkable development in the history of rubber cultivation of the country is its shifting into the small scale sector unlike that of other cash crops. Rubber has become the crop of the small growers, by starting cultivation in new areas and by the fragmentation of large estates. Rubber cultivation has become attractive to the small growers due to the introduction of high yielding varieties, the application of scientific farming techniques and the possibility of getting higher income.

The following table shows the details about the area of estates and holdings.
### TABLE 6

Details of the Area of Estates and Holdings in India During 2001-2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Estates in Hectares</th>
<th>Percentage (%)</th>
<th>Holdings in Hectares</th>
<th>Percentage (%)</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1902</td>
<td>200</td>
<td>100</td>
<td>--</td>
<td>--</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>1910</td>
<td>2000</td>
<td>100</td>
<td>--</td>
<td>--</td>
<td>2000</td>
<td>100</td>
</tr>
<tr>
<td>1946</td>
<td>42819</td>
<td>66.08</td>
<td>21279</td>
<td>33.02</td>
<td>64098</td>
<td>100</td>
</tr>
<tr>
<td>1956</td>
<td>47579</td>
<td>55.28</td>
<td>38488</td>
<td>44.07</td>
<td>86067</td>
<td>100</td>
</tr>
<tr>
<td>1960</td>
<td>53530</td>
<td>37.02</td>
<td>90375</td>
<td>62.08</td>
<td>143905</td>
<td>100</td>
</tr>
<tr>
<td>1970</td>
<td>67398</td>
<td>31.03</td>
<td>149800</td>
<td>68.97</td>
<td>217198</td>
<td>100</td>
</tr>
<tr>
<td>1980</td>
<td>68723</td>
<td>24.18</td>
<td>215443</td>
<td>75.82</td>
<td>284166</td>
<td>100</td>
</tr>
<tr>
<td>1990</td>
<td>74576</td>
<td>14.23</td>
<td>449499</td>
<td>85.77</td>
<td>524075</td>
<td>100</td>
</tr>
<tr>
<td>2000</td>
<td>68307</td>
<td>12.23</td>
<td>490277</td>
<td>87.77</td>
<td>558584</td>
<td>100</td>
</tr>
<tr>
<td>2001</td>
<td>67312</td>
<td>11.96</td>
<td>495358</td>
<td>88.04</td>
<td>562670</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Indian Rubber Statistics-various issues

S.M. Desalpine\(^6\) observed that India is the fourth largest consumer of natural rubber next to USA, China and Japan. Among the 5062 licensed rubber goods manufacturing units in the country, a vast majority are small-scale units annually consuming less than 100 tonnes of natural rubber. About 62 percent of the total consumption of natural rubber in the country during 2000-01 was accounted for by forty-eight big units, individually consuming more than 1000 tonnes per annum. Another characteristic of Indian rubber consumption, is the sector wise concentration, dominated by the automotive tyre manufacturing sector which accounts for as much as 45 percent of the total consumption in the country. Unlike the natural rubber production sector, which is characterised by a high degree of regional concentration, the consumption sector is relatively more dispersed.
Table 7 shows the details of the area of rubber cultivation, production and the yield per hectare.

**TABLE 7**

**Details of the Area of Rubber Cultivation, Production and the Yield per Hectare in India During 2001-2002**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total area (ha)</th>
<th>Tapped area (ha)</th>
<th>Production (Tonnes)</th>
<th>Average yield per ha (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-52</td>
<td>74915</td>
<td>55800</td>
<td>15830</td>
<td>284</td>
</tr>
<tr>
<td>1955-56</td>
<td>86067</td>
<td>67131</td>
<td>23730</td>
<td>353</td>
</tr>
<tr>
<td>1960-61</td>
<td>143905</td>
<td>70253</td>
<td>25697</td>
<td>365</td>
</tr>
<tr>
<td>1965-66</td>
<td>186713</td>
<td>112709</td>
<td>50530</td>
<td>448</td>
</tr>
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<td>1970-71</td>
<td>217198</td>
<td>141176</td>
<td>92171</td>
<td>653</td>
</tr>
<tr>
<td>1975-76</td>
<td>235876</td>
<td>178480</td>
<td>137750</td>
<td>772</td>
</tr>
<tr>
<td>1980-81</td>
<td>284166</td>
<td>194245</td>
<td>153100</td>
<td>788</td>
</tr>
<tr>
<td>1985-86</td>
<td>382831</td>
<td>223247</td>
<td>200465</td>
<td>898</td>
</tr>
<tr>
<td>1987-88</td>
<td>421512</td>
<td>249100</td>
<td>235197</td>
<td>944</td>
</tr>
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<td>1988-89</td>
<td>440584</td>
<td>266103</td>
<td>259172</td>
<td>974</td>
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<tr>
<td>1989-90</td>
<td>460341</td>
<td>289060</td>
<td>297300</td>
<td>1029</td>
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<td>1990-91</td>
<td>475083</td>
<td>306413</td>
<td>329615</td>
<td>1076</td>
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<td>1991-92</td>
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<td>1993-94</td>
<td>508420</td>
<td>338550</td>
<td>435160</td>
<td>1285</td>
</tr>
<tr>
<td>1994-95</td>
<td>515547</td>
<td>346270</td>
<td>471815</td>
<td>1362</td>
</tr>
<tr>
<td>1995-96</td>
<td>524075</td>
<td>356444</td>
<td>506910</td>
<td>1422</td>
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<tr>
<td>1997-98</td>
<td>544534</td>
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</tr>
<tr>
<td>1998-99</td>
<td>553041</td>
<td>387100</td>
<td>605045</td>
<td>1563</td>
</tr>
<tr>
<td>1999-00</td>
<td>558592</td>
<td>394800</td>
<td>622265</td>
<td>1576</td>
</tr>
<tr>
<td>2001-02</td>
<td>562670</td>
<td>400000</td>
<td>630405</td>
<td>1576</td>
</tr>
</tbody>
</table>

2.4 Natural Rubber in Kerala

Kerala is considered, the birthplace of rubber plantation in India. In 1902 J.J. Murphy, J.A. Hunter, K.E. Nichol and C.M.F. Ross formed the Periyar Syndicate\(^\text{17}\) in Travancore and planted rubber in Periyar estate at Thattekkad near Kothamangalam (Eranakulam District, Kerala). Rubber was first planted in 200 hectares. The planting activity extended to Konni in 1903, Mundakayam and Punalur in 1904 and so on, that by 1910 the total area planted increased to about 12,000 hectares. Following the lead given by the British, local enterprises soon emerged. Malankara Rubber and Produce Company, which was floated in 1910 with the planting programme in Thoupuzha, was the first of its kind.

Rubber plantation continued to progress till 1929 but the continuous fall of rubber price made it a sick industry. However, since 1948 it had been once again progressing gradually. The inception of the Rubber Board in 1947 was an important landmark in the development of rubber cultivation. After that rubber production, marketing and manufacture had to be carried out under the valid license from the Rubber Board. Kerala holds a monopoly position in the cultivation and production of natural rubber in India and the state has been maintaining this unique position since the introduction of rubber cultivation in the country.

Jose Thomas\(^\text{18}\) in his study on the economics of rubber plantation industry in Kerala remarked that a planned strategy must be formulated
for the development of the rubber plantation. He concluded that fixing a statutory minimum price must ensure stability of the price of natural rubber.

A study on the rubber-based industrialisation in Kerala was done by Tharian and Toms. They examined various linkages associated with the rubber plantation industry and assessed its future scope and concluded that the potentials of various by-products of the industry like rubber wood, rubber seed and rubber honey should be exploited.

