IMPACT OF TRADING COMPANIES JOINTLY SPONSORED BY RUBBER BOARD AND RUBBER PRODUCERS' SOCIETIES ON GROWERS IN KOTTAYAM AND THRISSUR DISTRICTS.

By

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DISSERTATION

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DECLARATION

I hereby declare that this dissertation entitled "**Impact of trading companies jointly sponsored by Rubber Board and Rubber Producers' Societies on growers in Kottayam and Thrissur Districts**" submitted in partial fulfilment of the requirements of the course '**Post Graduate Diploma in Natural Rubber Production**' is a bonafide record of research work done by me and that the dissertation has not previously formed the basis of the award to me any degree, diploma, associateship, fellowship or other similar title of any University or Society.

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CERTIFICATE

Certified that this dissertation "**Impact of trading companies jointly sponsored by Rubber Board and Rubber Producers' Societies on growers in Kottayam and Thrissur Districts**" is a record of research work done by **Sri. T.P. Radhakrishnan** under our guidance and supervision and that it has not previously formed the basis for the award of any degree or diploma to him.

We, the undersigned members of the Committee of **Sri. T.P. Radhakrishnan**, a candidate for the Post Graduate Diploma in Natural Rubber Production, agree that the dissertation entitled "**Impact of trading companies jointly sponsored by Rubber Board and Rubber Producers' Socieites on growers in Kottayam and Thrissur Districts**" may be submitted by **Sri. T.P. Radhakrishnan,** in partial fulfilment of the requirements for the Diploma.

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T.P. RADHAKRISHNAN

Dedicated

to

my

beloved Parents

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INTRODUCTION

INTRODUCTION

Natural rubber is a strategic raw material, essential techno-economically in the air and land transporation tyres. Over 70 per cent of the world natural rubber supply is absorbed by the transportation sector. Natural rubber enters into engineering uses and is a proven industrial performance material. Without an adequate supply of natural rubber, the wheels of world industry will come to a grinding halt. There is virtually no commodity that occupies such a uniquely strong and irreplaceable end-use requirement position (Sekhar 1994).

India occupies fifth position in the extent of rubber cultivation in the world, followed by Indonenia, Thailand, Malaysia and China. Out of the total area of 5,15,572 ha, 85.98 per cent (443300 ha) is confined to Kerala (Rubber Board 1996).

The total production of rubber in India is 4,71,815 mt during 1994-'95, of which the share of Kerala is 93.86 per cent (442830 mt). Of this, 113225 mt is contributed by Kottayam district which works out to 25.57 per cent of the total production in Kerala and 24 per cent of the production in the country. Thrissur district contributed only 3.11 per cent of the production in Kerala and 2.92 per cent of production in India (Rubber Board 1996).

Out of the 8,81,400 rubber holdings in India, 8,62,728 are small holdings (below 2 ha) comprising of an area of 3,65,679 ha. Proliferation of small holdings, the number of which had swelled to over 8.6 lakhs had prompted the Rubber Board to devise some method by which group approach and collective action among rubber producers living in the far flung

villages could be encouraged for effective transfer of technology to maximise production and productivity of rubber. Rubber Producers' Society (RPS) is the village level voluntary association of rubber farmers. The RPS is conceived largely as a non-political, non-profit, secular, democratic fraternity of the rubber producers and by the rubber producers.

In order to strengthen the activities of the rubber producers' societies, the Rubber Board took the initative to set up processing and trading companies in the predominanat rubber growing areas in Kerala. These are private limited companies owned by Rubber Board and the Rubber Producers' Societies of the concerned area with majority equity participation by the Rubber Board.

Being a pioneer effort to organise and render better services to rubber growers, the functioning of the trading companies is based on certain assumptions formulated with the past experience. Hence it is imperative to conduct a scientific investigation into the functioning of these companies and to assess the impact among the beneficiaries. Under these circumstances, a project was designed to study the impact of trading companies with the following objectives.

(1) to study the impact of trading companies on growers in Kottayam and Thrissur districts,

(2) to analyse the problems faced by RPSs and companies and

(3) to obtain suggestions from the beneficiaries to improve the functioning of the trading companies.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

The major objectives of launching of trading companies jointly promoted by Rubber Board and Rubber Producers' Societies are (1) to promote and provide for the permanent rehabilitation of small rubber growers in the state of Kerala including the centralised purchase of their rubber crop and processing and marketing the same, (2) to produce, manufacture, refine, prepare, process, import, export, purchase, sell and otherwise deal in all forms of natural rubber and latex and all products there of and (3) to undertake research and development activities for improving the rubber plantation industry with special reference to the problems of the small growers of rubber (Vallthol Rubbers, 1990).

The trading companies started their functioning in different rubber growing areas during 1990 and so far no attempt has been made to study the impact or efficiency of these companies in any part of the State as it is only in the estabilishing stage. Hence it was impossible for the investigator to locate and review enough literature on the working of the trading companies. However, an attempt was made to gather information on the working of Rubber Producers' Societies and similar societies/group activities in improving cultivation.

As in the case of other agriculturist, the rubber small holders are a highly disorganised weak lot. It is needless to say that the cultivation of rubber, production, processing and marketing require fairly high levels of skilful management in agronomic practices, input procurement and application, post- harvest technology and marketing. After experimenting different approaches in organising the small growers, the Rubber Board is now promoting

locally organised small groups called Rubber Producers' Society. It is expected that these bodies will adequately facilitate the flow of technical information to the small growers in time as a strong link between the extension and client systems and provide necessary support and services in the area of input procurement, incentives, processing, storage, establishing rubber based small scale industry units and marketing, giving higher returns to the cultivator (Menon, 1989).

Though these societies are necessarily voluntary associations of rubber growers, they have a definite organisational structure. It is envisaged to hold general body meetings at least once in three months in addition to the demonstrations, seminars and group meetings. Narayanan (1990) has opined that such meetings would enable to foster an intimacy between the members and smooth functioning of the Rubber Producers Society with a sense of belongingness.

Primary processing of the latex, if done scientifically and skilfully would fetch increased returns to the cultivator. With the purpose of equipping the members of Rubber Producers' Soceities, the Board has planned to train them in improved primary processing technology. This is also considered to be a worthwhile fulfilment of the objectives of Rubber Producers' Society (Lalithambika, 1991).

2.1. Role of Rubber Producers Societies in adoption of improved technologies.

As already mentioned elsewhere, organising the small rubber growers under the umbrella of Rubber Producers' Societies is expected to enhance the adoption of improved

farming technologies along with providing necessary support system facilities. The adoption of improved technology is always influenced by various factors attributable to the technology as well as the service systems, as evidenced from some of the related previous research studies.

After reviewing several research studies in diffusion and adoption of innovations, Rogers and Shoemaker (1971) observed that knowledge of the improved technolgy might necessarily act as a strong motivation for its adoption among farmers.

While studying the soil conservation measures by farmers in the scheme areas of Trivandrum district, Pillai (1978) observed that the level of knowledge in the subject matter was significantly related to the level of improved practices by the farmers.

Balakrishna *et al.* (1982) identified that farmers gave prime importance to infrastructure facilities for improvement of their agricultural practices.

Haraprasad (1982), after studying the impact of agricultural programmes implemented by Small Farmers Development Agency (SFDA) among the farmers in Trivandrum district reported that higher levels of awareness of the activities and higher levels of knowledge helped the adoption of improved practices in livestock rearing.

In another study on the impact of 'SADU' on the agricultural development of rural areas, Vijayakumar (1983) found that the beneficiaries of the programme had improved levels of knowledge and attitude towards all the selected practices and there by better adoption levels. The non-beneficiaries of the programme were significantly lower in the levels of these three aspects.

Jose (1991) after studying the impact of Rubber Producers' Societies on Rubber plantation Industry reported the necessity for arranging supply of good quality planting materials and better rubber marketing facilities through Rubber Producers' Societies.

2.2. Constraints in the functioning of producers co-operatives.

With all the accepted tasks, many agricultural co-operatives face serious constraints in the real working situations. Needless to say, these lacunae may remain as the serious setbacks for such organisations in fulfilling their objectives.

Vijayakumar (1983) pointed out that lack of supply of good quality seedlings and supply of necessary inputs at the appropriate time were some of the severe constraints significantly influencing the agricultural productivity. In the field of rubber cultivation, Cyriac (1989) has opined that incapability of procurement and marketing of rubber at village level by the Rubber Marketing Societies was the important draw back faced, which needed immediate corrective measures.

These observations may act as indicators of some of the important functions of an efficient farmers group movement to cater to their basic need to increase the net returns and provide necessary support.

METHODOLOGY

METHODOLOGY

In this chapter the locations of study, method of data collection are presented.

3.1. Locations of study

This investigation aims at studing the impact of trading companies in Kottayam and Thrissur districts. These two districts were selected for conducting the study for the following reasons:

Kottayam district stand first in total area and production of rubber in Kerala. M/s. Manimalayar Rubbers (P) Ltd. at Kottayam is a trading company with a number of diversified activities. So the study of the performance of this company, will give a clear picture of the activities of the trading company.

Thrissur district has the 12th position with respect to area and production of rubber in the State. The extension efforts of Rubber Board are relatively less in Thrissur distrct. The rubber cultivation in this district is coming up only recently. Thus for comparision of the performance of the companies, this study was concentrated in Kottayam and Thrissur districts.

3.2. Method of data collection

The two companies, namely M/s. Manimalayar Rubbers (P) Ltd., Kottayam and M/s Vallathol Rubbers (P) Ltd., Thrissur were visited. Data were collected on aspects like the name of share holders, total number of RPSs, total turnover for each financial year, details of

latex collection / sheet collection and trading, details of trading of estate input items, profit and loss accounts and other relevent details.

Since the trading companies are registered under the companies Act 1956 as private limited companies, the total number of share holders is limited to fifty. Fifty one per cent of the total share is owned by Rubber Board and forty nine per cent by forty nine RPSs.

The share holder RPSs of each company was listed and one grower from each RPS was randomly selected. The data were collected from the respondents by conducting personal interviews using a pretested interview schedule. (The schedule is given in Annexure I). Out of the ninety eight respondents (forty nine each from two companies), ten could not give correct response to some questions and hence those were eliminated from the sample, reducing the sample size to eighty eight. Thus, forty four respondents from M/s. Vallathol Rubbers Pvt. Ltd., Thrissur (the addresses of RPSs and the growers are given in Annexure II) and 44 respondents from M/s Manimalayar Rubbers (P) Ltd., Kottayam (the addresses of RPSs and the growers are given in Annexure III) were selected. The selected respondents had activities in the pre-company and post-company periods.

The information regarding availability, quality, price and time of distribution of the estate inputs, the difficulties met with by the growers etc. were collected for pre-company and post-company periods during personal visits.

The information regarding the quantity of sheet/latex marketed and the rate at the time of procurement were also collected.

RESULTS AND DISCUSSION

RESULTS AND DISCUSSION

Studies were conducted to assess the impact of trading companies jointly sponsored by Rubber Board and Rubber Producers' societies on growers in Kottayam and Thrissur districts. The results are described in the following pages.

4.1. General performance of the trading companies

The general performance of the two selected trading companies was assessed through analysing the authorised share capital, share capital issued and subscribed, turnover, profit before tax, profit after tax, number of RPSs involved in the activities of the company, total number of estate items handled and profit of major estate input items.

4.1.1. Authorised share capital, share capital issued and subscribed by the companies

Authorised share capital is the maximum amount of share capital which a company is authorised to raise. The amount is stated in the Memorandum of Association. Issued capital is the amount of that part of authorised capital which is allotted by the company and includes the shares taken up by the subscribers of the Memorandum of Association. Subscribed capital is the amount paid up on the shares shown as allotted by the company as on date of preparation of balance sheet (Guptha and Radhaswamy 1982).

The authorised share capital and the share capital issued and subscribed by the two companies for the period from 1990 - '91 to 1995 - '96 are furnished in table 1.

Table 1. Authorised share capital and share capital issued and subscribed by Vallathol Rubbers and Manimalayar Rubbers

Year	Authorised share capital (in Rupees)		Share capital issued & subscribed (in Rupees)	
	Vallathol Rubbers	Manimalayar Rubbers	Vallathol Rubbers	Manimalayar Rubbers
90-'91	10,00,000	10,00,000	150	150
91-'92	10,00,000	10,00,000	6,30,000	6,00,000
92-'93	10,00,000	10,00,000	6,50,000	8,00,000
93-'94	10,00,000	10,00,000	7,82,500	10,00,000
94-'95	10,00,000	50,00,000	8,42,500	10,00,000
95-'96	10,00,000	50,00,000	10,00,000	31,82,550

The authorised share capital is Rs 10,00,000.00 (Rupees ten lakhs) divided into 1,00,000 (One lakh) equity shares of Rs 10.00 each, the company having the power from time to time, to increase or reduce its capital or to consolidate or subdivide its shares in accordance with the companies Act 1956.

The authorised share capital of M/s Manimalayar Rubbers (P) Ltd. had been enhanced from Rs 10,00,000.00 in 1990-'91 to Rs 50,00,000.00 (Rupees 50 lakh) during 1994-'95. But the authorised share capital of M/s Vallathol Rubbers (P) Ltd. remained as Rs 10,00,000.00 during the above period (Fig.1).

