FOURTEENTH KERALA LEGISLATIVE ASSEMBLY

COMMITTEE ON PUBLIC UNDERTAKINGS (2016-2019)

SIXTY FOURTH REPORT

(Presented on 22nd March, 2018)

SECRETARIAT OF THE KERALA LEGISLATURE
THIRUVANANTHAPURAM
2018

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COMMITTEE
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On

The Plantation Corporation of Kerala Limited, The State Farming Corporation of Kerala Limited and The Rehabilitation Plantations Limited

(Based on the Report of the Comptroller and Auditor General of India for the year ended 31 March, 2009)

760/2018.

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INTRODUCTION

I, the Chairman, Committee on Public Undertakings (2016-2019) having been authorised by the Committee to present the Report on its behalf, present this Sixty Fourth Report on The Plantation Corporation of Kerala Limited, The State Farming Corporation of Kerala Limited and the Rehabilitation Plantations Limited, based on the Report of the Comptroller and Auditor General of India for the year ended 31 March, 2009 relating to the Public Sector Undertakings of the State of Kerala.

The Report of the Comptroller and Auditor General of India for the year ended 31st March, 2009 was laid on the Table of the House on 25-3-2010. The consideration of the audit paragraphs included in this report and the examination of the departmental witness in connection thereto was made by the Committee on Public Undertakings constituted for the years 2016-2019 and its meeting held on 4-1-2017.

This Report was considered and approved by the Committee (2016-2019) at its meeting held on 12-3-2018.

The Committee place on record their appreciation for the assistance rendered to them by the Accountant General (Audit), Kerala in the examination of the Audit Paragraphs included in this Report.

The Committee wishes to thank the officials of the Agriculture, Labour and Skills Department of the Government Secretariat and The Plantation Corporation of Kerala Limited, The State Farming Corporation of Kerala Limited and the Rehabilitation Plantations Limited for placing the materials and information solicited in connection with the examination of the subject. The Committee also wishes to thank in particular the Secretaries to Government-Agriculture, Labour & Skills and Finance Departments and the Officials of The Plantation Corporation of Kerala Limited, The State Farming Corporation of Kerala Limited and the Rehabilitation Plantation Limited who appeared for evidence and assisted the Committee by placing their views before it.

C. DIVAKARAN,
Chairman,
Committee on Public Undertakings.

Thiruvananthapuram,
12th March, 2018.

REPORT ON

THE PLANTATION CORPORATION OF KERALA LIMITED, THE STATE FARMING CORPORATION OF KERALA LIMITED AND THE REHABILITATION PLANTATIONS LIMITED

AUDIT PARAGRAPH

Performance Reviews relating to Government Companies

2.1-Resources Management by Three Plantation Sector Companies

Introduction

2.1.1 Three Government Companies in the State viz, The Plantation Corporation of Kerala Limited (PCK), Kottayam, The Rehabilitation Plantations Limited (RPL), Punalur and The State Farming Corporation of Kerala Limited (SFCK), Punalur, were commonly and independently engaged in raising and development of rubber plantations and production and sale of processed natural rubber. PCK was incorporated (November 1962) in the State sector to take over the rubber plantations raised by Forest Department. RPL was formed (May 1976) in joint sector to implement a Government of India programme of rehabilitation of refugee plantation workers from Sri Lanka. SFCK, incorporated (April 1972) in State sector, was initially engaged in sugar cane cultivation in forest lands but switched over (1980) to rubber cultivation as the former activity was adjudged as unsustainable. PCK and SFCK had also raised/ taken over (1972 - 1983) cashew plantations, along with other alternate crops such as coconut, arecanut, vanilla, pepper etc. PCK had also attempted (September 2005) diversification by constructing a Tourist Resort at Adirappally and setting up (December 1989) a Rubber Wood Processing Unit at Kodumon. Both the projects did not fetch the expected returns on investment and were being operated at breakeven level without any significant growth potential. RPL, however, confined its activity to rubber cultivation. PCK and SFCK functioned under the administrative control of Agriculture Department and RPL under Labour and Rehabilitation Department of Government of Kerala. All the three Companies have ISO certification.

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Present Activities

2.1.2 The Companies raised rubber plantations in forest areas allotted by Government and used the yield of field latex[1] for production of centrifuged latex[2] and by- products such as skim crepe[3], estate brown crepe[4] etc. PCK and RPL also processed scrap rubber[5] to produce crumb rubber[6] whereas SFCK disposed of scrap in unprocessed condition. The right of collection of crop from cashew estates was usually sold out by PCK and SFCK on the basis of competitive bids (tenders and auctions).