To assess the extent of the adoption of new technology by the small growers, P. Rajasekharan and V. Haridasan conducted a study in 1990 covering 480 small growers in Kottayam district. The study threw light into the various problems relating to technology adoption and concluded that in Kerala, the promotion of technological dualism in the small holding sector is characterized by the existence of traditional and modern technology side by side. The full impact of the adoption of technology is possible only by inducing all the small growers to adopt modern technology. The following table shows the district-wise production of natural rubber in Kerala.
TABLE 8
District-Wise Production of Natural Rubber in Kerala During 2001-2002

<table>
<thead>
<tr>
<th>Districts</th>
<th>1990-91 Area (in Ha)</th>
<th>2000-01 Area (in Ha)</th>
<th>Production %</th>
<th>1990-91 Production (tonnes)</th>
<th>2000-01 Production (tonnes)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiruvananthapuram</td>
<td>22156</td>
<td>28197</td>
<td>5.4</td>
<td>15513</td>
<td>33318</td>
<td>5.75</td>
</tr>
<tr>
<td>Kollam</td>
<td>32438</td>
<td>36771</td>
<td>7.9</td>
<td>26951</td>
<td>46289</td>
<td>7.9</td>
</tr>
<tr>
<td>Pathanamthitta</td>
<td>42872</td>
<td>47869</td>
<td>10.5</td>
<td>34264</td>
<td>62423</td>
<td>10.7</td>
</tr>
<tr>
<td>Alappuzha</td>
<td>3350</td>
<td>3801</td>
<td>0.82</td>
<td>2140</td>
<td>4003</td>
<td>0.69</td>
</tr>
<tr>
<td>Kottayam</td>
<td>103888</td>
<td>111196</td>
<td>25.4</td>
<td>82852</td>
<td>141266</td>
<td>24.3</td>
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<tr>
<td>Idukki</td>
<td>35545</td>
<td>38076</td>
<td>8.7</td>
<td>26638</td>
<td>45405</td>
<td>7.8</td>
</tr>
<tr>
<td>Ernakulam</td>
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<td>56644</td>
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From the above table, it can be seen that Kottayam district alone produce an average of 24.3 per cent of the total production of NR in Kerala followed by Ernakulam (12.6 per cent), Pathanamthitta (10.7 per cent), Kollam (7.9 per cent) and Idukki (7.8 per cent). In the case of area under cultivation in Kerala, Kottayam has the highest share of 23.4 per cent followed by Ernakulam (11.9 per cent), Pathanamthitta (10.1 per cent), Idukki (8.1 per cent) and Kollam (7.7 per cent).
2.5 Rubber and its Harvesting

The rubber tree is a large woody fast growing perennial plant usually grown in the tropical region. Majority of rubber growing area in India is confined to a narrow belt on the Western Ghats. Moderate and evenly distributed rainfall of about 2000 mm to 4000 mm in a year, with a warm tropical temperature of about 21°C to 35°C, a warm humid atmosphere, and slightly acidic lateritic soil are favourable factors for rubber cultivation. Kanyakumari District of Tamilnadu, Kerala and South Kanara District of Karnataka are the traditional belts of rubber cultivation in India. The fertile soil, congenial climatic conditions and the great enthusiasm of the local planters contributed much towards the development of Rubber Plantation Industry in India. The road system of Kerala is extensive and communication with the major industrial centres in India, which consume rubber, are quite good.

Rubber is considered as the modern “Kalpavriksha,” i.e., a tree with every part of it being useful and of economic importance. Besides yielding rubber, which is of most versatile application, the tree is an important source of timber, honey, rubber seed and oil cake. The wastewater of rubber processing can be used for producing biogas, which can reduce the use of liquefied petroleum gas.

Latex is obtained from the bark of the tree by tapping. Tapping is the process of controlled wounding during which thin shavings of bark are removed. The latex which gets dried up on the tapping panel (tree lace) and the shell scrap formed in the plastic cup also are part of the crop and
collected, by the rubber tapper in a basket before tapping. The important forms in which the crop can be processed and marketed are:

- Latex and its concentrate
- Crepe rubber
- Ribbed Smoked Sheet (RSS)
- Technically specified block rubber

1. **Latex and Latex concentrate**

   Field latex preserved with a suitable preservative is termed as preserved field latex. There is good market for preserved latex concentrates, as it is an important raw material for various products.

2. **Crepe rubber**

   When coagulated latex or any form of field coagulum (tree lace, shell lace, and earth scrap) is passed several times through the mill with minimum three rolls, a crinkly lace like rubber will be obtained. This lace like rubber, when air-dried is called crepe rubber.

3. **Ribbed smoked sheet**

   Latex is coagulated in suitable containers by mixing it with acid and water into thin slabs of coagulum and made into sheets by passing them through a set of rollers and dried to obtain the ribbed smoked sheet. The completely dried sheets are graded according to the standards set by the Rubber Manufactures Association (RMA) Inc., Washington in the green book. The standard at present provides for six grades of ribbed smoked sheets viz., RSS6, RSS1, RSS 2, RSS 3, RSS 4 and RSS 5.
The major quantity of natural rubber produced in our country is marketed in the form of rubber sheet.

4. Technically specified block rubber

The processing of natural rubber to technically specified block rubber strengthens the competitive base of natural rubber and it is necessary to give the appearance, presentation and grading comparable to those of synthetic rubber.

Marketing channels of natural rubber

The marketing channels of natural rubber include the various marketing agencies and institutions such as dealers, brokers, auctioneers, processors, marketing co-operatives, RPSs, companies in the RPS sector and other developmental agencies like the State Trading Corporation, the Rubber Marketing Federation and the Rubber Board.

2.6 The Rubber Board - An Agency Assisting the Rubber Growers

A number of socio-economic and agro-climatic factors helped the rubber cultivation to flourish in India. Besides, it was given active state support and encouragement. The developmental and extension services from the Rubber Board, favourable export-import policies of the Central Government, and direct financial assistance are designed to protect the natural rubber industry from international competition.

The Indian Rubber Board was constituted under the Rubber (Production and Marketing) Act, 1947. This act was passed as per the recommendation of an adhoc committee appointed by the Government of
India in 1945 and it came into force on 19th April 1947. The Rubber (Production and Marketing) Amendment Act of 1954 made certain changes in the constitution of the Board and amended the name as 'The Rubber Board'. The Act clearly defined the role of the Rubber Board in the development of the industry and the Board was assigned with the task of implementing various development schemes. The Act was later amended in 1960, and in 1994. The Rubber Rules, 1955, which provided guidelines to carry out the purpose of the Rubber Act, also have undergone many changes in the course of time.

**Constitution of the Rubber Board**

The Rubber Board functions under the Ministry of Commerce of the Government of India. It has twenty six members. They are:

- A full time Chairman appointed by the Central Government.
- Two members to represent the state of Tamil Nadu, one of whom shall be a person representing rubber producers’ interests.
- Eight members to represent the state of Kerala, six of whom shall represent rubber producers’ interests, of whom three representing the small growers.
- Ten members to be nominated by the Central Government, of whom two shall represent the manufacturers and four the labourers.
- Three Members of Parliament of whom two shall be elected by the House of the People and one by the Council of States.
- The Executive Director and the Rubber Production Commissioner of the Rubber Board are appointed by the Central Government, as
ex-officio members. The Board has a Secretary appointed by the Central Government. One of the members of the Board is elected as Vice-Chairman whose term of office is one year. The Board has seven sub-committees: Executive Committee, Research and Development, Planning, Market Development, Labour Welfare, Statistics and Import/Export, and Staff Affairs. They are constituted to review the activities vis-à-vis functions, examine proposals and make recommendations to the Board.