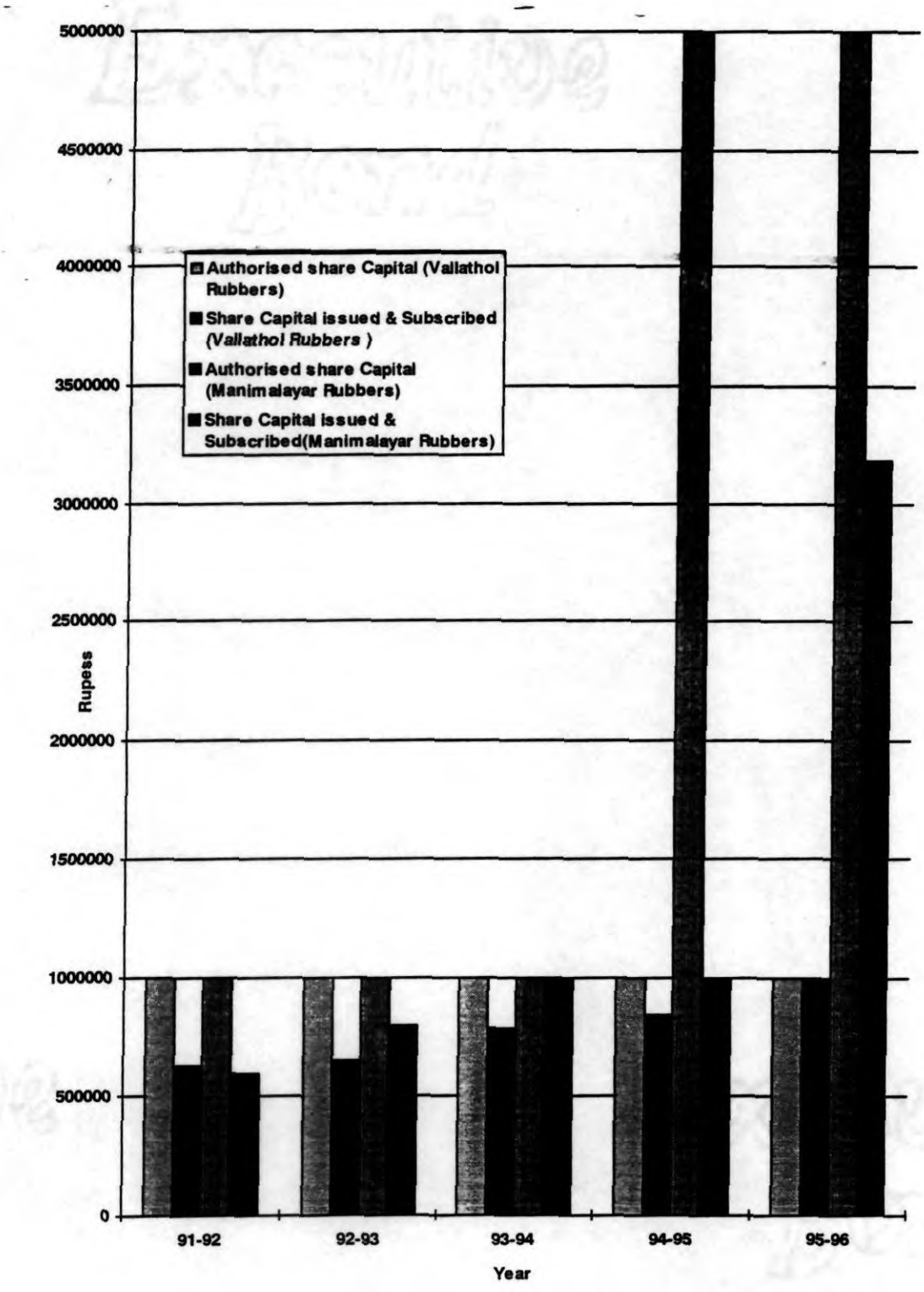
Since this amount form the working capital of the companies, it is very essential to increase the share capital in order to increase the day to day activities of the company. The Director Board of M/s Vallathol Rubbers took a decision to enhance the authorised share capital from Rupees ten lakhs to Rupees fifty lakhs in Sept. 1996.

The data on share capital, issued and subscribed (table 1) showed an upward trend. The Manimalayar Robbers (P) Ltd. registered a sharp rise from Rs 150.00 during 1990-'91 to Rs 31,82,550.00 during 1995-'96. The rate of increase was slow in Vallathol Rubbers (P) Ltd. during the same period.

4.1.2. Turnover

Turnover of the company include the finance raised/spent through sales amount of latex,

Figure 1. Authorised share capital and share capital issued and subscribed by Vallathol Rubbers and Manimalayar Rubbers



The total turnover and the rate of growth of the two companies during the period from 1990-'91 to 1995-'96 are furnished in table 2.

The data on turnover (in rupees) and rate of growth (in percentage) showed an upward and encouraging trend except during 1994-'95 in Vallathol Rubbers (P) Ltd.

M/s Vallathol Rubbers (P) Ltd. registered 136 times increase and Manimalayar Rubbers (P) Ltd. registered an increase of 15 times with in six years in the total turnover.

The turnover of M/s Vallathol Rubbers (P) Ltd. was less when compared to that of M/s Manimalayar Rubbers (P) Ltd. During 1990-'91 the turnover of M/s Manimalayar Rubbers (P) Ltd. was 34.88 times more than that of M/s Vallathol Rubbers (P) Ltd. During 1995-'96 the turnover of M/s Manimalayar Rubbers (P) Ltd. was only 3.77 times more than that of M/s Vallathol Rubbers (P) Ltd. This is because of the increased number of activities of M/s Manimalayar Rubbers (P) Ltd. and active participation of more RPSs in the activities of the company.

The turnover depends upon the quantity of field latex traded, sheet rubber and scrap traded, estate inputs traded and sales amount of field latex, sheet rubber, scrap and estate inputs. The trading details (quantity and sales amount) of field latex, sheet rubber, scrap and estate inputs are furnished in table 3.

The major activity of the trading companies is the procurement and sale of field latex.

Table 2.Turnover (Rupees)and the rate of growth (percentage) of the two trading companies.

Year	Vallathol Rubbers (P) Ltd		Manimalayar Rubbers (P) Ltd	
	Turnover (Rs)	Rate of growth(%)	Turnover (Rs)	Rate of growth (%)
1990-'91	1,00,227		34,96,097	
1991-'92	43,51,865	4242	89,33,466	156
1992-'93	57,79,600	33	1,06,24,889	18
113-'94	93,82,000	62	2,64,63,525	149
1994-'95	93,20,836	-1	4,42,82,322	67
1995-'96	1,35,81,524	45	5,12,20,000	15

Table 3. Details of turnover during the period from 1990 - '91 to 1995 - '96 of the two trading companies

		'90-'91		'91-'92		'92-'93		'93-'94		'94-'95		'95-'96	
		Vallathol	Mani-malayar	Vallathol	Mani-malayar	Vallathol	Mani-malayar	Vallathol	Mani-malayar	Vallathol	Mani-malayar	Vallathol	Mani-malayar
Field latex	Quantity (Drc Kg.)	3600	149378	134950	409809	211063	356580	344718	902592	252454	1183581	226827	851576
	Sales amount (Rs)	73572	3033198	2720707	8508608	5295630	9033105	8692372	23370367	8467251	39690497	11227547	443.6 lakh
Sheet Rubber	Quantity (Kg.)	--	--	--	13600	56850	20550	--	--	--	21016	--	33007
	Sales amount (Rs)	--	--	--	279705	1178133	492670	--	--	--	848356	--	17.75 lakh
Scrap	Quantity (Kg.)	--	--	--	--	--	1849	--	--	--	4907	--	4500
	Sales amount (Rs)	--	--	--	--	--	29221	--	--	--	115018	--	
Other Estate inputs (Sales amount Rs.)		17021	440279	425745	68515	470522	1069893	685900	3036802	710712	3400667	2203163	49.7 lakh
Other income (Rs.)		9634	22620	27280	76638	13448	55291	3728	56356	142873	227784	105214	1.15 lakh
Turnover (Rs.)		100227	3496097	4351865	8933466	5779600	10624889	9382000	26463525	9320836	44282322	13581524	512.20 lakh

Source : Vallathol Rubbers (P) Ltd. 1991, 1992, 1993, 1994, 1995, 1996. *Annual Reports*
Manimalayar Rubbers (P) Ltd. 1991, 1992, 1993, 1994, 1995, 1996. *Annual Reports*

Rs. 443.6 lakhs which contributed 86.6 per cent of the turnover of the company. On the Other hand, only 10 RPSs were involved in the latex collection of M/s Vallathol Rubbers (P) Ltd. during the same period and only 226827 Kg (drc) of field latex was collected and sold for Rs. 112.28 lakh which contributed 82.67 per cent of the turnover of the company.

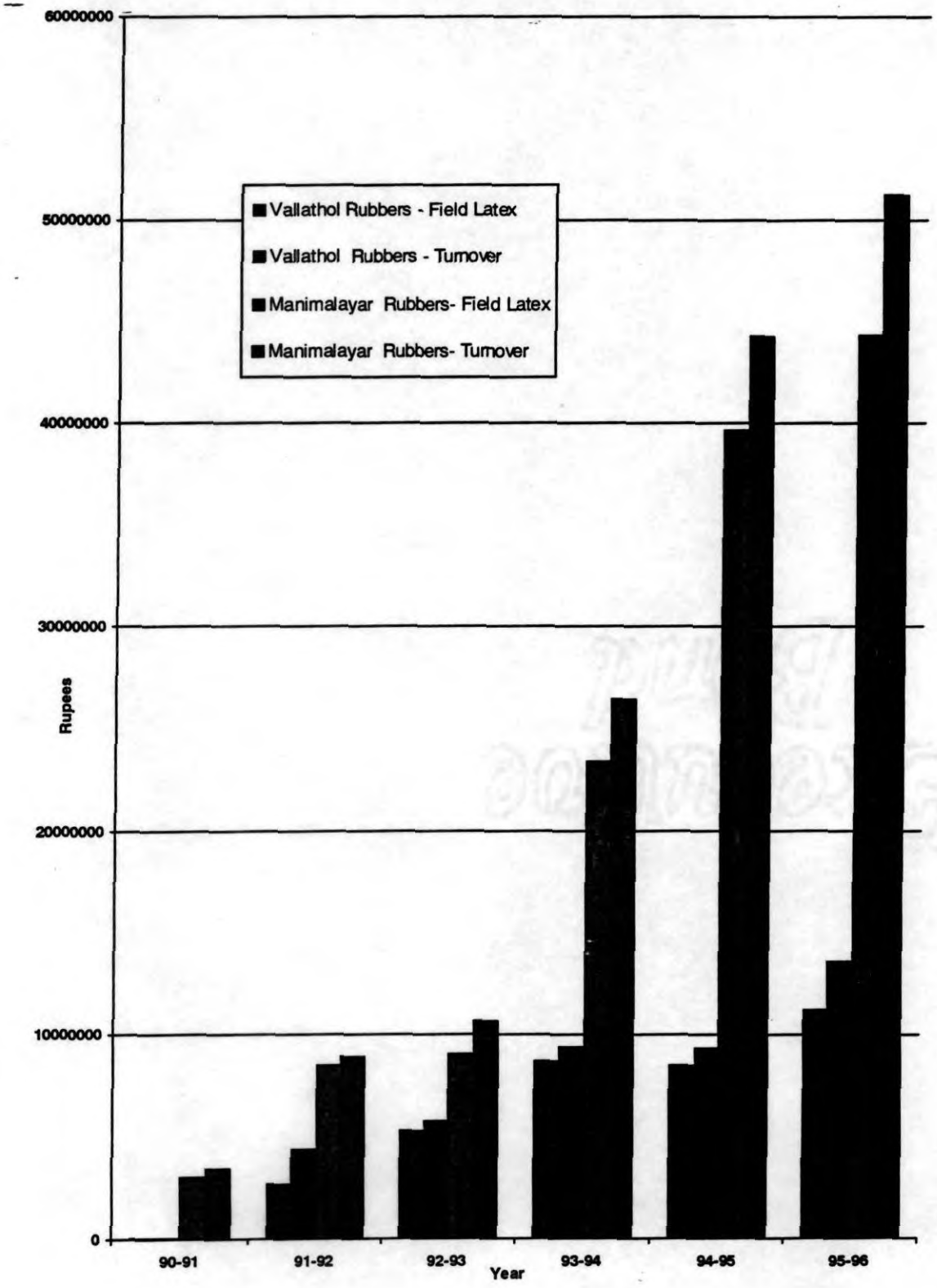
During the year 1994-'95, the sales amount of field latex at M/s Vallathol Rubbers (P) Ltd. was Rs. 84,67,251.00 which contributed 90.84 per cent of the turnover. At Manimalayar Rubbers (P) Ltd. the sales amount of field latex was Rs. 3,96,90,497.00 which contributed 90.27 per cent of the turnover (Fig.2).

Even though the quantity of field latex procured showed a decreasing tendency during 1995-'96, due to the increased rate of latex the sales amount was increased.

If the quantity of field latex/sheet rubber procured is increased, the turnover will also get increased. Likewise, to increase the turnover, the company should distribute more estate inputs to growers at a reasonable rate.

The companies showed an increase in growth rate during all the years under study except during 1994-'95 when M/s Vallathol Rubbers recorded a decrease by one per cent. This is due to the decrease in quantity of latex procured. Eventhough the number of collection centres had been increased, the company could procure only 252 mt (drc) latex as against 345 mt (drc) latex in 1993-'94. This was mainly because of the fall in the production of natural rubber due to the early leaf fall and added to that some growers switched over to the production of sheet rubber when the price of RSS 4 rubber registered an increasing trend

Figure 2. Sales amount of field latex and total turnover of Vallathol Rubbers and Manimalayar Rubbers



(Vallathol Rubbers, 1995).

4.1.3. Trading of field latex/sheet rubber

The first and foremost objective of the company is to distribute the maximum price to the growers for their produce by the centralised purchase of their rubber crop and processing and marketing the same.

At present, the companies, under study, do not possess processing units but the ultimate aim is to establish a viable processing unit (sheet or latex based) or a viable rubber based industry.

From table 3, it is clear that M/s Vallathol Rubbers (P) Ltd. showed an increasing tendency in the quantity of field latex collected upto 1993-'94 and then decreased.

During 1992-93 there was a decrease in the quantity of latex procured by M/s Manimalayar Rubbers (P) Ltd. Likewise, during 1995-96 there was a decrease of 332005 kg (drc) of field latex when compared to previous year. The main reason behind the decrease in the quantity of latex procured might be the grower's reluctance to give the field latex in order to get the advantage of the higher price of RSS-4 sheet rubber. An increase in the quantity of latex purchased was noticed in other years.

The problems now facing the trading companies and suggestions to solve the problems are detailed below:

Out of the total production of natural rubber (471815 mt during 1994-'95) the latex

concentrates contributed 11.16 per cent (ie. 52655 mt). In the grade wise consumption of NR, the latex concentrates contributed 11.11 per cent [Rubber Board 1996].

In addition to several private firms, the trading and processing companies set up by the Rubber Board, had also started collecting ammoniated latex from rubber growers. In the peak seasons of production of natural rubber (October to March) there is chance for glut in the latex market. At that time the cenex price is low when compared to graded sheet rubber price. There is a sharp increase in the rate of RSS - 4 when compared to ungraded rubber and a difference of Rs. 4.00 to Rs. 6.00 prevails at least for three months. The growers are reluctant to give field latex at this stage and they resume the production of graded sheet rubber in order to get the advantage of additional price of Rs. 4.00 for sheet rubber.