Organisational set up

2.1.3 The Board of Directors of PCK and SFCK consisted of 11 Directors each while RPL had nine Directors. The Managing Directors of all the three Companies were appointed by the State Government who were assisted by managers /officers.

As on 31st March, 2009, PCK was having seven rubber estates and four cashew estates. SFCK and RPL were having only rubber estates numbering four and two respectively. Each of the estates was managed by managers/ assistant managers.

Scope of Audit

2.1.4 A horizontal review on the working of these Companies was last conducted in 1994 and findings included in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1994. The report was treated (September 2002) as discussed by the Committee on Public Undertakings.

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[1]White or slightly yellowish opaque liquid coming out on tapping rubber tree that contained 30-40 per cent rubber, 55-65 per cent water with low percentages of sugar, protein and ash

[2]Concentrated latex of more than 60 per cent dry rubber content separated from field latex using a centrifuging machine.

[3]Manufactured out of skim lump, residue of centrifuging process.

[4] Manufactured out of cup lump and other higher grades of coagulated latex.

[5] Left over quantities of field latex collected after the day of tapping in solid form

[6] Processed scrap rubber of 100% Dry Rubber Content (DRC).

The business and economic scenario underwent changes during subsequent years giving rise to scope for a fresh study in view of the high profit potential of rubber cultivation in the State. Greater significance is also being attached to land utilisation during recent years. The present performance review conducted between January 2009 and May 2009 covers issues of the resource management by the three Companies during the five year period 2004-2009.

Audit Objectives

2.1.5 The main objective of the performance review was to examine whether the resources viz., land and other infrastructure, manpower, finance etc., were utilised optimally by the three Companies. Audit was conducted to ascertain whether:

- Land and other infrastructure were utilised optimally with measurable targets;
- Processing capacities were utilised optimally;
- The performance parameters were comparable among the three Companies and with industry standards;
- The Companies exploited the profit potential in sale of natural rubber, rubber nursery plants, right of felling of rubber trees etc.;
- The Companies made use of the financial assistance and expert advice available from Rubber Board, Government of India and acted upon their recommendations;
- The financial resources were optimally made use of and surplus funds gainfully utilised;
- The replanting projects prepared were efficiently implemented by the three Companies; and
- The Companies had an effective internal control/ internal audit system.

Audit Criteria

2.1.6 Audit adopted the following criteria:

- Norms fixed by Rubber Board as well as other industry norms for evaluating performance standards;
- Targets fixed by the Companies in their annual budgets;
- Statutory regulations in matters pertaining to labour recruitment, provision of amenities to workers, wage fixation etc.;
- Plantation Labour Committee decisions in matters relating to fixation of wage rates;
- Daily market prices published in local newspapers for judging fairness of sales price realised;.and
- Recommendations of Rubber Board in matters like clone[a] selection, formulation of replanting schemes, tapping methods etc.

Audit Methodology

2.1.7 Audit adopted the following methodology:

- Compilation and analysis of performance data available with the Companies;
- Discussion with top management regarding key issues;
- Detailed system studies in Companies;
- Interviews with management to understand field conditions;
- Collection of necessary data from Rubber Board and inter company comparisons with reference to benchmarks; and
- Review of Project Reports and related documents in respect of specific projects.

Projects and Schemes implemented

2.1.8 RPL had been implementing replanting scheme since 2001 and completed replanting in an area of 1,095.45 hectares (ha) by the year 2008-09, incurring expenditure of Rs. 21.53 crore. No major replantation schemes were under implementation in other two Companies. PCK, however, outsourced

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a Rubber trees of same characteristics and same percentage.

slaughter tapping over an area of 852.30 ha out of total area of 5,984.69 ha of mature plantations to private parties, collecting revenue of Rs. 12.98 crore during 2007-2009.

Audit findings

Findings emerging from the performance audit review are discussed in the succeeding paragraphs:

Financial Position and Working Results

2.1.9 The financial position and working results of the three Companies for the five years up to 2008-09 are given below: (details in Annexures 7 and 8).