**Functions**

The Rubber Act lays down the following functions for the Rubber Board:

- It shall be the duty of the Board to promote by such measures as it thinks fit, the development of the rubber industry.
- Without prejudice to the generality of the foregoing provision, the measures referred to therein may provide for:
  - Undertaking, assisting or encouraging scientific, technological and economic research.
  - Giving training to the rubber growers in improving methods of planting, cultivation, manuring and spraying.
  - The supply of technical advice to rubber growers.
  - Improving the marketing of rubber.
  - The collection of statistics from the owners of estates, dealers and manufactures.
  - Securing better working conditions and the provisions for improvement of amenities and incentives for workers.
  - Carrying out any other duty which may be vested with the Board as per the rules made under this Act.
It shall also be the duty of the Board:

1. To advise the Central Government on all matters relating to the development of the rubber industry, including the import and export of rubber.
2. To advise the Central Government with regard to participation in any international conference or scheme relating to rubber.
3. To submit to the Central Government and such other authorities as may be prescribed, half-yearly reports on its activities and the working of this Act.
4. To prepare and furnish such other reports relating to the rubber industry as may be required by the Central Government from time to time.

Organisational set-up

The Chairman is the Principal Executive Officer and is responsible for the proper functioning of the Board, implementation of its decisions and the discharge of its duties under the Rubber Act. There are eight departments and the Chairman exercises administrative control over all the departments. The Administration Department headed by the Secretary attends to general and personnel administration, labour welfare, legal affairs, and marketing.

The Director of Research heads the Rubber Research Institute of India. There are eight research divisions, namely Agronomy and Soils, Agricultural Economics, Biotechnology, Botany, Germplasm, Mycology and Plant Pathology, Plant Physiology and Rubber Chemistry, and Physics and Technology.
The Rubber Production Department, headed by the Rubber Production Commissioner, is responsible for the formulation and implementation of schemes for the development of rubber plantations, rendering advisory, extension and training services for estates and small holdings, production and supply of planting materials, supply of other requisites, establishment and maintenance of demonstration farms.

The Department of Processing and Product Development is headed by the Director. It has four divisions, (1) Engineering (2) Quality Control (3) Factory Management and (4) Rubber Processing and Market Development.

The Statistics and Planning Department headed by the Joint Director gathers basic statistics from the growers, processors, manufacturers and dealers, and compiles, analyses and disseminates the information. The Department of Training and Technical Consultancy, headed by the Director imparts specialised training in various aspects of rubber cultivation, primary processing and product manufacture besides providing assistance to new entrepreneurs for setting up small-scale units for manufacturing rubber products.

The Finance and Accounts Department handles budget and budgetary control, annual accounts and audit, preparation of financial statements and cost studies.

The Department of Licensing and Excise Duty attends to excise duty collection, market intelligence, and licensing for dealing in rubber for manufacturing purposes. In order to evolve agricultural technologies best suited to Indian conditions, the Rubber Board developed its own research facilities by establishing the Rubber Research Institute of India in 1955.
2.7 Arguments for and against Rubber as a Small Growers' Crop

There are certain arguments for and against rubber as a small growers' crop. Rubber has many attractions as a small growers' crop. The favourable factors that motivate the small growers to engage in rubber cultivation are given below:

- Rubber trees are not prone to serious diseases and can have a productive life of about twenty-five years.
- Only minimum care is needed for maintenance of rubber trees after the initial stage.
- Even the family members can carry out taping and other operations.
- Crop is obtained continuously throughout the year except for certain occasional breaks incidental to monsoon and winter leaf fall.
- Rubber trees will grow almost anywhere, in tropical regions.
- The Small growers can rely on rubber produce for his day-to-day monetary needs and this advantage is not available in the case of other crops.

There are certain factors unfavourable to rubber as a small growers' crop which are mentioned below:

- The period of gestation is about seven years.
- After the commencement of taping proper processing and profitable disposal of the crop create problems to the small growers.
• The system of grading also gives room for manipulation by unscrupulous buyers and thus results in lack of realisation of fair selling price.

• The middlemen marketing chain may also be detrimental to the interest of the small holders.

The main reason for the popularity of rubber cultivation among the small holders can be attributed to the favourable factors highlighted above. Rubber cultivation stands now as a major source of income to the small agricultural holders of Kerala. Since it is a major source of income to the small holders, utmost care and attention is required from planting to marketing. But it is seen that the unfavourable factors mentioned above always stand as major hindrances in the well being of the small growers. A number of steps are taken by the Government, the Rubber Board and other agencies for encouraging the small growers to solve these problems by themselves, which are mentioned in the coming sections.

2.8 The Small Rubber Growers and Co-operatives

The term ‘co-operatives’ refers to an organisation of individuals for achieving a common objective by mutual help and collective effort. They play an important role in leading the ordinary and poverty stricken people towards social and economic changes in terms of adoption of innovations. Co-operation is the essence of successful social, economic and political life. In the words of Herbert Calvert, "Co-operation is a form of organisation where in persons voluntarily associate together as human beings on the basis of equality for the promotion of economic interest of themselves." It improves the standard of living of people by providing
them with proper education and training and inducing among them a spirit of co-operation.

Tushar Shah says: "successful co-operatives seemed to easily transform threats into opportunities and weakness into strength." Co-operation helps weaker persons to escape from exploitation by enabling them to become their own lenders, merchants, employers or traders. It helps them to gain advantage of large-scale operation while maintaining their dependence. According to Prem S. Sarma the co-operative societies represent people's involvement in various economic activities ranging from supply of critical agricultural inputs like fertilizers, seeds, and implements to the processing of agro based commodities. The co-operative movement has been recognised as one of the forces for improving the economic and social conditions of the backward sections of the society.

It was on the recommendations of a special committee of the international co-operative alliance that the following co-operative principles were recognised in 1937:

- Voluntary and open membership
- Democratic control
- Limited interest on share capital
- Equitable distribution of surplus
- Co-operative education, and
- Co-operation among co-operatives
Yeoh Abraham is of the opinion that the Co-operatives or Marketing Boards should attempt to combine many individually weak sellers and processors into one stronger selling and processing unit. Such organisations may permit direct sales to consumers without intermediary dealers. In Malaysia the effort of this kind have been the establishment of group processing centres and central factories under Malaysian Rubber Development Corporation.

Jacob George evaluated the performance of co-operative movement in the field of natural rubber marketing. He found that co-operative rubber marketing societies have been confronted with problems such as over-politicisation, less accountability, lack of professionalism, competition from dealers and visual grading. He suggested certain remedies such as professional orientation and professional representation in the Board of Directors of co-operative societies, strengthening the apex body and membership restrictions.

According to R. Thirunarayanan rubber is a product, which is used from millionaires to mendicants for a variety of purposes all over the country. Though it is used everywhere, 90 per cent of the production comes from Kerala. No wonder the co-operative sector is playing a key role in assisting the medium and small producers for getting remunerative prices and promote alongside the development of rubber industry in the country.

2.8.1 Rubber Marketing Co-operatives

The organisation of small rubber growers into co-operatives has been attracting the attention of the Government and the Rubber Board
from the 1950s. As the small rubber growers are widely scattered it is very difficult to adopt scientific cultivation, processing and marketing methods effectively. In order to increase the productivity and reduce the cost of production, these small farmers are to be organised on a co-operative basis. A reasonable price can also be realised if there is the existence of co-operatives.

In order to promote the growers' Rubber Marketing Co-operatives, the Rubber Board obtained the services of a Deputy Registrar from the Department of Co-operation, Government of Kerala, in 1960. He succeeded in starting a number of marketing co-operative societies. Gradually its number increased to 35. The decision of the Rubber Board to route new schemes on share capital contribution, working capital loan and financial assistance for the production of Technically Specified Rubber, and existing schemes like spraying subsidy, manure subsidy, loan for purchase of rollers and so on through co-operatives gave further impetus for the development of Rubber Marketing Co-operatives all over Kerala.