Hence the trading companies began to start trading of sheet rubber in bulk quantities in addition to latex trading. There are many constraints for the sheet trading in bulk quantities. Some of them are

i) shortage of enough funds for collection and storage of sheet rubber

ii) lack of storage facilities

iii) tight competition in the sheet market

iv) above all, since the trading companies are set up by the Rubber Board and follow strict accounting system, there is no scope for manipulation in the bill-ing system.

v) private dealers may attract the growers by advancing money for the purchase.

Anyhow, by increasing the share capital, the companies can increase the working capital for day to day activities. By availing loan from banks or from member RPSs, the working capital can be increased.

In the near future, companies will be forced to do sheet trading in sizeable quantities and to start sheet rubber based small scale industry in order to minimise the accumulation of field latex and to get maximum price to the growers. The companies can also start making good quality sheet rubber (RSS- 3, RSS-2, RSS-1) by the use of own/rented smoke house by the active participation of RPSs. This will benefit the growers to get maximum price.

To set up a sales godown for sheet trading outside Kerala State, where the price of sheet rubber and demand for sheet rubber are high, in the joint sponsorship of four or five trading companies, is another suggestion. Eventhough there are many constraints, if the trading companies constitute an apex body to consolidate all the programmes undertaken by each company and formulate a common programme in a phased manner, the trading companies will succeed in their venture to establish a common outlet outside Kerala for their sheet trading.

M/s Manimalayar Rubbers (P) Ltd. started initial steps to procure sheet rubber. They have a purchase depot at Puthupally and they had procured and sold 21016 Kg, and 33007 Kg sheet rubber during 1994-'95 and 1995-'96 respectively. Earlier, during 1991-'92 they have procured and sold 13600 Kg and during 1992-'93, 205550 Kg sheet rubber.

During 1991-'92, M/s Vallathol Rubbers joined hands with M/s Pazhassi Rubbers, the agents of State Trading Corporation and procured 31.1 t of RSS-4 and 25.75 t of RSS-5.

Both the companies have plans to procure sheet rubber in large quantities during this financial year in order to fulfil the company's obligation to the small rubber growers.

The total number of RPSs involved in latex collection during the years 1990-'91 to 1995-'96 are furnished in table 4. The number of RPSs which actively participated in the latex collection process of M/s. Vallathol Rubbers (P) Ltd. and M/s Manimalayar Rubbers (P) Ltd. increased from four (during 1990-'91) to ten (during 1995-'96) and from thirteen (during 1990-'91) to thirty nine (during 1995-'96), respectively (Fig.3). The percentage wise calculation showed 17.9 per cent (10/56) at M/s Vallathol Rubbers (P) Ltd. and 19.5 per cent (39/200) at M/s Manimalayar Rubbers (P) Ltd.

The low percentage of involvement of RPSs might be due to non co-operation among the member growers of the RPS, nonavailability of two barrels of latex daily (below which there may be losses), lack of timely disbursement of latex price to growers, non-availability of transportation facilities to the widely spread plots and non receipt of higher price (based on RSS-4) from the trading companies.

4.1.4. Trading of estate inputs

4.1.4.1. Formic acid

Table 5 indicates the quantity of formic acid sold and the sales amount of the same of the two trading companies. During 1990-'91 and 1991-'92 M/s Manimalayar Rubbers acted as

Table 4. Total number of RPSs involved in latex collection during the years from 1990-'91 to 1995-'96

Year	Vallathol Rubbers	Manimalayar Rubbers
1990-'91	4	13
1991-'92	13 (17 centres)	22
1992-'93	9 (20 centres)	29
1993-'94	12 (23 centre)	43
1995-'95	10 (25 centres)	43
1995-'96	10	39

commission agents of authorised distributors of formic acid in Kottayam district. In the table, the quantity of Formic acid showed an increasing trend except for M/s Manimalayar Rubbers during 1995-'96. The companies managed to procure and distribute formic acid of good quality to the member growers of RPS which enabled them to produce good quality sheet rubber.

4.1.4.2. Collection cup

Earlier, coconut shells were used as receptacles for latex collection. At present, even small growers began to use plastic cups as receptacle due to cleaniness and capacity to accommodate high yields. The sales of plastic cups started during 1992-'93 by both companies. During 1995-'96, M/s Vallathol Rubbers purchased and distributed 1,00,818 plastic cups worth Rs. 1,31,914.00 (Table 6). During the same period, M/s Manimalayar Rubbers purchased and distributed 3,29,959 plastic cups worth Rs. 4,29,719.00. A 3.3 times increase in the sales of plastic cups was noticed in M/s. Manimalayar Rubbers (P) Ltd. when compared to that of M/s Vallathol Rubbers (P) Ltd. during the year 1995-'96.

4.1.4.3. Spout, cup hanger and tapping knives

Tapping knife, spout and cup hanger are the essential tools for the tapping and collection of latex. Table 7 illustrates the sales amount of the above mentioned articles.

An increase of 16.50, 2.17 and 3.90 times in the sales of tapping knives, spouts and cup hangers, respectively were noticed in M/s Manimalayar Rubbers (P) Ltd. when compared to that of M/s Vallathol Rubbers (P) Ltd. during the year 1995-'96.

Table 5. Trading of formic acid by the trading companies

Year	M/s. Vallathol Rubbers		M/s. Manimalayar Rubbers	
	Quantity (Kg.)	Sales Amount(Rs.)	Quantity (Kg.)	Sales Amount(Rs.)
1990-'91	...	5,320	...	...
1991-'92	4432	87,280	...	...
1992-'93	7695	3,25,402	17805	7,99,551
1993-'94	8001	3,64,322	49398	21,70,244
1994-'95	8637	3,40,472	65717	22,47,264
1995-'96	12197	5,31,836	62183	25,21,351

Table 6. Trading of plastic cups by the trading companies

Year	M/s. Vallathol Rubbers		M/s. Manimalayar Rubbers	
	Quantity (Kg.)	Sales Amount(Rs.)	Quantity (Kg.)	Sales Amount(Rs.)
1992-'93	27000	33,100	20000	24,000
1993-'94	74073	98,201	61500	86,371
1994-'95	47026	63,485	55625	71,823
1995-'96	100818	1,31,914	329959	4,29,719

Table7.Sales amount of spouts,cup hangers and tapping knives of the two trading companies

Year	M/s. Vallathol Rubbers Sales amount (Rs.) of			M/s. Manimalayar Rubbers Sales amount (Rs.) of		
	Tapping Knives	Spouts	Cup hangers	Tapping Knives	Spouts	Cup hangers
1992-'93	3411	...	...	12231	...	...
1993-'94	5814	9831	20516	86879	23747	6804
1994-'95	5265	16037	41396	87433	69870	193797
1995-'96	7995	28930	55575	131918	62911	216966

4.1.4.4. Aluminium dish

For making good quality sheets aluminium dishes are essential. Both companies purchased and distributed good quality aluminium dishes at reasonable rate. The data are furnished in table 8.

It was found that 1.88 times increase in quantity and 1.66 times increase in sales amount were registered by Manimalayar Rubbers when compared to that of Vallathol Rubbers.

4.1.4.5. Other estate inputs

Other estate inputs include scrapper cum maker, aluminium sieves, aluminium mug, froth remover, aluminium bucket, polythene bag (HM HDPE and LDPE), hand operated sprayer, poovan thoomba, Kottayam thoomba, pick axe, kodali, sickle (aruval), crowbar (alavank) bio-manure, tapping light, template, rubber kot, chemical like Sodium sulphite, Sodium bisulphite, Indofil M45, Golden touch, Thiride, Phosjet, water pots, tapping shade, rainguard plastic, rainguard paste, stapler and pins, collection basket, plastic strap, vakkathi, garden shear, cutting knives, multitool kit and other articles like coconut scraper, kitchen knife and chappal.

4.1.5. Total number of estate input items handled by the companies

Table 9 illustrates the total number of estate inputs and other useful items handled by the two companies.

Table 8.Trading of aluminium dish in the two trading companies

year	Vallathol Rubbers (P) Ltd		Manimalayar Rubbers (P) Ltd	
	Quantity (Kg.)	Sales Amount(Rs.)	Quantity (Kg.)	Sales Amount(Rs.)
1992-'93	658	32900	4442	1658
1993-'94	1497	77402	1605	79704
1994-'95	1382	77690	3021	165677
1995-'96	2729	192920	5123	320580

During 1990-'91 M/s Vallathol Rubbers (P) Ltd. had handled three items, ie, field latex, formic acid and head light while M/s Manimalayar Rubbers (P) Ltd. had handled only two items, ie, field latex and budded stumps. Year after year, the number of estate input items handled by the two companies had increased. During 1995-'96 M/s Vallathol Rubbers (P) Ltd. had handled 40 estate handled 69 input items (Fig.4).

M/s Vallathol Rubbers showed 13.33 times increase in the number of input items while m/s Manimalayar Rubbers showed 33 times increase in the number of input items.

During 1995-'96 M/s Manimalayar Rubbers showed 1.65 times increase in the number of input items when compared to that of M/s Vallathol Rubbers.

In addition to the common estate inputs, M/s Manimalayar Rubbers managed to procure and distribute the necessary articles for day to day life activities to the rubber growers. Some of such items are garden shears, coconut scraper, different kinds of knives, dolphin chappals and multitool kits.

4.1.6. Profit before and after tax

The table 10 indicates the year wise profit before tax and profit after tax.

The operating results of the M/s Vallathol Rubbers (P) Ltd. for the period from 5th June 1990 to 31st March 1991 showed a net loss of Rs. 27854.00 which was carried forward to the financial year 1991-'92. This was due to the fact that the company started effective operation only from December 1990. So the data pertained to the performance of only three months. Arrangements were made to collect field latex from four RPSs. Being lean period of production,

Table 9. Total number of estate input items handled by the two companies

Year	Vallathol Rubbers (P) Ltd.	Manimalayar Rubbers (P) Ltd.
1990-'91	3	2
1991-'92	11	6
1992-'93	19	19
1993-'94	20	38
1994-'95	30	39
1995-'96	40	69

Figure 3. Total number of RPSs involved in latex collection during the years from 1990-'91 to 1995-'96

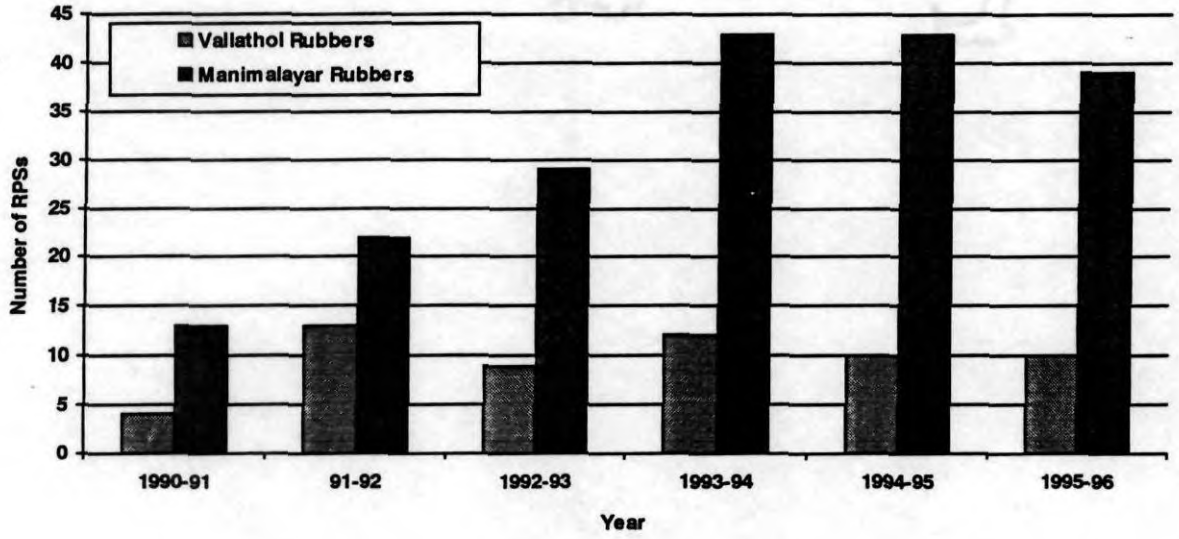


Figure 4. Total number of estate input items handled by the two companies

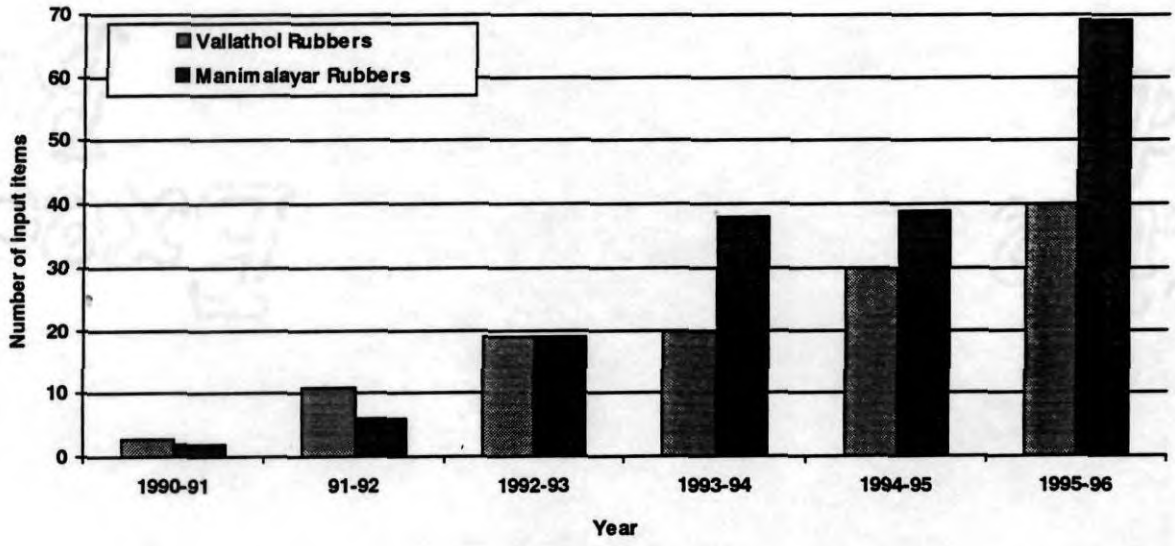


Table 10.Profit before tax and profit after tax during the period from 1990-'91 to 1995-'96 of the two trading companies

Year	Vallathol Rubbers (P) Ltd		Manimalayar Rubbers (P) Ltd	
	Profit before tax (Rs)	Profit after tax (Rs)	Profit before tax (Rs)	Profit after tax (Rs)
1990-'91	- 27,854.00	...	82652.00	37,360.00
1991-'92	30,464.00	29,324.00	1,01,689.00	42,611.00
1992-'93	56,361.00	28,330.00	95,248.00	40,478.00
1993-'94	71,520.00	35,670.00	5,40,311.00	2,29,631.00
1994-'95	70,532.00	42,729.00	3,15,154.00	1,31,062.00
1995-'96	1,10,078.00	61,752.00	9,38,000.00	5,07,000.00

sizeable quantity could not be collected and sold. The very next year (1991-'92) company's net profit (profit after tax) was Rs. 29324.00 as against the loss during the previous year. The profit after tax for the succeeding years showed an upward trend (Fig.5).