(Rs. in crore)

Year	Paid-up Capital			Turnover			Profit		
	PCK	SFCK	RPL	PCK	SFCK	RPL	PCK	SFCK	RPL
2004-05	5.57[a]	9.04[b]	3.39[c]	31.12	15.22	14.08	5.50	5.23	5.27
2005-06	5.57	9.04	3.39	44.71	21.06	17.95	2.24	8.84	6.02
2006-07	5.57	9.04	3.39	50.31	18.93	21.45	12.19	12.25	11.32
2007-08	5.57	9.04	3.39	52.58	25.10	19.08	13.87	12.77	8.73
2008-09	5.57	9.04	3.39	70.23	22.85	19.73	20.78	20.79	7.58

Audit observed that:

- The working results were not comparable amongst the three Companies since different accounting treatments were followed for high value transactions such as sale of rubber trees, stock valuation etc.

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a Fully subscribed by Government of Kerala.

b Rs. 8.43 crore held by State Government and Rs. 0.61 crore by others

c Rs. 2.06 crore held by State Government and Rs. 1.33 crore by Government of India.

- The growth in turnover was also not comparable as substantial part of the areas of RPL were under replanting from 2001 onwards, whereas the replanted areas of PCK were being progressively brought under tapping during these years. The plantations of SFCK were nearing the age of replantation, showing signs of declining productivity.
- The percentage of profitability to turnover was only 5.01 to 29.59 in PCK as against 12.19 to 64.75 in SFCK and 33.56 to 52.80 in RPL. The main reason for lower profit margin of PCK's operations was low productivity of its plantations.

Land Management

2.1.10 Particulars of land utilisation by the three Companies as of March 2009 are given below:

(Area in hectares)

Company	Gross area under lease/free hold	Land under possession as per land records of Company	Land utilised for plantations	Percentage of utilisation	Area utilised for infrastructure including vacant patches and rocky area	Area in use unidentified with the Company
PCK	15384.35	15176.64	13688.37	90.19	401.26	1087.01
SFCK	2360.78	2360.78	2110.77	89.41	250.01	-
RPL	2193.77	2193.77	2040.51	93.00	153.26	-
Total	19938.90	19731.19	17839.65	90.41	804.53	1087.01

RPL, PCK and SFCK utilised 93 per cent, 90.19 per cent and 89.41 per cent of area respectively under possession for raising plantations

It could be seen from the table that the extent of land utilised for raising/maintaining plantations was 93 per cent in RPL, 90.19 per cent in PCK and 89.41 per cent in SFCK. Purpose wise dettails of utilisation of the remaining areas were not available in all the three Companies. While PCK identified areas unsuitable for planting and that used for infrastructure creation as 2.64 per cent (401.26ha) of total holdings it did not have any details of utilisation of the left over area of 7.12 per cent (1087.01 ha).

Deficiencies noticed in land management are given below:

- The areas under plantation in the three Companies were not independently surveyed and demarcated either before or after takeover.
- No lease deeds were executed for the holdings of PCK at the estates of Thannithode (699.35 ha), Nilambur (582.58 ha), Mannarghat (545.85 ha) and Cheemeni (1378.35 ha) and part areas to the extent of 1333.08 ha in other estates. Payment of lease rent was also in arrears in PCK since 1999, following disputes over rates applicable. There were serious contradictions in the different orders issued by Government from time to time, fixing the rates of lease rent, which required to be removed, to enable final settlement of demands raised.
- Areas of Kasaragod estate of PCK and Chithelvetty estate of SFCK were subjected to encroachments by private parties. Companies could not undertake boundary protection measures due to the huge financial commitments involved.

Plantation Management

2.1.11 The three Companies had 17,839.65 ha of vested forest land under cultivation of rubber, cashew etc., as at the end of March 2009 as shown below:

Name of the Company	Name of Estate	Area under cultivation (Hectare) as on 31-3-2009						
		Rubber		Cashew		Oil palm	Other crops	Total
		Mature	Imma ture	Mature	Immature			
1	2	3	4	5	6	7	8	9
PCK	Kodumon	1189.23	4.00				4.75	1197.98
	Chandana ppally	1488.63	20.08	50.00				1558.71
	Thannithode	592.01		58.08			1.50	651.59
	Kallala	1115.49	51.67	277.97		142.09		1587.22
	Adirappally	1231.13	40.70	307.98	5.62	565.64		2151.07
	Nilambur	299.14		51.76	21.24		21.03	393.17
	Perambra	194.97	237.89	484.68	16.18		28.98	962.70
	Kasaragod		99.00	1248.90	842.10			2190.00
	Cheemeni			899.50	60.00			959.50
	Rajapuram			1419.43	103.00			1522.43
	Mannarghat			511.50			2.50	514.00
	Total	**6110.60**	**453.34**	**5309.80**	**1048.14**	**707.73**	**58.76**	**13688.37**
SFCK	Chithelvetty	605.95		105.35	15.00		15.00	741.30
	Kumaram kudy	397.01		20.00			20.00	437.01
	Mullumala	420.99		79.57			6.00	506.56
	Cherupitta kavu	406.98			9.92		9.00	425.90
	Total	**1830.93**		**204.92**	**24.92**		**50.00**	**2110.77**