2.9 Rubber Producers' Societies

The small growers of rubber in our country generally face difficulties in establishing processing facilities, marketing of their produce and implementing latest information and technology in their holdings. As such, this sector is vulnerable to exploitation at various levels, particularly in marketing and obtaining a fair price. A group management system alone can help to overcome the existing problems, as the ordinary
growers don't have any direct access to the general market. The Rubber Producer's Societies were envisaged to act a force for group management in all the activities of the small holders.

**Genesis of RPS**

Thailand, Indonesia, India, Malaysia and China are major natural rubber producing countries in the world. In all these major rubber producing countries attempts have been made to organise the small rubber growers to ensure their prosperity. Group Marketing Organisation in Thailand, North Sumatra Development Projects in Indonesia, Federal Land Development Authority, Rubber Industry Small Holder Development Authority and Malaysian Rubber Development Corporation in Malaysia, and Group Processing Centres in Sri Lanka are efforts in similar direction.\(^{30}\)

In the 1950s the Rubber Board appointed D.V. Reddy to make a detailed study of the marketing and other problems of the industry.\(^{31}\) In his report he recommended co-operative smoke houses for processing of latex of the small growers in villages instead of centralised co-operative marketing societies. But this was not successful due to the lack of cooperation from the growers.

The Plantation Enquiry Commission examined the marketing problems of the small growers in detail and observed thus: "What is needed is a chain of primary co-operative societies maintaining smokehouses for taking delivery of the latex of small holders and making smoked sheets of uniform and good quality."\(^{32}\) So the commission wanted to establish village level co-operative societies. The commission also envisaged the functions of such marketing societies.
The Government of India appointed the Small Holding Economic Enquiry Committee in 1967 under the chairmanship of T.M. Abdullah. The committee studied the problems of rubber industry, giving due importance to the condition of the small growers. The committee was asked to analyse the problems and suggest measures to improve the efficiency and stability of this sector. The committee identified the following problems of the small rubber growers.

- Uneconomic size of the holdings
- Lack of scientific knowledge in cultivation practice
- Lack of processing facilities.
- Absence of small grower organizations to keep them alive to common problems.

The committee recommended encouraging Rubber Marketing Societies and strengthening smallholdings advisory services.

K. Ramakrisna Pillai conducted a study on the response of a sample of 404 small growers to the aid schemes of the Rubber Board and concluded that the response of the small growers towards the Board's Aid Scheme was far from satisfactory. In the study he suggested that in order to solve the problems of the small rubber growers the extension agents of the Rubber Board should be able to persuade the growers to form and join co-operatives.

A team of six persons from the Rubber Board led by K.S. Varma visited Anand in Kaira district of Gujarat to study the organization and working of the milk collection centres of Amul Project established under the Kaira District Co-operative Milk Producers' Unit in 1978. The team was
asked to suggest the type of organisational set up that would be suitable for rubber cultivation and marketing and prepare a scheme for a pilot project to be implemented in the Amul model and to assess the financial implications. The committee studied in detail about the working of Amul pattern of co-operatives. They analysed the similarities in the problems and prospects between rubber production by small holders and milk production by small farmers as follows:

- The most important similarity between the rubber and milk industry is that a major portion of production is made by small holders who depend mainly upon their products for livelihood. The small holder of rubber is in need of steady market and regular payment for his produce, which he does not get at present. As such, the Amul pattern of procurement and payment, if established, can bring about a major change in the economy of the small rubber holder.

- Just like milk, rubber latex coagulates if kept for 5 to 8 hours. So the system followed by the milk societies in Anand for prompt transport to processing centres can be adopted for rubber also.

- For milk, correct feeding of cattle, prompt veterinary service, proper cleanliness and improvement of the progeny are found to increase the input-output ratio materially. In the case of rubber also a correct use of improved planting materials suited to each locality, scientific and discriminatory fertilizer application and improved agronomic practices can increase the yield materially. A package deal duly subsidised by the Rubber Board can thus bring about a revolution in the productivity of rubber in smallholdings more or less similar to the change brought by Anand co-operatives in milk production.
The Anand pattern has a two-tier system, the village level co-operatives and district level union. A state level federation decides the marketing policies. For rubber also there are primary co-operatives and state level federation. By organising village level collection centres affiliated to the marketing co-operatives and by providing processing facilities through the apex institution, the rubber co-operatives can be brought more or less in the same pattern as the milk co-operatives.

Just like the milk co-operatives and the cattle owners having a technical advisory body in the National Diary Development Board, the rubber co-operatives and the small holders can have the benefit of technical advice and financial assistance of the Rubber Board.

The committee recommended the following organizational set-up for the effective functioning:

- The establishment of a Rubber Small Holder Development Authority, at the Rubber Board. This authority will have experts on production, processing, research and development, organisation and methods of processing of rubber and they will advice and guide the rubber small holders and their co-operatives for proper and effective functioning.

- The basic unit will be a co-operative Rubber Small Holder Development Centre under the existing marketing co-operatives. Each of these Rubber Small Holder Development Centre will be established after a feasibility study by the Rubber Small Holder Development Authority.
Small Holder Development Centres

In order to facilitate the smooth working of the Co-operative Rubber Processing Factories, the Rubber Board organised three Small Holder Development Centres in the early 1980s through which crop collection was arranged. At these centres the collection of latex and scrap rubber is linked with efforts towards modernisation of smallholdings through provision of a package of services. The centres function under the co-operative rubber marketing societies, which buy rubber for central processing. The Rubber Board gives comprehensive assistance for establishing and maintaining the centres.

Inspired by the success of the pilot Small Holder Development Centres and with the objective of relieving the small growers from the hardships suffered in processing and marketing their produce the Board launched a massive programme for organizing Rubber Latex Collection Centres in each village. This collection centres in village areas were modelled on the AMUL pattern successfully functioning at Anand in Gujarat. These collection centres later became Rubber Producers' Societies.

The following chart shows the Genesis of the RPSs.
The organisational structure of the Rubber Producers’ Societies can be represented as follows:

![Organisational Structure Diagram]

**Formation of the Rubber Producers’ Societies**

Only seven small growers are needed to register a Rubber Producers’ Society. To qualify the Rubber Board's approval 50 members, each contributing Rs.50 as entrance fees and Rs.10 as annual subscription, are needed. An elected eight member Managing Committee governs the day-to-day functioning of the Rubber Producers' Societies and the local extension officer of the Rubber Board also is a member of the Managing Committee.

At the end of the year 2001-2002 there were 2041 registered Rubber Producers' Societies in Kerala. The Rubber Producers' Societies were registered in non-traditional regions also.

Each Rubber Producers' Society is a group of 50 to 300 small rubber growers residing in a locality forming themselves into a society, registered under the 12th Travancore Cochin Literary, Scientific and
Charitable Societies Act of 1956. The President looks after the day-to-day executive functions of the society. A commission agent for collection, processing and marketing of latex and scrap, and the distribution of inputs, assists him.

The Rubber Producers' Society is conceived largely as a non-political, non-profit, secular democratic fraternity of the small rubber growers. The Society acts as a nucleus for distribution of inputs and dissemination of information to the rubber growers. It can channelise and expedite distribution of financial and technical assistance from the Rubber Board and other agencies by collective action.

The society can cater to all the needs of members and maintain statistics and other information of rubber produced and the rubber area newly developed in the locality. The Board gives a financial assistance of Rs.10000/- in cash or equipment needed for forming the society.