The profit after tax of M/s Manimalayar Rubbers (P) Ltd. showed up and down trends. During 1994-'95, there was a decrease of Rs 2,25,157.00 on profit before tax and a decrease of Rs 98,569.00 on profit after tax. This was because of the reason that the company had acquired 4.15 acres of land at Kanam and proposed to diversify the activities.

M/s Manimalayar Rubbers (P) Ltd. registered 13.57 times increase in respect of profit after tax while M/s Vallathol Rubbers (P) Ltd. registered 2.11 times increase.

4.1.7. Fixed assets

The table 11 indicates the number of fixed assets and its book value.

At M/s Manimalayar Rubbers, the fixed assets include items such as type writer, furniture and fittings, weighing balance, office equipments, computer and accessories, bicycle and laboratory equipments.

At M/s Vallathol Rubbers, the fixed assets included furniture and fittings, office equipments and electronic typewriter.

4.1.8. Dividend

The table 12 shows the dividend per equity share to the members.

Figure 5. Profit before tax and profit after tax during the period from 1990-'91 to 1995-'96 of the two companies

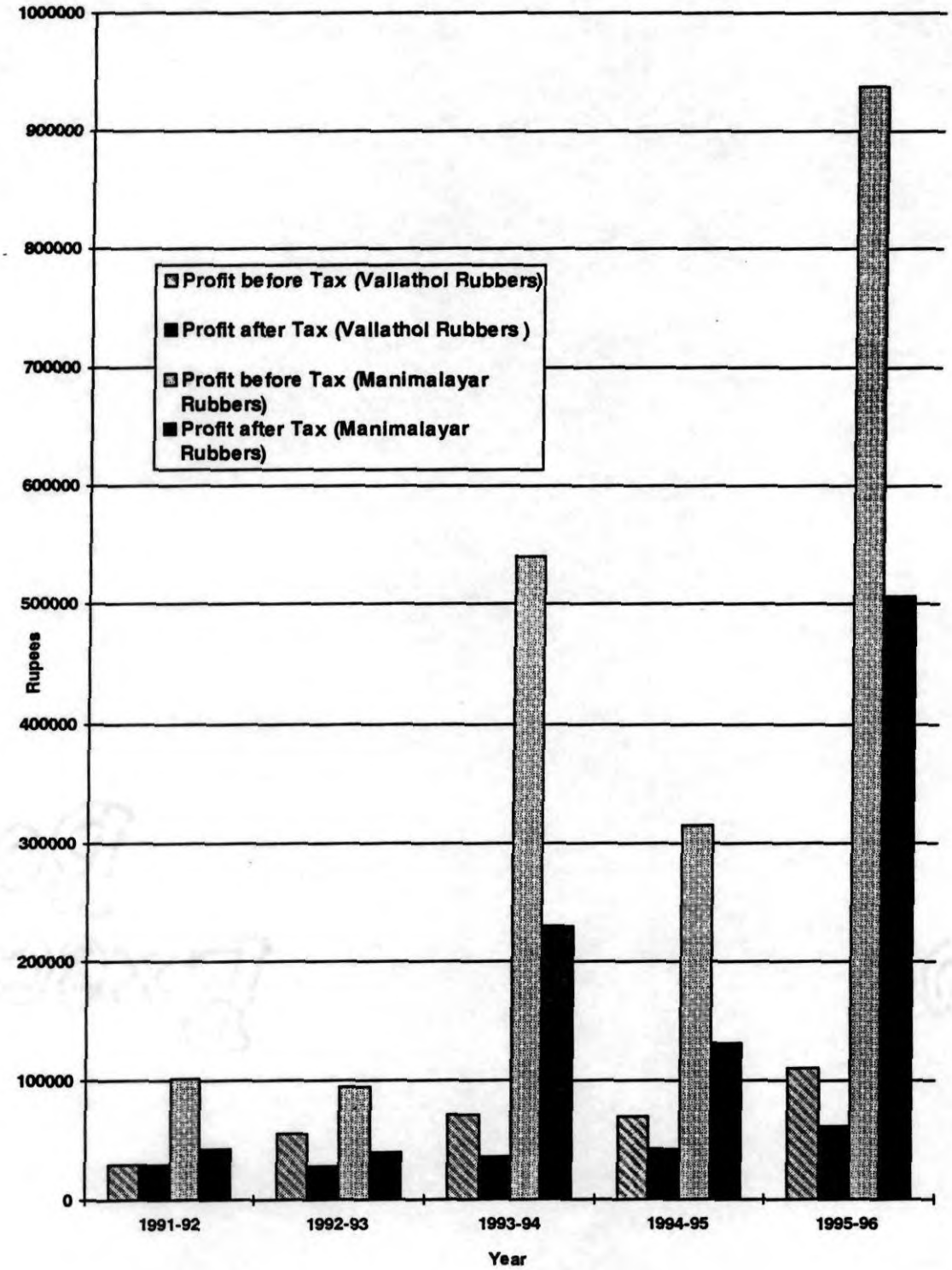


Table 11. Number of items and total book value of fixed assets of the two trading companies

Year	Vallathol Rubbers (P) Ltd.		Manimalayar Rubbers (P) Ltd.	
	No. of item	Book value (Rs.)	No. of item	Book value (Rs.)
1990-'91	...	...	2	15,746
1991-'92	2	3,074	2	19,833
1992-'93	2	2,699	3	18,453
1993-'94	2	15,422	4	49,708
1994-'95	3	32,115	7	1,93,841
1995-'96	3	44,572	9	16,68,510

The dividend rate of M/s Vallathol Rubbers (P) Ltd. was less when compared to that of M/s Manimalayar Rubbers (P) Ltd. This was due to the less profit accrued by M/s Vallathol Rubbers (P) Ltd. It was as high as 15 per cent in the year 1993-'94 in Manimalayar Rubbers (P) Ltd.

4.1.9. General information

General information of the two companies are described in the table 13.

In the area of operation of M/s Manimalayar Rubbers, a total number of two hundred Rubber Producers' societies (RPSs) are functioning. Out of these one hundred and twentysix RPSs took part in the sales of estate inputs and thirty nine RPSs participated in the latex collection activity of the company. In the service area of M/s Vallathol Rubbers, only fifty six RPSs are functioning. Out of these, twenty three RPSs participated in the sales of estate inputs and ten RPSs actively took part in the latex collection process.

M/s Manimalayar Rubbers (P) Ltd. showed an increase of 3.57, 5.47 and 3.9 times in respect of total number of RPSs functioning, number of RPSs participated in selling estate inputs and in the latex collection process, respectively when compared to M/s Vallathol Rubbers (P) Ltd. This is due to the large area under cultivation and higher production of natural rubber in the service area of M/s. Manimalayar Rubbers (P) Ltd.

Kottayam district stands first in total production and total area under cultivation of rubber in Kerala. The total area under cultivation of rubber in Kottayam district is 1,08,433 hectares which is 7.86 times more than that of Thrissur district. The production is 1,13,225 mt

Table 12. Dividend per equity share of the two trading companies

Year	Vallathol Rubbers (%)	Manimalayar Rubbers (%)
1990-'91	...	...
1991-'92	...	5
1992-'93	3.5	...
1993-'94	4	15
1994-'95	4.5	10

Table 13. General information of the companies during the period 1995-'96

	Observations	Manimalayar Rubbers	Vallathol Rubbers
1	Total number of RPSs under the service area of the company	200	56
2	Number of RPSs participated in selling estate input items	126	23
3	Number of RPSs participated in the latex collection	39	10
4	Branches (Sales depot)	..	4
5	Separate Godown	1	..
6	Sheet collection centre	1	..
7	Own land (Acre)	4.15	2.35
8	Number of Items handled	69	40

which is 8.85 times more than that of Thrissur district. Thrissur district has the 12th position as far as production (13,790 t) and area under cultivation (12,493 ha) are concerned. The details of area and production are furnished in Table 14(Fig.6). The people of Kottayam district are dependant more on rubber than any other crop for their livelihood. Hence the activities connected with rubber are more in Kottayam district and more growers participated in Rubber Board activities.

As far as M/s Vallathol Rubber is concerned, it had four rented outlets for distribution of estate inputs in more rubber concentrated areas such as Chelakkara, Veloopadam, Alengad and Inchakudu. M/s. Manimalayar Rubbers had no such outlets. Outlets are not necessary in the case of Manimalayar Rubbers as 126 RPSs participated in distributing estate inputs to the needy growers.

M/s Manimalayar Rubbers had one separate godown for stocking the estate inputs and from there also individual growers will get the estate inputs.

M/s Manimalayar Rubbers had already started sheet collection on a regular basis. At Puthupally, there is a separate sheet collection centre. Rubber sheets are purchased gradewise from individual growers from RPSs in one or two specified days in a week. Sheets were graded by a expert grader and price was given to growers according to the rates published in dailies.

For diversification of activities, M/s Manimalayar Rubbers had purchased 4.15 acres of land at Kanam during 1995-'96 while M/s Vallathol Rubbers had acquired 2.35 acres of land

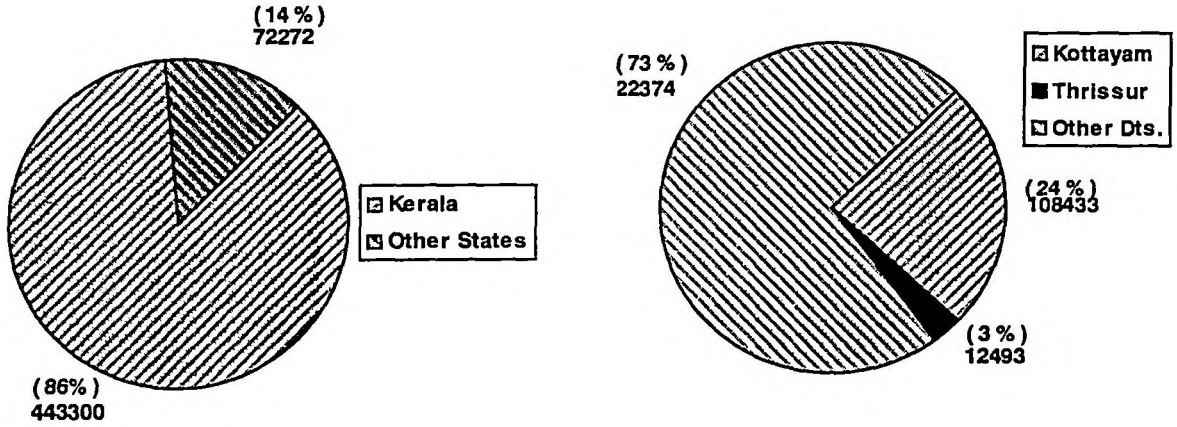
Table 14. Area and production statistics of rubber.

	Area (ha)	Production (t)
Kottayam	1,08,433	1,13,225
Thrissur	12,493	13,790
Kerala State	4,43,300	4,42,830
India	5,15,572	4,71,815

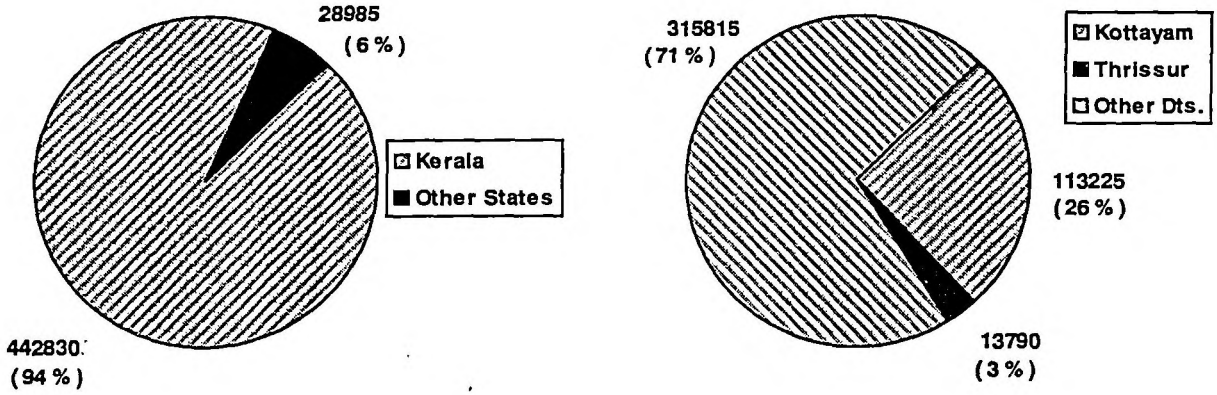
Source: Indian Rubber Statistics Vol-21-1996

Figure 6. Area and production statistics of rubber.

Area (in Ha.)



Production (in Mt.)



at Thiruvillwamala recently.

The total number of estate inputs handled by M/s Manimalayar Rubbers (P) Ltd. is sixty nine which is 1.73 times more than that of M/s Vallathol Rubbers (P) Ltd. M/s Vallathol Rubbers (P) Ltd. handled only 40 items.

4.1.10. Cost price, selling price and profit of field latex and other input items.

The cost price, selling price and profit of field latex and important input items are furnished in table 15 and table 16 respectively.

The selling price of field latex is higher at M/s Manimalayar Rubbers (P) Ltd. than that of M/s Vallathol Rubbers. M/s Manimalayar Rubbers had got Rupees two and fifty nine paise (Rs.2.59) more by selling one kg drc of field latex.