The important features of the RPSs are the following:

- The RPSs operate in a small compact area having a radius of 2 to 3 kilometres. This helps the members to bring their latex, sheet, and scrap to the Rubber Producers' Societies without much difficulty. The area usually comprises of 2 to 3 divisions of a Grama Panchayat.

- Membership is in the range of 50 to 300 only. The small rubber growers having rubber holdings within the operational area of the Rubber Producers' Society can become members.

- The annual accounts are usually audited by a Chartered Accountant. The account should be presented to the Director Board and General Body from time to time.
The general body of the Rubber Producers' Societies should meet regularly once in every three months and take policy decisions and review the progress of implementing actions as well as the performance. The general body usually meets in the members' holdings and discusses technical and developmental issues. The field officer of the Rubber Board and experts in different fields of rubber cultivation are usually present to clarify the doubts of the members.

The Rubber Producers' Societies function non-politically and on democratic lines. The decisions are taken on majority votes. An elected Board of Directors administers the society. The directors are elected on rotation basis. The Board of Directors elect a President and Vice-President from among themselves.

The society should not engage regular employees. Anyone engaged for assistance should work on a fair commission paid on the basis of actual work done.

The functions of the Rubber Producers' Societies are the following:

- To disseminate knowledge on the latest improvements in the cultivation of rubber, tapping, collection and processing of latex and scrap rubber.
- To assist or undertake common marketing of the members' rubber grade-wise and ensure remunerative price.
- To establish and run common crop processing facilities that help members to upgrade the quality of rubber.
- To promote and assist group approach for new planting, replanting productivity enhancement, availing of bank finance, and Rubber Board grants.
• To raise nurseries and supply high yielding planting materials to members.

• To receive the supply of various inputs from the Rubber Board and other possible sources and distribute them among eligible members.

• To participate in joint ventures of the Rubber Producers' Societies undertaken in regional basis, with or without assistance from the Rubber Board, for furthering the common interest of the members.

The Rubber Producer' Societies help the members in marketing their produce and distributing the agricultural inputs to them at reasonable rates. Other functions expected from the societies are the following:

• Pooling the rubber produced by members and marketing it grade-wise at remunerative prices.

• To establish smoke houses for group processing of latex to upgrade quality by availing financial aid from the Rubber Board.

• To promote group approach for new planting, re-planting, availing bank finance, subsidy and other facilities.

• To raise nurseries and supply high yielding planting materials grown in polythene bags to members at fare price with the support of the Rubber Board.

• To promote bee-keeping in the members' holdings to supplement their income.

• Share participation in processing factories owned jointly by the Rubber Producers' Societies.
2.9.1 The Objectives of the Rubber Producers' Societies

The following are the objectives of the Rubber Producers' Societies:

- To ensure maximum productivity and returns to the small farmers by serving as a connecting link between the farmers and the societies processing the rubber.

- To organise collective marketing of latex and scrap of the members through collection centres, and thereby to demonstrate the economics of collective marketing and to distribute the benefit so derived to the members of the society.

- To disseminate knowledge on the latest improvements in cultivation of rubber, tapping, collection and processing of latex and scrap rubber.

- To act as an agent of the concerned state government and of the Rubber Board for implementing extension programmes and developmental activities.

- To arrange and carry out leaf and soil analysis and other tests aiming at maximisation of the utility value of inputs in the rubber holding and thus assist in cost reduction in their operations.

- To organise other welfare and educational programmes for the benefit of the members.

- To keep liaison with the Rubber Board and the processing societies and also to obtain technical guidance on agricultural processing and marketing of rubber as and when necessary.

- To raise necessary funds by way of admission fee, subscription from members, donations, loans and advances from members, the public, banks and other financial institutions, co-operative societies, the Rubber Board and the Government.
- To construct community smoke houses and other collective processing centres to upgrade the quality of the produce of the small holders.
- To distribute various agricultural inputs to its members at reasonable price.

The society shall be a non-profit making institution aimed at imparting technical and scientific know-how to the members for the general improvement of the area and in particular for the economic and social welfare of the small rubber growers.

Membership

The membership of the society is restricted to small rubber growers in the area of operation and who agree to market the rubber latex and scrap produced in his holding through the society, subject to the following conditions:

- He should have attained the age of maturity and should be competent to contract.
- The small rubber growers who desire to become a member shall apply in the prescribed form along with an admission fee and annual subscription.
- He should abide by the rules and regulations of the society and should not be engaged in any activities detrimental to the objective of the society or in competition with it.

A member will lose his membership if he disqualifies himself on any of the above grounds. He can also retire or resign from the society by
giving notice and the society may accept such request provided he has no dues or liabilities to a society and he is not in custody of any property of the society.

**Funds of the Society**

Funds of the society shall be raised by way of:

- Admission fee
- Annual Subscription
- Donations, loans and advances from the members
- Donations, loans, subsidies and advances from non-members, banks, other official institutions, co-operative societies, the Rubber Board and the Government.

**Development Fund Account**

For the purpose of improving the financial position and future development of the society, a compulsory recovery at the rate of ten paise per kg DRC of rubber sold to the society shall be made and the amount so recovered shall be credited to a separate Development Fund Account. Decisions about the utilisation of this fund are to be taken only with the approval of the Rubber Board.

**The General Body**

The society shall convene the first general body meeting of all the members within a period of three months from the date of registration and thereafter annually but not later than one month after the end of the financial year. The quorum for the general body meeting shall be
one-third of the eligible members in the membership roll of the society or twenty, whichever is less.

The executive committee on its own initiative or on written request form one third of the eligible members shall convene a special general body meeting to transact special or urgent matters.

**Powers and duties of the General Body**

The ultimate authority of the society vests in the general body. The general body shall in its first meeting elect from among themselves the President of the society. He in turn will immediately conduct the election of six members to the executive committee. The annual report and the annual accounts of the society duly approved by the executive committee and audited by the auditor appointed by the executive committee in the case of first year accounts, and during subsequent years by the auditor appointed by the Annual General Body shall be presented to the general body for consideration. The general body of the society may authorise or delegate the powers in these respects including the preparation of necessary bylaws, rules and regulations for the proper management of its affairs whenever required to the President/Executive Committee.

The General Body shall appoint an auditor for the society and the period of appointment shall be for one year except in the case of the first year. The provisions under the Societies Registration Act and Rules shall govern in all such matters, which are not specifically provided for the rules and regulations of the society.
Management

The management of the society shall vest in the executive committee consisting of the president and six persons elected by the general body from among its members. The President will hold office for three years. Two members of the executive will retire every year. There is no bar for re-election of a retiring member. The Rubber Board will have the right to nominate one of its officers to the Executive Committee. The executive committee shall conduct the affairs of the society in accordance with the objectives and policies defined and the rules and regulations as amended from time to time. The quorum of the executive committee will be four including the president /Vice President. The committee shall meet as often as required but at east once in a month. The executive committee shall elect from the elected members, a Vice-President. The service of the President and Vice-President are gratuitous.

Each member of the executive committee shall have one vote and in case of equality of votes, the president shall have a casting vote. An executive committee member may resign at any time but it should be accepted by the committee. If a member of the executive committee absents himself from four consecutive meetings, he will loose his membership.

Number of Rubber Producers' Societies

The number of Rubber Producers' Societies has been increasing at a great rate since their inception in 1986. The number of RPSs was only 185 in 1986. But the number in 2002 increased to 2041.
2.9.2 Activities of the Rubber Producers’ Societies

The RPSs provide the small rubber growers various kinds of services. These services are crucial as they affect the social and economic conditions as well as the standard of living of the small rubber growers. Eventhough there are differences in the extent of the services rendered by the diverse Rubber Producers’ Societies, they have a critical role in all the spheres of the life of the small rubber growers.

The main activities of the RPSs can be divided into three types:

- Economic Benefits rendered by Rubber Producers’ Societies to the members.
- Social Benefits rendered by the Rubber Producers’ Societies to the members.
- Imparting training to the members by the Rubber Producers’ Societies.

2.9.2.1 Economic Benefits Rendered by Rubber Producers’ Societies

The small rubber growers being an unorganised sector were ignorant of the technical and economic aspects of rubber cultivation. Since they were following the traditional modes of farming they could not successfully adapt themselves to the technological innovations in farming and the scientific methods of agriculture, which became prevalent in the wake of globalisation. As they are generally people of average education, they have been exploited by middlemen in the input supply and the marketing of their products. With the advent of the Rubber Producers’ Societies the small rubber growers got an opportunity to overcome much of their difficulties and to protect their own interests.
A number of economic benefits are rendered by Rubber Producer’s Societies to their members. These benefits are classified into three:

1. Supplying Inputs
2. Marketing Benefits
3. Other General Services

1. Supplying Inputs

The inputs distributed include fertilizers, polythene and adhesive for rain guarding, plastic cups, headlight, hand sprayers, panel-protecting materials, fungicides, spray oil and power sprayers. The RPSs procure the various estate input items through the trading companies direct from the manufactures or principal dealers inviting sealed tenders and conduct further negotiations to bring down the purchase price to the minimum. This ensures the supply of quality materials to the small growers at a considerably cheaper rate. The various estate input items thus distributed are:

i) Fertilisers

The small rubber growers were generally unaware of the quantity and mode of application of fertilizers at the appropriate time. As the subsidies are cut off in the wake of liberalisation, procuring fertilizers at reasonable price is a major problem that the small rubber growers face. In this context the Rubber Producers’ Societies, as an organised body, has a significant role in supplying fertilizers.

The objective of the scheme is to popularise scientific application of fertilisers and to supply fertilizers, viz., Urea, Muriate of Potash and
Mussoorie Rock Phosphate to the small growers to encourage them to adopt scientific application of fertilizers in the correct proportion after testing soil and leaf to achieve optimum utilisation and to avoid wasteful expenditure on fertilizers.

ii) Rain Guarding Materials

This scheme aims at the popularisation of rain guarding for getting sustained production in rainy season. Materials like polythene sheets, adhesives, the tapping shades are supplied to the small growers through Rubber Producers' Societies.

The objects of the scheme are:

- To encourage tapping curing rainy season when the trees are normally left untapped.
- To ensure regular supply of raw rubber to the manufacturing and processing companies
- To check the seasonal price fluctuation of rubber.

iii) Tapping Accessories and Cultivation Equipment

The Rubber Producers Society are supplying the following tapping accessories and cultivation equipments to the small rubber growers.

a) Supply of latex collection cups

The increased flow of latex from modern high yielding varieties of trees where yield stimulation is applied demand an increase in the capacity of the latex collection cups. Moreover, the use of coconut shell for collection of latex creates quality problems also. This scheme is
implemented to popularise the use of plastic latex collection cups of 650 ml capacity to overcome these drawbacks and to facilitate cleanliness of field latex and to reduce scrap percentage.

b) Distribution of sieves and Paranitrophenol

The objective of supplying sieves and paranitrophenol is to improve the quality of the sheets produced.

c) Supply of tapping knives

The objective of supplying tapping knives is to help the small growers to increase the return from their plantations through modernization of the crop harvesting technique.

d) Supply of templates

To get the best yield of latex the tapping panel on the bark should be of the appropriate slope at the right height. The conventional method of marking panels did not take into account this fact and the result was low yield of latex. The Rubber producers' societies give proper guidance in marking panels by supplying templates. This scheme is meant for encouraging the adoption of efficient harvesting technique.

e) Supply of cup hangers

The objective of the scheme is to encourage the small growers to switch over to better harvesting techniques by using better cup hanging devices.
f) **Supply of headlights**

The scheme for supply of headlights at subsidised rate is aimed at popularising its use among small growers for the purpose of tapping early in the morning, which is the most favourable atmospheric condition for getting more latex from trees.

g) **Supply of latex cans**

The scheme provides for purchasing and supplying to the Rubber Producers' Society members quality cans for carrying latex from the field to the processing shed.

h) **Supply of cultivation equipment**

The Rubber Producers' Societies supply cultivation equipment like spout, spade, pick axe, hoe, dish, strainer, and bucket to the small rubber growers.

iv) **Planting Materials**

The Rubber Producers' Societies implement the scheme for raising budded rubber plants in poly bags with the involvement and participation of its members. This helps to make available genuine high yielding poly bagged rubber plants to the small holders at reasonable price and to popularise the use of advanced planting materials. By adopting this method, the gestation period can be reduced from 7 to 8 years to 5½ to 6 years. These nurseries help to check the price rise of poly-bagged plants in the open market.
v) **Spraying Facility and Spray Oil**

This scheme is implemented with the objective of popularizing the scientific application of fungicides such as copper sulphate, copper oxychloride, the spray oil and to give encouragement to the small growers for using these materials in the right manner and at the right time, for protecting the rubber trees from fungal diseases.

a) **Supply of hand operated sprayers**

The main objective of the supply of hand operated sprayers to the small growers is to popularize the use of hand operated sprayers for protecting young rubber plants from the onslaught of shoot rot, abnormal leaf fall and powdery mildew diseases by timely spraying of plant protection chemicals, thereby ensuring healthy growth of plants during the initial year of planting in the field.

b) **Supply of power operated low volume sprayers**

Spraying using power operated sprayers or dusters is very effective in rubber plantations to prevent crop loss due to leaf diseases. The scheme provides for assisting the purchase of the power operated sprayers at 50 per cent subsidy on price of the machine by rubber producers' societies having at least one year standing and at 25 per cent subsidy on purchase by the individual small grower.

vi) **Ethepon**

A short-term measure to increase the production of rubber from the existing plantation is the application of yield stimulants. Ethepon is used by the small rubber growers as a yield stimulant.
vii) Copper Sulphate

Copper sulphate is used as a fungicide for spraying to protect rubber from abnormal leaf fall. The small rubber growers commonly use copper sulphate for plant protection purpose.

viii) Supply of Tapping Panel Protection Materials

Under this scheme, Emissan and Rubber Coat are supplied to encourage the protection of the tapping panel from fungal disease.

ix) Acid

The small rubber growers usually process latex into ribbed smocked sheets. Formic acid or acetic acid is generally used for coagulation. The quantity of acid required for satisfactory coagulation depends on various factors like the amount and type of anticoagulant used, duration of coagulation, the season and the nature of the latex.

x) Tapping Shades

During the rainy season tapping can be carried out by fixing tapping shades above the tapping cut. By fixing a suitable channel on the trunk just above the tapping cut, flow of water through the main trunk is channelled out. About 35 to 45 additional tapping could be obtained every year by rain guarding using tapping shades.

2. Marketing Benefits

The marketing of rubber products is also a field where the small rubber growers are subjected to exploitation. In the case of quantity,
quality and price of the products sold by the small rubber growers the
interference of the middlemen cause monetary loss to the growers. The
dealers determine all aspects of the sale of products. To make matters
worse, most of the small rubber growers do not have holding capacity to
get a better bargaining power due to poor economic condition at the time
of sale of their products.