M/s Manimalayar Rubbers had given 60 paise as commission (RPS commission Ps. 20, collection agent commission Ps.30 and V.F.A. commission Ps.10) while M/s Vallathol Rubbers had given only Ps.50 (No. V.F.A Commission) per one kg drc field latex. M/s Manimalayar Rubbers had given Rs 50.41 to the growers which is Rs. 2.24 more than that of M/s. Vallathol Rubbers. This is due to the higher selling price received by M/s Manimalayar Rubbers.

The net profit per kg drc of field latex at Manimalayar Rubbers (P) Ltd. was Rs.1.68 which was 35 paise more than that of M/s Vallathol Rubbers (P) Ltd.

In the case of estate inputs M/s Manimalayar Rubbers had got less profit in all the major

Table 15. Cost price, selling price and Profit of field latex of the two trading companies.

Observation	Manimalayar Rubbers (Rs./drc Kg.)	Vallathol Rubbers (Rs/drcKg.)
Average Purchase rate price given to growers	50.41	48.17
Average selling price	52.09	49.50
Collection charges given to RPSs i) RPS commission	0.20	0.20
ii) Collection agent charge	0.30	0.30
iii) VFA commission	0.10	..
iv) Profit	1.68	1.33

Table 16. Cost price, selling price and profit of some input items in the two trading companies

	M/s. Manimalayar Rubbers (P) Ltd			M/s. Vallathol Rubbers (P) Ltd		
	Cost Price (Rs.)	Selling Rate (Rs.)	Profit (Rs.)	Cost Price (Rs.)	Selling Rate (Rs.)	Profit (Rs.)
Formic Acid	45	46	1.00	45	47	2
Cup hanger (per Kg.)	26.00	28.00	2.00	31.00	33.30	2.30
Plastic Cup	1.45	1.55	0.10	1.45	1.55	0.10
Tapping knife	48.00	56.00	8.00	55.00	60.00	5.00
Felling knife	35.00	46.00	11.00	45.00	50.00	5.00
Aluminium Dish	62.15	69.50	7.35	68.29	74.00	5.71
Spout (1 bundle)	8.00	9.00	1.00	8.00	10.00	2.00

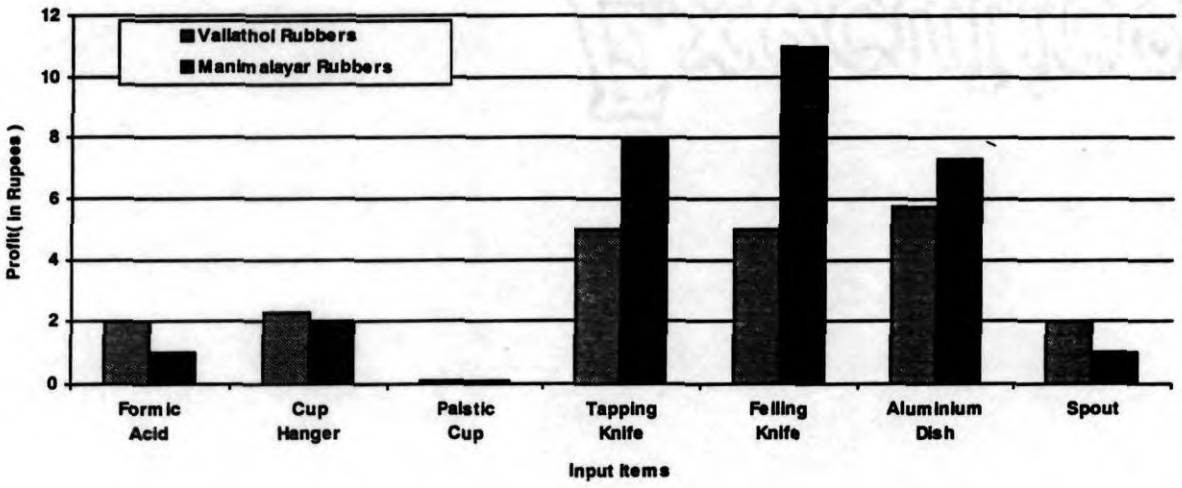
inputs than that of M/s Vallathol Rubbers (P) Ltd.(Fig.7). This might be because of the bulk purchase of all estate inputs and greater participation of active RPSs in selling the inputs among the small rubber growers. The sales amount (Rs. 49.7 lakhs) of all estate inputs of M/s Manimalayar Rubbers which was Rs 27.04 lakhs more than that of M/s Vallathol Rubbers (P) Ltd.

The factors which attributed to the better performance of M/s Manimalayar Rubbers (P) Ltd. are (i) Kottayam district is a traditional belt for the cultivation of rubber with a total area of 1,08,433 ha of rubber and a production of 1,13,225 t, (ii) the growers of Kottayam district have more rubber culture than the people of Thrissur district, (iii) there is no other parallel organisation in Kottayam district, (iv) proximity to the Head Office of Rubber Board, (v) support from staff of Rubber Board. Technical officers are more in the operational area of M/s Manimalayar Rubbers than in Thrissur district. There are three regional offices and twenty field offices under the service area of M/s Manimalayar Rubbers whereas only one regional office and six field offices are under the service area of M/s Vallathol Rubbers and (vi) more number of service staff at Manimalayar Rubbers (P) Ltd. (nine staff at M/s Manimalayar Rubbers whereas there are only four staff at M/s Vallathol Rubbers including MD.).

4.1.11. Future Plans

M/s Manimalayar Rubbers (P) Ltd. has prepared a detailed short term and long term action plans and are furnished below:

Figure 7. Profit of some input items in the two trading companies



Short term action plan

Latex trading:- Now collected through 41 centres under 39 RPSs using the barrels and gas supplied by purchasers. Proposes to purchase own barrels and gas and make spot sale to processors. They expect higher returns by getting a higher premium. Also proposes to get their latex processed through the centrifuging unit of the Rubber Board at Chethakkal where capacity utilisation is presently very low. Preliminary discussions already held with the Jt. Director.

Sheet collection:- Presently collected through own depot at Puthuppally. Proposes to enhance collection considerably through collection centres to be operated through RPSs. Marketing to be done through a consortium of their trading companies with the major involvement of M/s. Bharathapuzha Rubbers (P) Ltd. Palakkad. Opening sales point at Coimbatore.

Scrap collection:- Now collected along with sheet at Puthuppally only. To be collected along with sheet and latex from all centres. Can utilise local marketing outlets effectively.

Polybag rubber nursery:- Proposes to raise a polybag nursery of 50,000 plants in their plot purchased recently at Kanam, utilising advance amount to be collected from prospective growers. Acute shortage of polybagged plants expected next year.

Formic acid repacking unit:- Now acid purchased in 35 Kg packing and sold through RPSs. Proposes to start own repacking unit at Kanam. Small packing of 2.5 Kg

and 6 Kg can very well be marketed utilising the network of their companies through out Kerala. Investment expected is Rs.8.0 lakhs.

Bio-fertilizer unit:- Proposes to start a bio-fertilizer unit at Kanam to capitalise on the recent awareness on use of bio-fertilizers like Rhizobium, Acetobactor, Azospirillum and Mycorrhiza. Investment expected Rs. 3.0 lakhs only.

Sales of inputs and products:- The company is presently trading in 42 types of estate inputs and products and proposes to diversify and enhance sales through sale outlets to be opened at all RPSs as far as possible. If utilised properly, the potential is enormous since over 200 RPSs exist under their area of operation

Long term action plan

Latex processing unit at Kanam:- The company's main business activity now is trading in latex, daily collection reaching upto 120 barrels during peak season. Sale of latex to processors fetches very small profits compared to the huge returns the processors have. This threatens the very existence of their latex business. Justice cannot be done also to their growers supplying latex by mere sale of field latex. Hence, own processing unit is the only alternative. It is proposed to start a centrifuging unit at Kanam.

Manufacturing of rubber based goods:- With abundant raw material at their command, they have to seriously think in terms of starting some manufacturing units in consultation with the experts in the Rubber Board.

Own godown:- It is proposed to construct a godown in Kanam for sheet rubber mainly,

and also for estate inputs etc. sold by the company.

Distributorship/Dealership of estate inputs:- The Board's companies joined together commands a decisive position in the distribution of various estate inputs and products. Distributorship/Dealership of maximum proprietary products for Kerala is to be tried.

Scrap processing:- Scrap collected is proposed to be processed into crepe rubber through private crepe mills on job work basis. This being a sphere of high returns without any capital investment, is being done by many private individuals very profitably.

Shifting of office:- Due to the recent revolution in communication systems, the company's office need not be retained at Kottayam town when the plot at Kanam is developed. Hence it is proposed to shift the office of the company to Kanam as and when warranted.

Export of natural rubber and products:- The Company has already acquired export licence from the Jt. Director General of Foreign Trade, Cochin. The Company proposes to take up export when feasible.

M/s Vallothol Rubbers (P) Ltd. has not yet prepared the future plans.

4.2. Benefits/losses to the grower

4.2.1. Procurement of estate inputs

4.2.1.1. Quality and correct quantity of input

Both companies are very much particular about the quality and correct quantity of the estate input items. During the study none of the respondents criticised the quantity and quality of estate inputs supplied by the companies.

4.2.1.2. Economic aspects :

Economic aspects of the respondents on all estate inputs were analysed. The results on important 15 input items are furnished in table 17(Fig.8).

The price difference of 1 Kg of formic acid varied from 50 paise to Rs. 13.00 in the case of M/s. Manimalayar Rubbers while it varied from Rs. 2.00 to Rs. 8.00 in case of M/s. Vallathol Rubbers when compared to outside market. The mean price difference was Rs. 5.35 and Rs. 3.56 at M/s. Manimalayar Rubbers and M/s. Vallathol Rubbers respectively.

In respect of tapping knives, the mean price difference of Rs. 41.60 and Rs. 17.50 was noticed at M/s. Manimalayar Rubbers (P) Ltd. and M/s. Vallathol Rubbers (P) Ltd., respectively. The sale of jebong and gouge knives was undertaken by only M/s. Manimalayar Rubbers. The mean price difference noticed was Rs. 35.00 for one jebong knife and Rs. 20.00 for one gouge knife.

In the case of plastic cup, a mean price difference of paise twenty six and paise eighteen were noticed at Manimalayar and Vallathol Rubbers (P) Ltd., respectively.

Table 17. Mean price difference in procurement of some estate inputs when compared to the open market

	Item	Mean price difference	
		Manimalayar Rubbers (Rs.)	Vallathol Rubbers (Rs.)
1.	Formic Acid/Kg	5.35	3.56
2.	Tapping Knife / one	41.63	17.50
3.	Plastic Cup / one	0.26	0.18
4.	Cup hanger / Kg	3.05	2.46
5.	Spout / bundle	1.65	1.19
6.	Al. Bucket / Kg.	9.5	10.83
7.	Al. Dish / one	7.35	6.55
8.	Al. Mug / one	3.17	2.50
9.	Door mat / one	12.75	5.00
10.	Al. Sieve / one	11.75	4.00
11.	Felling knife / one	34.93	19.17
12.	Chappal / one	7.46	..
13.	Tapping light / one	36.43	42.00
14.	Gouge knife / one	20.00	..
15.	Jebong knife / one	35.00	..

Figure 8. Mean price difference in procurement of some estate inputs when compared to the open market

A mean Price difference of Rs. 3.05 and Rs. 2.46 was noticed at Manimalayar Rubbers and Vallathol Rubbers, respectively for one kg cup hanger when compared to outside market. The growers of Mythri RPS has got one Kg of cuphanger at a rate which was two rupees less than that of M/s. Manimalayar Rubbers (P) Ltd.

In the case of spout also, a mean price difference of Rs. 1.42 *was noticed per bundle.*

4.2.1.3. Timely distribution

Both companies had some problems in the timely distribution of estate inputs. The main input items in which there was difficulty in timely distribution were formic acid, plastic cup and rainguard plastic and rainguarding compound. This was mainly because of the short supply of these items from the manufacturing/distributing companies due to the problems of labourers, short supply of the raw materials, greater demand or some machinery problems. However, the trading companies had solved the problems within a reasonable period or distributed some alternate materials to the growers.

4.2.1.4. Door delivery

Both the companies had made arrangements to the supply of estate inputs at the door steps of the RPS without additional charge. The success of the door delivery of estate inputs depends on the number of RPSs involved in the distribution of estate inputs. This activity was more at M/s. Manimalayar Rubbers (P) Ltd. as the number of RPSs involved were more.

4.2.2. Purchase of estate inputs by growers before establishing the trading companies.

The details of the quality and correct quantity and availability of estate inputs before establishing the company are furnished in table 18. Thirty six per cent of the growers had got good quality estate inputs before establishing the company in Kottayam district, while only twenty three per cent of growers got good quality inputs in Thrissur district. As far as the correct quantity is concerned, sixty one per cent and ninety one per cent of the growers of Kottayam and Thrissur, respectively had got the correct quantity of inputs. The estate inputs were locally available to eighty two per cent and sixteen per cent of the growers, respectively in Kottayam and Thrissur districts(Fig.9). In the case of quality and availability, Kottayam district was better than Thrissur district. But in the availability of correct quantity, Thrissur was better than Kottayam.