The Rubber Producers' Societies, which come forward to collect
latex, sheets, and scrap from their members and sell it at remunerative
prices to processors. The Rubber Board supplies necessary equipment
such as platform balance to weigh latex, sheet, and scrap. Electric oven
to dry sample coagulum for estimating dry rubber content, chemical
balance to weigh the dried sample coagulum to find out the exact weight
of dry rubber in the sample, and other accessories required are also
supplied.

i) Collection of latex

The main activity of the RPSs is collection, processing, and
marketing of latex. The latex is collected usually in the premises of the
RPS. For this purpose the RPSs appoint collection agents on commission
basis. After taking samples of latex from each grower for measuring DRC,
it is processed into grade sheets by societies having smoke houses, or
marketed through trading companies formed by the Rubber Board with
the help of the RPSs. Some societies make block rubber also. Some
RPSs are providing cans with anticoagulants to collect the latex in the
premises of the growers, and collect the cans periodically to market them
through trading companies. The Rubber Board has a scheme for
providing assistance to latex collection centres operated by the Rubber Producers' Societies. There is provision to supply Platform Balance, Chemical Balance, and Air Oven etc. worth Rs. 10,000/- to such societies as per the scheme.

ii) **Collection of sheet**

The RPSs also collect rubber sheets from the growers. The collected sheets are marketed through the trading companies or through private traders. The growers get better prices depending on the grade of the sheets.

iii) **Collection of scrap**

Any form of field coagulum (tree lace, shell lace, or earth scrap) is generally called scrap. The RPSs collect scrap from the small growers. The scrap collected is marketed through trading companies or through private traders. These services save the small growers from the exploitation of unscrupulous traders.

3. **Other General Services**

The RPSs are providing the following services to the small rubber growers:

i) **Financial grant for silt pit**

Silt pits are made in rubber plantations in order to maintain the fertility of the soil and for water harvesting and to check soil erosion. The Rubber Board gives financial grant for making silt pits. The Rubber Producers' Societies help the rubber small growers in making the silt pits and distributing the financial grant.
ii) Soil and leaf analysis

Soil and leaf analysis is carried out for diagnosing the fertilizer requirements. Before undertaking planting in nurseries or in the field, representative soil from the area should be analysed for fertility status. It is desirable to analyse the soil in the nursery once in three years. During the subsequent years of immaturity, and after the commencement of tapping, manuring based on Soil and leaf analysis should be followed. The Rubber Producers' Societies help the small growers in collecting the samples as well as in analysing them. Some Rubber Producers' Societies have trained persons for collecting soil and leaf samples, and make arrangements for analysing the samples.

iii) Community smoke house

Those Rubber Producers' Societies which are interested to set up community smoke-houses are given subsidy at the rate of about one lakh rupees to bear the cost of construction and equipment limited to about 75 per cent of the total cost.

iv) Demonstration activities

The following types of demonstrations were conducted: discriminate fertilizer application: moisture conservation practice, D-3 system of tapping and composite demonstration on all aspects. A demonstration programme is implemented primarily by the extension staff of Rubber Production Department was implemented by the RPSs for which the society is given 5 per cent service charges. The importance of the demonstrations of the Rubber Producers' Society was convincingly proved at the rain guarding
campaigns held in 1989 and in the one lakh tappers' training campaign held in 1990. The message of rain guarding has been given to the small growers, which is testified by the huge response for this programme in 1990. The tappers training campaign of 1990 also has been a very successful exercise in disseminating the correct techniques of tapping among rubber tappers of smallholdings.

During 1991 the Rubber Board successfully conducted a massive educational campaign in the production of good quality sheets with the active co-operation of the Rubber Producers' Societies. The main theme of this campaign is to transfer the appropriate technology of quality sheet processing to the small growers, thereby getting better remuneration for their graded sheets. Considering the importance of this subject, the campaign was repeated in 1992 also. In 1996 a massive demonstration was organised by the RPSs in rubber processing and marketing. The year 1997 was dedicated to the training and demonstration of innovative tapping methods to increase production, known as 'CUT 97'. In 1999 the thrust was given to augment production by way of controlling the diseases. The programme was known as 'SPRAY 99'. The RPSs concentrated on increasing the income of the small rubber growers by making quality sheets in 2000 and the campaign was called 'Quality 2000.' The programme 'Replart 2001,' organised by the RPSs with the help of the Rubber Board helped to equip the growers to compete in the market by reducing the cost of production. Such grassroot level exercises met with real success, because of the existence of the strong base network of Rubber Producers' Societies at the village level, which played a key role in joining hands with the Rubber Board in organising these campaigns.
2.9.2.2 Social Benefits Rendered by Rubber Producers' Societies

A Rubber Producers' Society is expected to deliver certain social benefits to its members like acting as a forum for discussion, developing the leadership qualities, helping to uplift the standard of living, empowering women, and honouring the best rubber growers and tappers. The following are some of the social benefits rendered by the rubber producers' societies.

1) Acting as a forum for discussion

The Rubber Producers Societies arrange meetings of the growers usually in the members' holdings. In such meetings experts are present to take classes. After that the members are free to talk about any topic related to rubber. This discussion helps the members to a great extent. In village areas this opportunity helps the growers to discuss their common problems and try to solve them.

2) Developing the leadership qualities

RPS is a forum that gives its members opportunities to develop their leadership qualities. The participation in the activities of the RPSs will help many to come to the benefits and become good leaders. Nowadays, many active members of the RPSs get elected to the three-tier panchayat system in Kerala.

3) Helping to uplift the standard of living

The participation in the activities of the RPSs will provide their members' with more opportunities for social interaction. The interaction with others will give them a wider perspective on life. This will help them to augment their standard of living.
4) **Empowering women**

In the present-day world many women come out of their houses and get involved in social activities. Some of them have proved to be better leaders. Most of the RPSs take keen interest to motivate women by including them in the board of directors. The activities of the RPSs motivate women in the rural areas.

5) **Honouring the best rubber growers and tappers**

Awards are given in recognition to the merits. The awards given to the best growers and tappers by the RPSs will motivate them. These awards will inculcate a competitive spirit among the growers and tappers. Awards will invariably lead to better performance and production.

6) **Acting as a nodal agency**

The ordinary small rubber growers are reluctant to approach the government and the Rubber Board due to the lack of experience and time. The RPSs can act as a nodal agency between the members, the government and the Rubber Board.

7) **Providing study aids to the children of the members**

The RPSs give scholarships to the children of its members, who stand top in various public examinations. It is a motivation to the students to excel in their studies. They also provide books, umbrella, and tuition facility for weak students. This facility will also motivate the other members of the family to involve in various programmes organised by the Rubber Producers' Societies.
8) **Supplying necessary information**

Most of the growers do not get the benefits from the various agencies due to the lack of information. The RPSs provide timely information to its members about the various beneficial schemes of the Government and the Rubber Board and also provide information about new trends in planting, manuring, spraying and innovations in cultivation.

9) **Local area development**

The Rubber Producers' Societies can contribute to the development of the locality in which they function. Some of the RPSs provide job opportunities and arrange medical camps for their members. Providing better transport facilities and making arrangements for drinking water supply also come under the activities of certain RPSs.

10) **Providing help to generate subsidiary income**

The Rubber Producers' Societies do not concentrate on the activities related to rubber cultivation alone. They also motivate the members to generate subsidiary income by helping them to start small-scale industries, bee keeping and the cultivation of other crops like cocoa, plantain and medicinal plants.

2.9.2.3 **Imparting Training to the Members**

The traditional know-how the small rubber growers possess in the various aspects relating to the planting, care and harvesting of rubber is inadequate to face the challenges of modern agriculture. Small rubber growers are not fully aware of the different aspects of rubber cultivation.
i.e., in planting, fertiliser application, tapping, and rubber processing. The Rubber Producers' Societies can take a very important role in imparting training to their members. In the technologically advanced world, in order to ensure the maximum yield from the rubber trees, proper training is needed in the various stages of rubber cultivation. The rubber growers are to be properly equipped with necessary information in the diverse fields connected with the cultivation. The RPSs conduct various training programmes with the help of the Rubber Board from time to time. Every year a new programme is introduced.

The main types of training given by the Rubber Producers' Societies are in the fields of:

1) Rubber planting
2) Rubber tapping
3) Subsidiary income generation
4) Quality sheets production
5) Fertiliser application
6) Value addition

1) Rubber planting

The maximum yield from a rubber tree, invariably, depends on the way the tree is planted. Proper attention is to be given right from pit digging onwards. Most of the growers are ignorant of the various steps to be taken in the selection of the budded plants or poly bagged plants, digging the pit, and maintaining the proper distance between the plants.
In order to maximize the yield from the trees, the growers need proper and scientific training in rubber planting. In the year 2001 a training programme called ‘Replant 2001’ conducted by the RPSs was meant for creating awareness among the growers to increase productivity by timely replanting and scientific methods of cultivation.

2) Rubber tapping

Rubber growers often depend upon the conventional methods of tapping, which they learnt from their forefathers. Improper tapping reduces the yield as well as the life span of trees. But the height and slope of the tapping panel, the thickness of the shaving made on the bark, the time of tapping and the type of knife used influence the yield from the trees. A proper and scientific training in the various aspects of tapping equips the growers with a proper knowledge, and thereby enhance the yield. The campaign ‘CUT 97’ was organized by the RPSs to give training of innovative tapping methods.

3) Subsidiary income generation

The vicissitudes of price and yield variation make the life of the growers difficult on various occasions. This can be met with by the various measures of subsidiary income generation. The growers can simultaneously indulge in bee keeping, cultivation of medicinal plants, and the collection and selling of rubber seeds. A proper training in these various measures of subsidiary income generation helps the growers much. Special programmes were organized in 1998 about subsidiary income generation by way of planting medicinal plants, and bee-keeping.
4) **Quality sheet production**

The price of the sheet depends on the quality of production. Depending the quality the rubber sheets are graded as RSSix, RSSi, RSSii, RSSiii, RSSiv, RSSv. Ordinary rubber growers produce only RSSv. In order to ensure maximum price to the growers, proper training in quality sheet production is needed. During 1991 and 1992 RPSs conducted training campaign in the production of good quality sheets by the active co-operation of the Rubber Board.

5) **Fertiliser application**

Proper fertilizing will reduce the cost of cultivation and maximize the yield. Before applying fertilizers, soil and leaf analysis is to be made. A scientific training is needed for using the right fertilizer at the right time in the right quantity and manner. In 1994 special training programmes were conducted in discriminate fertiliser application.

6) **Value addition**

The use of the rubber products ranging, from rubber bands to tyres is very common in our day-to-day life. The small rubber growers are marketing the latex or rubber sheets, the raw materials for all these products. In order to help the small growers in value addition, the RPSs can initiate the production of various products. They can also impart training to their members for helping them to start small-scale industries of rubber products. Special campaigns in this regard were given through the RPSs in 1995.
Rubber Producers' Societies are also engaged in multifarious activities like new planting of rubber, organising steps like collective filling and submission of applications, engaging common surveyor for preparing survey plans, organising joint field inspections, encouraging subscription of RB publications, persuading the growers to ensure their holdings and conducting study tours.

2.10 Model Rubber Producers' Societies

RPSs were formed with a view to promoting the interest of the small growers. About 2000 societies were thus formed. In order to strengthen these societies and to act as models by giving clear guidelines, the Rubber Board decided to identify certain societies as model RPSs. These model societies can disseminate knowledge to the growers through the societies. Thirty five societies were identified by the Rubber Board as model RPSs in various parts of the country. They were provided with infrastructure facilities and technical advice.

About 12.5 lakhs of rupees was spent on each society. Out of this 8.75 lakhs was grant from the Board and the remaining amount was raised by the societies. Now every model society has a capacity for drying 1000 kilograms of rubber, two biogas plants with the twin aims of water treatment and achieving fuel efficiency, and a training centre with all the modern facilities.

The following are the important activities of the model RPS.

- To secure a reasonable income to the growers by ensuring the production of superior quality sheets, and the marketing of latex and scrap.
To act as training centres for the modernisation of cultivation and dissemination of knowledge.

To assure the marketability of superior quality products for a long term.

To act as demonstration centres for providing technical advice to ensure the quality of products.

To take steps to store and export products wherever needed.

To strengthen the surrounding societies by giving training to their office bearers.

To purchase and distribute agricultural inputs to the growers at a reasonable rate.

To start rubber nurseries in a scientific manner.

Model RPSs should provide training in rain guarding, spraying, and in preventive measures in curing diseases whenever needed, and give technical training in all related matters regarding rubber production.

To improve the leadership of the RPSs and to mould women oriented co-operative societies.

To co-operate with the programmes of the Rubber Board for helping to materialise the programmes.

2.11 Companies in the RPS Sector

In order to further integrate and strengthen the activities of the RPSs, the Rubber Board took the initiative to set up seven processing companies and eleven trading companies in the predominant rubber growing areas in Kerala.
These are private limited companies owned by the Rubber Board and the Rubber Producers' Societies of the concerned areas with fifty one percent equity participation by the Rubber Board and the remaining share by the Rubber Producers' Societies working in the area. Each company will have 49 Rubber Producers' Societies and the Rubber Board as shareholders. In the case of companies undertaking the processing and marketing of rubber, the share contribution per Rubber Producers' Society is Rs. 25000/- while in the case of trading companies it is Rs. 10000/-. In both types of companies the Rubber Board will have controlling shares. The companies formed as joint ventures of the Rubber Board and the Rubber Producers' Societies have become a milestone in the growth of the Rubber Producers' Societies. The object of the formation of these companies is to improve rubber cultivation and rubber based industries. Particulars of the companies are given in Annexure III.

2.12 Award for the Best RPS

From 1997 onwards the Rubber Board has instituted Suvamasangham Award\textsuperscript{38} to be presented once in two years to the best performing Rubber Producers' Society. The objective of the award is to give proper incentive and motivation to the RPSs, which perform well and serve the growers to the desired extent in the transfer of technology and enhancement of production and productivity. The award includes Rs. 2 lakhs in cash, a memento and a citation. The recipient of the first award was Illithode RPS in Ernakulam District. The best RPS selected for 1999-2000 was Janatha RPS, Aimcomp in Kottayam District. Kalampur RPS in Ernakulam District was selected as the best RPS in 2001-2002.
2.13 K.M. Chandy Memorial Award for the Best Rubber Grower

The Rubber Board has instituted an award to the best rubber grower in India\textsuperscript{37} as an encouragement to the small growers, who have contributed very much for the growth of rubber plantation industry in India to commemorate late Prof. K.M. Chandy, the Ex-Chairman of the Rubber Board. As a tribute to his outstanding service to the organization and the industry in general, it was decided to institute the above award in his name. The award given once in two years consists of rupees one lakh and a citation. The recipient of this award for 1999 is Shri. V.J. John, Vallookandathil, Elanji. Ernakulam District. Sadanandan, Nimibhavan from Pathanamthitta was the recipient of this award for 2002.

2.14 National Federation of Rubber Producers' Societies

The National Federation of Rubber Producer's Society (NFRPS) is an apex body with about 2000 primary rubber producer's societies affiliated to it. The headquarters of NFRPS is at Kottayam. The NFRPS is a body registered under the Charitable Societies Registration Act.

The main objective of this apex body is to secure common economic stability to the members. Eliminating all kinds of middlemen to secure reasonable price for the hard earned produce of the small rubber cultivators is also a major aim.
Notes


36 The Rubber Board, Rubber and Its Cultivation (Kottayam: Rubber Board, 2002): 90.

37 The Rubber Board, Rubber and Its Cultivation (Kottayam: Rubber Board, 2002): 90.