4.2.3. Selling of sheet rubber/field latex.

4.2.3.1. Field Latex

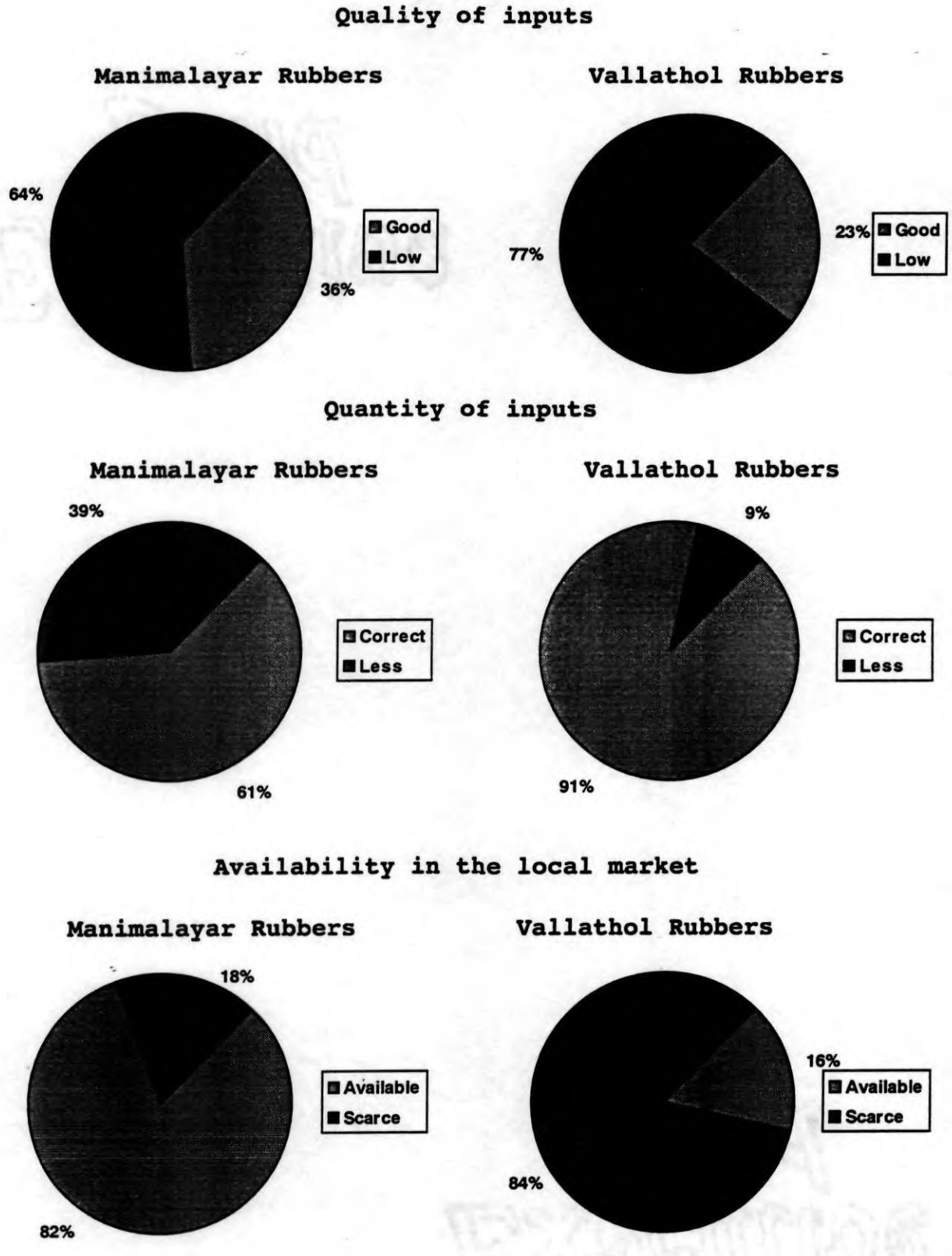
The major activities of trading companies include procurement and sale of field latex :

The average purchase rate of the field latex from growers of both the companies and average rate of ungraded rubber sheet and RSS-4 are furnished in table 19. The purchase rate of field latex of M/s. Vallathol Rubbers was low when compared to that of M/s. Manimalayar Rubbers and was also less when compared to the average market rate of ungraded sheets of Kottayam market(Fig.10). This might be due to the low premium rate received by M/s. Vallathol rubbers, lower percentage of participants and the less quantity of field latex procured from each RPS.

Table 18. Purchase of estate inputs by the growers before the establishment of the trading companies

	Percentage of growers getting inputs							
	Quality inputs		Quantity		Availability in the local market		Price in local market	
	good	low	correct	less	avai-lable	scarce	more	equal
Manimalayar Rubbers (Kottayam)	36	64	61	39	82	18	100	..
Vallathol Rubbers (Thrissur)	23	77	91	9	16	84	100	..

Figure 9. Purchase of estate inputs by the growers before the establishment of the trading companies



During 1990-'91 and 1994-'95 the purchase rate of field latex of M/s. Manimalayar Rubbers was less when compared to the ungraded sheet rate prevailing in Kottayam market. During all the other years, the company had paid a higher rate to its growers when compared to ungraded market rate. During 1995-'96 the company had paid Rs. 1.67 more than the ungraded sheet price of Kottayam market.

By giving field latex to the RPSs, the rubber growers could save the initial expenses for establishing the rubber sheeting rollers and smoke house, cost of formic acid which is used to coagulate the field latex, the labour charges, the cost of fire wood and cost of the chemicals like Paranitrophenol (to prevent the mold growth in sheet rubber), Sodium bisuphite (to prevent the surface darkening.) More over, before establishing the companies sponsored by Rubber Board, they got only lower rate than the ungraded sheet market eventhough they made good quality sheets.

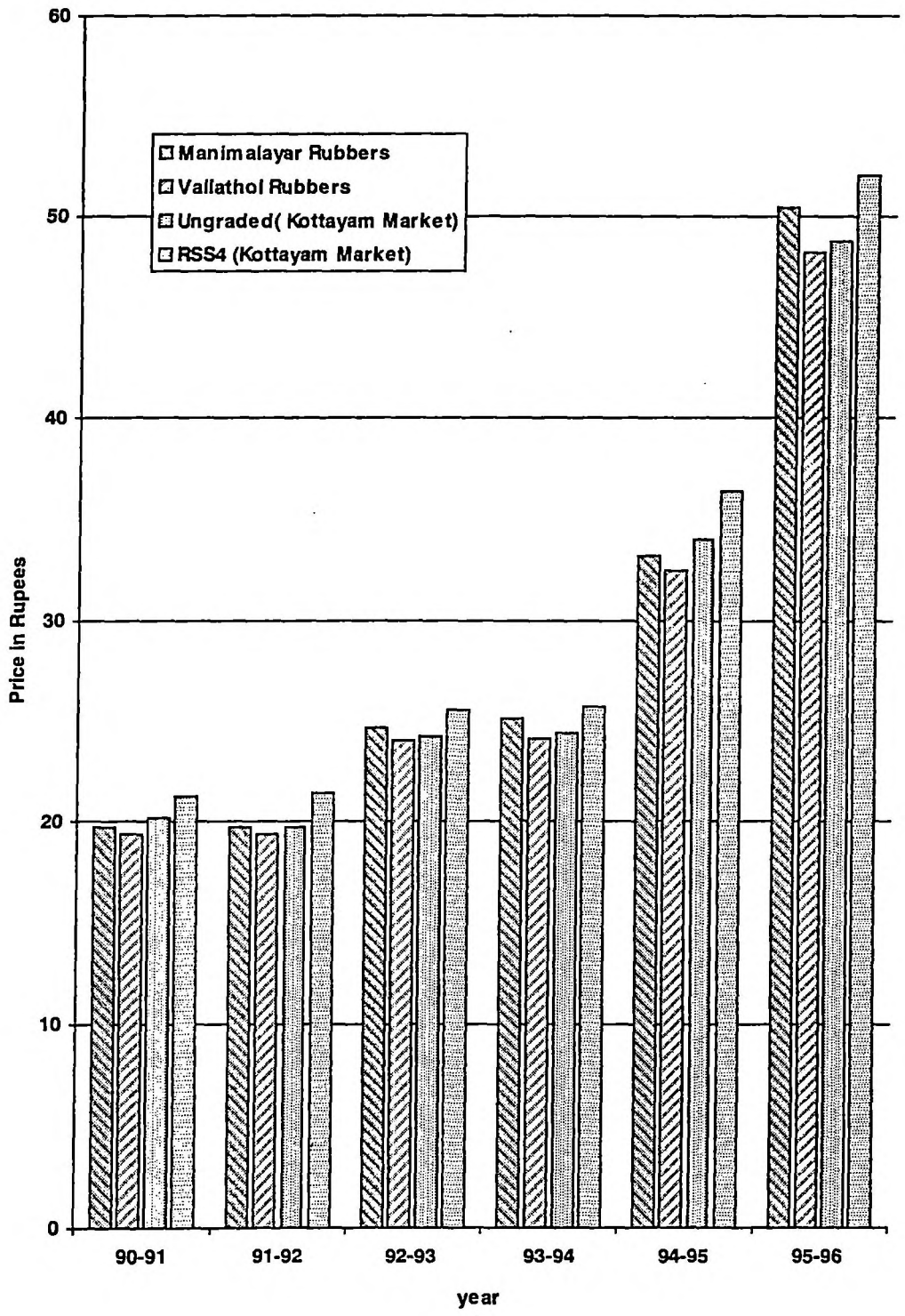
After the establishment of the trading companies and after the starting of field latex trading, the local rubber sheet dealers began to give much better price for the rubber sheet to the growers in order to spoil the organised trading of the companies. However, the trading companies sponsored by the Rubber Board should diversify its activities by starting sheet trading, making good quality graded sheets, processing units or rubber based industries to make value added products in order to give better price to the growers for their produce.

Table 19.Price of field latex given to RPSs by the companies and average lot price and RSS-4 price at Kottayam market

Year	Average price (Rs.) given to growers by		*Kottayam Market	
	Manimalayar Rubbers	Vallathol Rubbers	ungraded	RSS4
90-91	19.76	19.43	20.23	21.29
91-92	19.75	19.40	19.75	21.41
92-93	24.61	24.05	24.20	25.50
93-94	25.06	24.09	24.37	25.69
94-95	33.12	32.48	33.96	36.38
95-96	50.41	48.17	48.74	52.04

*Source - Indian Rubber Statistics - volume 21 (1996)

Figure 10. Price of field latex given to RPSs by the companies and average lot price and RSS-4 price at Kottayam market



4.2.4. Method of processing

Methods of processing include making of ribbed smoked sheets and giving field latex (by adding ammonia and chemical). The percentage of growers involved in making of sheets and giving field latex as such is furnished in table 20.

Out of 55.68 per cent growers who were involved in making of sheets, 6.82 per cent of growers sold sheet rubber to M/s. Manimalayar Rubbers (P) Ltd. Out of 44.32 per cent of growers who sold the field latex as such, 42.05 per cent of growers gave field latex to M/s. Manimalayar Rubbers.

In the case of M/s. Vallathol Rubbers (P) Ltd., 78.4 per cent of growers were involved in making ribbed smoked sheets and none of them sold the sheets to the company as the company did not enter in the trading of sheets. Out of 21.6 per cent of growers, 19.3 per cent of growers sold their field latex to the company.

4.2.5. Sheet trading in open market

The table 20 indicates the percentage of growers who got grade wise price in the open market.

Only 20.83 per cent and 14.29 per cent of growers had received RSS-4 price in the open market in case of M/s. Manimalayar Rubbers and M/s. Vallathol Rubbers, respectively.

8.33 per cent growers of Manimalayar Rubbers and 8.57 per cent of growers of Vallathol Rubbers had got only lot price eventhough they had made grade sheets. 12.50 per cent of

Table 20. Trading of rubber products in the service area of the two trading companies.

Observations	Manimalayar Rubbers	Vallathol Rubbers
1. Sheet Rubber		
a. Growers selling to trading company (%)	6.82	..
b. Growers selling to open market (%)	48.86	78.4
2. Field latex		
a. Growers selling to company (%)	42.05	19.3
b. Growers selling to GAICO (%)	2.27	..
c. Growers selling to open market(%)	..	2.3
3. Percentage of growers who got grade wise rate		
RSS4	20.83	14.29
RSS4 minus Ps. 25	12.50	22.86
RSS4 minus Ps. 25 to Ps. 50	25.00	22.86
RSS4 minus Ps. 50 to Rs.1.00	16.67	14.29
RSS4 minus Rs.1.00 to Rs.2.00	4.17	11.43
Lot rate	8.33	8.57
Lot rate minus Rs.1.00	4.17	..
Lot rate plus Ps. 50 to Rs.2.00	8.33	5.71

growers of Manimalayar Rubbers and 5.71 per cent of growers of Vallathol Rubbers had got only less than the lot price (ranged from 50 Ps to Rs. 2 for their produce).

M/s. Manimalayar Rubbers gave price to the growers according to the grade of the sheets. Mean purchase rate of sheet rubber of Manimalayar Rubbers (P) Ltd. was Rs. 52.96 per kilogram.

In Vanchimala, sometimes growers had got even more price than RSS-4 rate, (upto 50 paise more), if the market had showed an upward trend. In that case, the growers had received the amount only after ten days after the purchase of the sheets.

In Elanad (in Trichur district.) Rubber Growers Marketing Society had purchased grade sheets even for one rupee more than the RSS-4 rate when the market showed upward trend.

4.3. Adoption of scientific methods of cultivation

The data on the extent of adoption of scientific methods of cultivation in the service area of the two trading companies are furnished in table 21.

The data indicated that the holding size varied from 0.14 to 1.6 ha in the service area of Manimalayar Rubbers, while the range in respect of Vallathol Rubbers was 0.2 to 8.7 ha. The mean holding size in the two areas was 0.65 and 1.30 ha respectively.

The results on the type of clone used in the selected holdings in Kottayam and Thrissur districts revealed that in Kottayam 67.86 per cent of the growers used RRII 105 for planting. The percentage of growers with RRIM 600 was 5.36. 19.64 per cent employed mixed clones

Table 21. Influence of trading companies on adoption of recommended practices in the respective service areas.

Observation	Manimalayar Kottayam	Vallathol Thrissur
Holding size (ha)		
Range	0.14 - 1.6	0.2 - 8.7
Mean	0.65	1.31
Clone (%)		
RRII 105	67.86	72.92
RRIM 600	5.36	..
Mixed	19.64	27.08
Others	7.14	
Population density (No./ha)		
Range	333-600	317-600
Mean	441	450
Cover cropping (%)	77.27	90.91
Intercropping (%)	63.64	70.45
Soil conservation work (%)	100.00	100.00
Incidence (%)		
Brown bast / TPD	06-28.00	0.5-17.00
Abnormal leaf fall	2.4-3.0	10.0-22.0
Pink disease	1.0 - 6.00	0.5 - 8.33
Oidium	..	..
Plant Protection measures (%) against		
Panel diseases	93.18	61.36
Leaf diseases	81.82	75.00
Stem diseases	93.18	63.64
Tapping intensity (%)		
S/2 d/2	72.73	85.56
S/2 d/3	22.73	14.44
S/2 d/4	..	..
S/2 d/1	4.54	..
Rain guarding (%)	72.73	76.74
Fertilizer application (%)		
General recommendation	40.91	61.36
Discriminatory	56.82	38.64
No application	2.27	..
Yield (Kg/ha)		
Range	857-2880	1250-2704
Mean	1871	1955

and 7.14 per cent of the growers used other clones. The data in respect of Thrissur showed that 72.92 per cent used RRII 105 and 27.08 per cent used mixed clones for planting(Fig.11). The mean population density was 441 in Kottayam and 450 in Thrissur.

Cover cropping was adopted by 77.27 per cent of the growers of Kottayam, while in Thrissur, 90.91 per cent adopted cover cropping.

The percentage of growers who adopted intercropping was more in Thrissur (70.45%) when compared to Kottayam (63.64%). In both the districts, banana was the popular intercrop.

The data indicated that irrespective of the region, all the respodents adopted soil conservation work.

The results of the incidence of brown bast and pink disease showed higher values in Kottayam district when compared to Thrissur district. However, in respect of abnormal leaf fall the incidence was high in Thrissur (10.0 - 22.0%) as against 2.4 per cent to 3.0 per cent recorded in Kottayam.

The data on adoption of plant protection measures indicated that the growers of Kottayam were more aware of the practices and as such the percentage of growers adopting control measures againt panel, leaf and stem diseases were more in Kottayam district.

In respect of tapping intensity, the results showed the growers of Kottayam generally followed low intensity tapping system when compared to the growers of Thrissur.

The percentage of adoption of S/2 d/2 system of tapping was 72.73 in Kottayam district, while that in Thrissur district was 85.56. In Kottayam, 22.73 per cent of the growers followed S/2 d/3 while the figure for Thrissur was 14.44. It was also observed that 4.54 per cent of the growers in Kottayam district adopted daily tapping(Fig.12).

The data on adoption of rainguarding showed that 72.73 per cent of the growers of Kottayam used rainguards, while the value for Thrissur was 76.74 per cent.

The results on fertilizer application in the selected holdings showed that general recommendation was adopted by 40.91 per cent and 61.36 per cent of the growers, respectively. Discriminatory fertilizer application based on soil and leaf analysis was adopted by 56.82 per cent of the growers of Kottayam and the value recorded by Thrissur was only 38.64. In Kottayam, 2.27 per cent of the growers did not apply fertilizers.

In respect of yield, the data showed that the mean yield was higher (1955 kg/ha) in Thrissur district, when compared to Kottayam (1871 kg/ha).

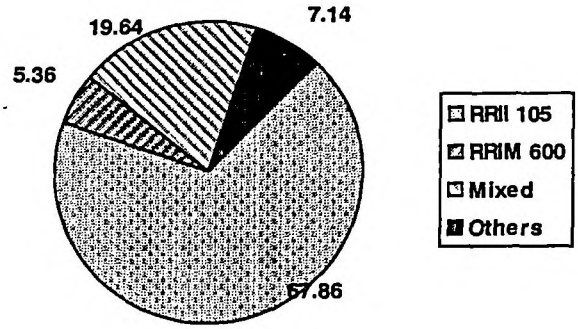
Though the extent of adoption of scientific practices was more in Kottayam, the influence of such improved practices was not reflected on yield. This might be due to the use of low yielding clones by the growers of Kottayam as it is evidenced from table 21.

4.4. Participation of growers in group meetings.

The data on the extent of participation of growers in the group meetings in selected area are presented in table 22. The results revealed that the growers of Kottayam attended five

Figure 11. Planting material used (Clone wise)

Manimalayar Rubbers



Vallathol Rubbers

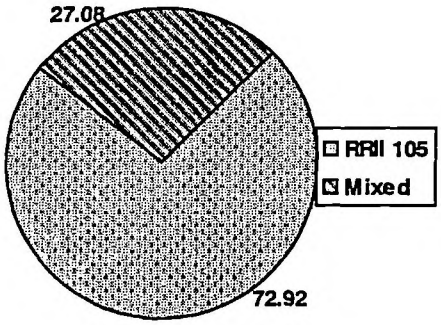
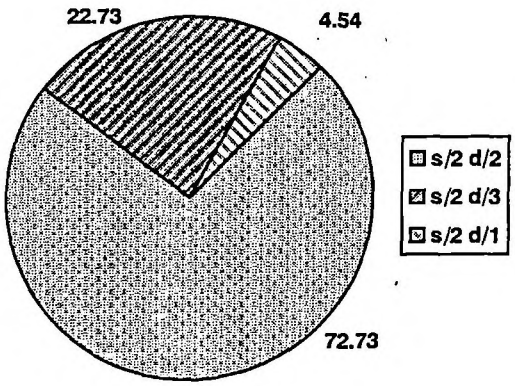
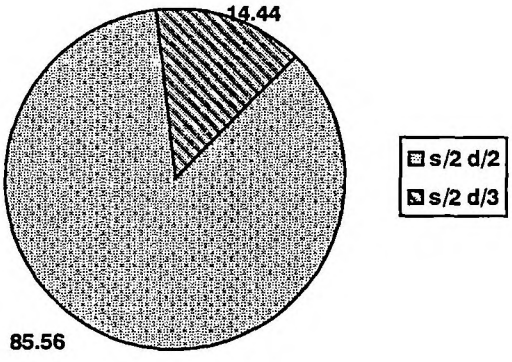


Figure 12. Tapping intensity

Manimalayar Rubbers



Vallathol Rubbers



group meetings arranged by the Rubber Board, RPS or trading companies. The number of group meetings attended by the growers in Thrissur were four. The data also showed that the highest percentage (45.45) of the growers attended four to six meetings, in Malamalayar Rubbers service area. In respect of Vallathol Rubbers, more number of growers (43.18%) attended two to four meetings.

4.5. Limitations of the RPSs

Major limitations of the RPSs in Thrissur district were the following (Table 23)

i) 84.09 per cent of the RPSs did not have own holding which affected the functioning of the RPS.

ii) Non-co-operation of members of RPSs among themselves was the other major problem. This category includes 81.82 per cent.

Other limitations noted were - plots are scattered (6.82%) lack of adequate leadership (4.5%), economic backwardness of the area (2.27%) lack of fund for sheet collection and others.

The major limitations of the RPSs in Kottayam district were (table 23) the following:

i) RPS did not own building - 63.67 per cent

ii) non co-operation of growers - 15.91 per cent

iii) no fund to build godown

iv) RPSs did not own smoke house or sprayer.

Table 22. Participation of growers in group meetings.

Observation	Number of meetings attended	
	Manimalayar Rubbers	Vallothol Rubbers
Range	1-11	1-8
Mean	5	4
Percentage of growers who attended		
1 to 2 meetings	2.27	22.73
2 to 4 meetings	34.04	43.18
4 to 6 meetings	45.45	25.60
6 to 8 meetings	15.91	9.09
Above 8 meetings	2.27	..

Table 23. Limitations of the RPSs

	Item	Manimalayar Rubbers (Per cent)	Vallathol Rubbers (Per cent)
1.	Non co-operation of members	15.91	81.82
2.	No own building	63.67	84.09
3.	Scattered plots	2.27	6.82
4.	Lack of leadership	2.27	4.55
5.	Low income area		2.27
6.	Lack of staff for maintanence of accounts		2.27
7.	Lack of funds to build godown	6.82	
8.	No sprayer	13.67	
9.	Near by service co-operative Bank 2 months credit to inputs	2.27	
10.	President had own rubber trading shop	2.27	

4.6. Suggestions to improve the functioning of the trading companies.

Suggestions are furnished in table 24.

With respect of Manimalayar Rubbers (P) Ltd. the important suggestions are

i) to start rubber based industry or any processing unit inorder to get maximum price to growers for their produce (54.55%)

ii) to get maximum benefit for field latex producing growers, prompt payment of latex price is necessary - 45.45 per cent.

The other suggestions include

i) enhancement of the loading and unloading charges of barrels, collection agent charges in the case of latex collection centres

ii) start giving incentives to Presidents and committee memebrs of RPS

iii) give initial fund to RPS for starting sheet collection

iv) technology transfer to improve the production and productivity of rubber

v) give dividend to associate members

vi) give management training to RPS presidents and committee members

vii) give more incentives to latex collection RPSs

Table 24. Suggestions for improving the performance of the two trading companies

		Percentage of share holders suggested	
		Vallathol Rubbers	Manimalayar Rubbers
1.	Communication between the farmers and the company to be extended more	2.27	
2.	Growers to be encouraged to sell their goods through the company	2.27	
3.	Sheet trading	61.36	11.36
4.	Raising the share capital	13.67	
5.	Rubber based industry (mother unit concept) or Rubbers processing unit	56.81	56.82
6.	Latex price to be increased and timely disbursement of price	13.67	45.45
7.	Own plot and building	13.67	
8.	To open more branches	6.82	
9.	No suggestion	13.67	15.91
10.	More concentration on technology transfer	4.55	2.27
11.	Thought for proposal for decreasing the remittence of income tax	2.27	
12.	Wood processing unit	2.27	
13.	Factory for plastic cup and rainguard plastic	2.27	
14.	Common smoke house to make graded sheet	4.55	2.27
15.	Start spraying	2.27	2.27
16.	Credit of estate inputs (at least one month)	2.27	
17.	Collection agent welfare whether any assistance will be given by Rubber Board	2.27	
18.	Bio-fertilizer unit	2.27	
19.	Door delivery of estate inputs	2.27	2.27
20.	More insentives to latex collection RPS	2.27	
21.	To give more dividend	4.55	
22.	Loading and unloading charges to be enhanced		11.36
23.	Collection agent charge to be increased		13.67
24.	Incentives to committee members and President		2.27
25.	Availability of estate inputs to individual growers		2.27
26.	Seperate godown for each region		2.27
27.	Depot at Kanjirappilly - outlets for sheet collection		6.82
28.	To encourage mushroom culture and orchid culture to enhance the income of growers		2.27
29.	Formic acid repacking		2.27
30.	Dividend to associate members		2.27
31.	Management training to president / committee members		2.27

viii) give financial assistance to start making graded sheets (to build common smoke house).

The major suggestions for improvement of M/s. Vallothol Rubbers (P) Ltd. are,

i) to start sheet trading

ii) to start rubber based industry (Mother unit concept) or to start rubber processing unit

iii) to raise the share capital

iv) company possess own plot and building

v) importance to be given to technology transfer.

The studies indicated that the following suggestions are to be taken up to improve the functioning of the companies.

i. Necessary steps are to be taken to increase the paid up share capital of the companies. Undercapitalised company cannot withstand for long periods by diversifying its activities in order to get maximum benefit to growers.

This can be done by increasing the share contribution of each share holder RPSs.

a) For this, if necessary, a committee comprising of company personnel, directors of the company and innovative RPS presidents, to be formed.

b) The company should have a definite goal and a correct estimated project profile.

c) Company should give full assurance to growers about the benefits.

The company should take initiative to convene meeting of growers at regional level/ village level/RPS level

Then the committee with this local people should meet personally every innovative farmer for share collection.

ii. The company should take initiative to start either a rubber based industry based on mother unit concept or a processing unit for making good quality sheets or to start a bio-fertilizer unit or to start a estate input (plastic cup or polythene sheet) manufacturing unit with the active participation of RPS and the company should take the responsibility of marketing the items produced by the RPSs.

For this company should conduct market survey and formulate effecive marketing channels.

iii. Technology transfer

Company should take efforts to disseminate scientific knowledge among farmers.

a) Company should take initiative to conduct one day seminars (atleast 1 one day seminar in every month) with active participation of RPSs.

b) Conduct or convene group meetings of 2 hr. duration of growers at RPS level or area wise (atleast one meeting in every week)

c) Popularise the Board's journals or publications. Enrol growers as subscribers of rubber magazine.

iv. ~~d)~~ Above all, team spirit and co-operation among company personnel, Directors and Presidents of RPS are necessary for overall success of the company.

(v) ~~e)~~ Rubber Board/Company should give more emphasis on disseminating the advantage of starting small scale rubber based industries on RPS level or individually. Rubber Board should give financial assistance to individual or RPSs to start small scale rubber based industries (to start the production of value added products).

vi. ~~f)~~ Rubber Board/Company should give more financial assistance to community smoke house in order to make good quality sheets which in turn help the growers to get maximum price for their produce.

vii. ~~iv.~~ Two or more companies should take initiative jointly, to procure graded sheets and sell directly to tyre factories or to open outlets in other states for the selling of the graded sheet.

viii) Centralised / regional wise bulk purchase of all items of estate inputs for all companies should decrease the cost price. For this an apex body with all infra structure and expert personnel should be constituted.

SUMMARY

SUMMARY

The main objectives of the rubber trading companies are centrilized procurement and distribution of estate inputs and centrialized marketing of rubber sheet/latex in order to get maximum benefits to growers. A study was conducted to evaluate the impact of trading companies on growers in Kottayam and Thrissur districts. Fourty four Rubber Producers' Society members of both the districts (total 88 members) were contacted for this purpose, using a pre-tested interview schedule. The major findings of the study are summarised as follows.

General performance of both companies was good. Both the companies were actively involved in the procurement and trading of field latex / sheet rubber which in turn benefited to growers. Both companies were actively involved in the trading of estate input items to growers which helped the growers in getting good quality materials at reasonable rates.

The performance of M/s. Manimalayar Rubbers (P) Ltd. Kottayam, was better when compared to M/s. Vallathol Rubber (P) Ltd., Thrissur.

The growers of both the companies could procure all the estate input items at a reasonably low price when compared to the open market.

None of the respondents of both the companies criticised the quantity and quality of estate input items supplied by the companies.

Both the companies had made arrangements in supplying of estate inputs at the door steps of RPSs without additional charge.

In the case of field latex procurement, both the companies had given reasonable rates to growers. M/s. Manimalayar Rubbers (P) Ltd., Kottayam had given comparatively better price than the average ungraded sheet rubber price to its growers.

Both the companies participated along with Rubber Board officials in the dessimination of scientific knowledge of cultivation.

Major limitations of the RPSs were

(i) absence of own building for day to day activities

(ii) non co-operation among members

(iii) scattered plots within the RPS (in the case of Thrissur district)

(iv) lack of leadership.

Major suggestions to improve the activities of the company included (i) starting sheet rubber trading in bulk quatities (ii) starting rubber based industry (iii) starting rubber processing units (iv) increasing price of field latex and prompt payment to the growers.

The results of the studies suggest the following measures to improve the functioning of the companies.

(i) increase the paid up share capital of the companies for diversifying its activities.

(ii) take initiative to start either a rubber based industry based on mother unit concept or a processing unit for making good quality sheet or to start an estate input manufacturing unit with the active participation of RPSs. The company should take the responsibility of marketing the items produced by the RPSs.

(iii) intensify efforts to disseminate scientific knowledge of cultivation among farmers

(iv) give more emphasis on dissemination of the advantage of starting small scale rubber based industries on RPS level

(v) centralised / regional wise bulk purchase of all items of estate input for all the companies to decrease the cost price.

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IMPACT OF TRADING COMPANIES JOINTLY SPONSORED BY RUBBER BOARD AND RUBBER PRODUCERS' SOCIETIES ON GROWERS IN KOTTAYAM AND THRISSUR DISTRICTS.

By

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ABSTRACT OF THE DISSERTATION

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ABSTRACT

The impact of trading companies on growers in Kottayam and Thrissur districts was studied. The activities of both the companies include centralised marketing of rubber sheet/ latex and centralised purchase and distribution of estate inputs in order to get maximum benefits to growers.

The study revealed that the performance of M/s. Manimalayar Rubbers (P) Ltd. was comparatively better when compared to M/s. Vallathol Rubbers (P) Ltd. The growers of both companies got reasonable price for their produce (field latex or sheet). Both the companies had distributed estate inputs to growers at a reasonably lower price when compared to the open market. Both the companies could make arrangements to supply the estate inputs at the door steps of RPSs without additional charge. Both the companies participated along with Rubber Board officials in the dessemination of scientific knowledge of cultivation. The major limitations found in the functioning of the RPSs were (1) they do not own building and (2) non co-operation among members. Major suggestions to improve the activities of the company included (1) starting sheet trading and (2) starting rubber based industry or processing unit. The studies indicated that the following suggestions are to be taken to improve the functioning of the companies (1) increasing the paid up share capital (2) taking initative to start either rubber based industry based on mother unit concept or a processing unit or making good quality sheets (3) centralized / region wise bulk purchasing of all estate inputs.

ANNEXURE - I

IMPACT OF TRADING COMPANIES JOINTLY SPONSORED BY RUBBER BOARD AND RUBBER PRODUCERS SOCIETIES ON GROWERS IN KOTTAYAM AND THRISSUR DISTRICTS.

Interview schedule for evaluating the impact of trading companies on growers.

B. Details to be collected from the growers

1. General Information :

a) Name and address of grower :

b) Name and address of the RPS :

c) Name of the trading company under which you belong :

d) No. of equity shares taken (of Rs. 10 each) :

2. Particulars of area under rubber cultivation :

Plot No.	Year of planting	Area	Clone	Planting density	Whether mature / immature	Area under cropping	Year of opening

Total

Yield Obtained : Sheet (kg) Scrap (Kg) Latex (kg)

3. Details of inputs purchased from the company during 1994-95

Items	Quality	Whether quantity correct or not	Profit/ loss when compared to open market	Whether timely distributed	Direct purchase/ purchase from RPS
1	2	3	4	5	6
1. Formic acid					
2. Rainguard plastic					
3. Rainguard compound					
4. Tapping kit					
5. Tapping knives					
6. Jebong					
7. Plastic cup					
8. Cup hanger					
9. Spouts					
10. Al. Bucket					
11. Al. Dish					
12. Al. Mug					
13. Marker-cum-scrapper					
14. Template					
15. Froth remover					
16. Rhizobium					
17. Organic manure					
18. Al. sieves					

19. Felling knife
20. Garden shear
21. Kokra
22. Chappels
23. Door mat
24. Axe
25. Crow bar
26. Coconut scrapper
27. Sickle
28. Tapping light
29. Thumba
30. Funnel
31. Polybag
32. Multi tools
33. Sodium sulphite
34. Sodium bisulphite
35. PNP
36. Rubber kot
37. Metrolac
38. Budded stumps
39. Hand sprayer
40. Catalyst DC
41. Gouge knife

4. Have you purchased the estate inputs before establishing the company ? Yes/ No

   If yes, furnish the following :

   1. Quality
   2. Correct quality or not
   3. Availability

5. Benefits/losses of the growers in connection with selling of sheet rubber/ latex to the company :

   a) Method of processing :

   b) Whether the company purchase the sheet/latex or not

Latx	Sheet
Yes/No	Yes/No

   If yes, furnish the following :

Sheet/Scrap

1. Whether grading is done or not :
2. Grade/grades assigned to your product :
   a) Are you satisfied with the grade asigned :
   b) Price realised from RPS :
   c) Price that would have realised in open market :
   d) Time of disbursement of price from the company :
   e) Scrap rate :
   f) Interval of disposal :

Latex :

a) drc satisfied or not when compared to other agencies :

b) rate
Price realised from RPS :
Price that would have
realised in open market :
c) Disbursement time of
price realised :

6. Have you attended any group meeting organised by RPS to focus the attention of the following :
a) Scientific method of rubber
cultivation :
b) Rain guarding :
c) Improved tapping methods :
d) Soil and water
conservation work :
e) Any others (specify)

7. Adoption of scientific practices :
a) Planting material used
b) Whether cover cropping done :
c) Soil conservation work :
d) Intercropping if any :
e) Plant protection
measures adopted for :
1. Panel diseases
2. Leaf diseases
3. Stem diseases
f) Incidence of diseases/disorders No. of plants
1. Brown bast
2. Phytophthora
3. Pink
4. Oidium
g) Tapping intensity
1. S/2 d/2
2. S/2 d/3
3. S/3 d/4
4. S/2 d/1
h) Rainguarding
i) Fertilizer application according to
1. General recommendations
2. Based on leaf and soil analysis
3. None of above

8. Functioning of RPS
Excellent/good/Satisfactory/poor

9. Limitations if any

10. Suggestions/Remarks :

11. Aspirations of the grower about the Company.

Signature :
Name :

ANNEXURE - II

Name and address of RPSs and name of respondents of M/s. Vallathol Rubbers (P) Ltd., Thrissur.

Sl. No.	Name and address of RPSs	Name of respondents
1.	R.P.S. CHERUMKUZHY P.O. Asarikkad	Sri. Joseph K.V.
2.	R.P.S. CHETTIKKAD P.O. Kundukad	Sri. U.P. Yohannan
3.	R.P.S. CHUVANNAMANNU P.O. Chuvannamannu	Sri. Joseph Master
4.	R.P.S. ERUMAPETTY P.O. Erumapetty	Sri. Thankanchan Zacharias
5.	R.P.S. ELANAD P.O. Elanad	Sri. Devassy K.C.
6.	R.P.S. ELANAD P.O. Elanad	Sri. Gopinathan Nambiar
7.	R.P.S. INCHAKUNDU P.O. Inchakundu	Sri. T.J. Augustine
8.	R.P.S. KADAMGODE P.O. Kadamgode	Sri. Jose Meenattoor
9.	R.P.S. KALLAMPARA P.O. Panangattukkara	Sri. Markose
10.	R.P.S. KALLOR P.O. Muttithadi	Sri. P.C. Jacob
11.	R.P.S. KONDAZHY P.O. South Kondazhy	Sri. P.T. John
12.	R.P.S. KONDAZHY p.O. South Kondazhy	Sri. E.P. Mathew
13.	R.P.S. KUTTICHIRA VILLAGE P.O. Chaipankuzhy	Sri. Devarajan T.B.
14.	R.P.S. KORMALA P.O. Kuttichira	Sri. K.S. Joseph
15.	R.P.S. KURUMALA P.O. Kurumala	Sri. C.I. Kuriakose
16.	R.P.S. KURUMALA P.O. Kurumala	Sri. Narayanankutty
17.	R.P.S. MANALADY P.O. Attoor	Sri. N.J. Kurian
18.	R.P.S. MANALADY P.O. Attoor	Sri. Rajesh
19.	R.P.S. MANALITHARA P.O. Manalithara	Sri. Thomas
20.	R.P.S. MANAMMANGALAM P.O. Manammangalam	Sri. A.U. EliyaS
21.	R.P.S. MANNUTHY P.O. Mannuthy	Sri. K.J. Thomas
22.	R.P.S. MARAKKAL P.O. Kannara	Sri. Yohannan
23.	R.P.S. MAROTTICHAL P.O. Marottichal	Sri. K.A. Jocob

24.	R.P.S. PANGARAPPILLY P.O. Pangarappilly	Sri. P.M. Philip
25.	R.P.S. PARIYARAM P.O. Mothirakanny	Sri. V.P. Jose
26.	R.P.S. PAZHAYANNOOR P.O. Kumbalakode	Sri. K.G. George
27.	R.P.S. POOLACKAL P.O. Kurichikkara	Sri. K. Sankarankutty Menon
28.	R.P.S. PONNOOKARA P.O. Ponnookara	Sri. P.C. Thomas
29.	R.P.S. THICHOOR P.O. Thichoor	Sri. N.K.K. Menon
30.	R.P.S. THONNOORKARA P.O. Thonnoorkara	Sri. E.S.K. Menon
31.	R.P.S. VADAKKETHARA P.O. Pazhayannoor	Sri. John Varghese
32.	R.P.S. VADAKKETHARA P.O. Pazhayannoor	Sri. Abraham Varghese
33.	R.P.S. VALUNGAMURI P.O. Nalukettu	Sri. C.A. Devassy
34.	R.P.S. VANIYAMPARA P.O. Vaniyampara	Sr. Subash Chandran P.K.
35.	R.P.S. VARAKKARA P.O. Varakkara	Sri. M.A. Johnson
36.	R.P.S. VARATHARAPPILLY P.O. Veloopadam	Sri. P.D. Chacko
37.	R.P.S. VARIKULAM P.O. Kattilappovam	Sri. P.D. Mathew
38.	R.P.S. VAZHANI P.O. Vazhani	Sri. Thomas
39.	R.P.S. VENGANELLUR P.O. Venganellour	Sri. Cyriac George
40.	R.P.S. VENNOOR P.O. Vennoor	Sri. Kunchu
41.	R.P.S. VILANGANNOOR P.O. Peechi	Sri. K.K. Mohanan
42.	R.P.S. VELLIKULANGARA P.O. Murikkingal	Sri. E.M. Mathew
43.	R.P.S. VETTILAPPARA P.O. Vettilappara	Sri. A.V. Abraham
44.	R.P.S. WADAKKANCHERY P.O. Wadakkancherry R.S.	Sri. P.A. Thomas

ANNEXURE - III

Name and address of RPSs and name of respondents of M/s. Manimalayar Rubbers (P) Ltd., Kottayam.

Sl. No.	Name and address of RPSs	Name of respondents
1.	RPS THANNIKUZHY Alapra P.O.	Sri. M.V. Joseph
2.	RPS CHIRAKADAVU VIJAYA P.O. Ponkunnam	Sri. Das P.G.
3.	RPS KURUMKANNI P.O. Panachiyapally	Sri. V.N. Krisha Pillai
4.	RPS CHIRAKADAVU P.O. Ponkunnum	Sri. K.E. Chacko
5.	RPS PARATHODU P.O. Parathodu	Sri. A.J. Scaria
6.	RPS VIZHIKKITHODU P.O. Vizhikkithodu	Sri. Chandra Sekharan Nair
7.	RPS KOOVAPPALLY P.O. Koovappally	Sri. K.O. Varkey
8.	RPS VANCHIMALA P.O. Vanchimala	Sri. Mathew John
9.	RPS ELIKULAM P.O. Elikulam	Sri. M.M. Mathew
10.	RPS MYTHRI Cheruvally P.O.	Sri. M.V. Chackochan
11.	RPS EDAKUNNAM P.O. Edakunnam	Sri. P.K. Janardhanan Nair
12.	RPS YANDYAR P.O. Yandyar	Sri. C.J. Joseph
13.	RPS ELAMGULAM NORTH P.O. Koorali	Sri. P.T. Avirha
14.	RPS KOOTTICHAL P.O. Thalunkal	Sri. P.T. Thomas
15.	RPS INCHIYANI Inchiyani P.O.	Sri. George Thomas
16.	RPS MOOLEPLAVU P.O. Cheruvally	Sri. V.N. Sreedharan Nair
17.	RPS. SASTHAMKAVU P.O. T.P. Puram	Sri. K.A.N. Ramakrishnan Nair
18.	RPS KOTTOOR P.O. Kottoor	Sri. Thomas Varghese
19.	RPS CHELAKOMBU P.O. Chelakombu	Sri. M.J. George
20.	RPS KANGAZHA P.O. Kanjazha	Sri. Harsan Ravuthar
21.	RPS THAZHATHUVADAKARA P.O. Thazhathuvadakara	Sri. A.C. Joseph
22.	RPS KADAYANIKADU P.O. Edayirakkapuzha	Sri. T.T. Joseph
23.	RPS SANTHIPURAM P.O. Santhipuram	Sri. George John
24.	RPS KANAM P.O. Kanam	Sri. Kesavan Nair

25.	RPS ELAMKUNNU Madappally P.O.	Sri. P.J. Philip
26.	RPS KOTTANAD P.O. Kottanad	Sri. P.S. Rajappan
27.	RPS THELLIYUR Thelliyur P.O.	Sri. P.V. Thomas
28.	R.P.S. VAZHOOR EAST Vazhoor East P.O.	Sri. K.J. Thomas
29.	RPS. KUMBANAD P.O. Kadapra	Sri. M.L. George
30.	RPS PADINJATTUSSERY P.O. Anjilithanam	Sri. N.P. Vasudevan Potti
31.	RPS PANGADA P.O. Panjada	Sri. Cheriyan
32.	RPS VELLOOR WEST P.O. Velloor	Sri. M.K. Ninan
33.	RPS MOOZHOOR P.O. Moozhoor	Sri. Josekutty Antony
34.	RPS NELLIKUNNU P.O. Paduva	Sri. P.P. Gopalakrishnan Nair
35.	RPS CHANNANIKAD Kuzhimattam P.O.	Sri. K.K. Ramakrishnan
36.	RPS AMAYANNNOR P.O. Amayannoor	Sri. K.Mani
37.	RPS AYARKUNNAM P.O. Ayarkunnam	Sri. K.J. Mathew
38.	RPS AKALAKUNNAM P.O. Karimbani	Sri. A.M. Simon
39.	RPS KOLLAD P.O. Kollad	Sri. C.T. Eliyus
40.	RPS K.S.S.S. KONGANDOOR P.O. Kongandoor	Sri. P.T. Thomas
41.	RPS KEEZHOOR P.O. Keezhoor	Sri. K.P. Paul
42.	RPS MEENADOM P.O. Payyappadi	Sri. C.K. Raju
43.	RPS MADATHIPARAMBU P.O. Thurubampadi	Sri. P.O. Neelakandan
44.	RPS SOUTH PAMPADY P.O. Poothakuzhy	Smt. Sudha Tagore