1	2	3	4	5	6	7	8	9
RPL	Kulathupuzha	832.00	475.89					1307.98
	Ayiranallur	242.27	490.35					732.62
	Total	**1074.27**	**966.24**					**2040.51**
Grand Total		**9015.80**	**1419.58**	**5514.72**	**1073.06**	**707.73**	**108.76**	**17839.65**

The share of the three Companies put together was 27.00 per cent (10,435.38 ha) of the total land holdings (38,645 ha) in estate sector for rubber cultivation and 7.84 per cent (6,587.78 ha) of cashew cultivated areas (84,000 ha) in Kerala.

Target and Achievement in rubber production

2.1.12 Annual production targets and achievements there against for the three Companies for the period 2004-2009 were as shown below:

Estate	2004-05			2005-06			2006-07			2007-08			2008-09		
	T[b]	A[c]	P[d]	T	A	P	T	A	P	T	A	P	T	A	P
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PCK															
Kodumon	1450	1380	95.17	1569	1296	82.6	1620	1502	92.72	1568	1441	91.9	1725	1806	104.7
Chandanappally	985	956	97.06	1215	1040	85.6	1415	1267	89.54	1534	1280	83.44	1648	1592	96.6
Thannithode	511	410	80.23	507	326	64.3	504	276	54.76	266	184	69.17	209	217	103.83
Kallala	917	734	80.04	958	655	68.37	973	841	86.43	998	866	86.77	1061	1116	105.18
Adirappally	1089	871	79.98	1190	737	61.93	1196	846	70.74	1130	776	68.67	1121	1097	97.86
Perambra	57	48	84.21	76	60	78.95	109	84	77.06	167	103	61.68	170	155	91.18
Nilambur	207	208	100.48	246	233	94.72	293	260	88.74	252	217	86.11	258	252	97.67
Total	5216	4607	88.32	5761	4347	75.46	6110	5076	83.08	5915	4867	82.28	6192	6235	100.69

[b] Targeted quantity in MT.

[c] Achievement against target in MT.

[d] Percentage of achievement to targets.

SFCK															
Chithelvetty	759	660	87	784	651	83.01	916	638	69.76	724	621	85.71	805	563	69.86
Kumaramkudy	564	417	73.92	528	443	83.81	634	444	70.12	500	424	84.81	564	412	73.03
Mullumala	492	394	79.95	492	438	88.97	526	466	88.64	510	432	84.71	556	495	89.15
Cherupittakavu	432	345	79.85	432	337	78.11	486	359	73.72	403	362	89.87	436	378	86.65
Total	2247	1816	80.81	2236	1869	83.55	2562	1907	74.48	2137	1839	86.05	2361	1848	78.26
RPL															
Kulathupuzha	1565	1372	87.67	1320	1332	100.9	1325	1242	93.73	1275	1171	91.84	1172	1050	89.59
Ayiranallur	601	591	98.34	590	638	108.1	475	483	101.7	378	333	88.1	368	253	68.6
Total	2166	1963	90.63	1910	1970	102.6	1800	1725	95.83	1653	1504	90.99	1540	1303	84.61
Grand Total	9629	8386	87.09	9907	8186	82.53	10472	8708	83.16	9705	8210	84.60	10093	9386	92.99

Audit observed that:

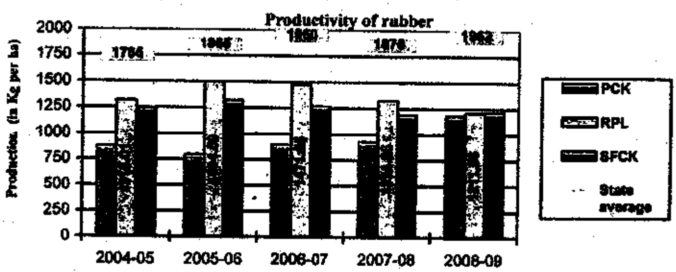
- PCK followed the system of fixing production targets based on clone- wise productivity standards estimated by Rubber Board for the effective area under tapping. However, the production levels comparable with targets were recorded by only two of the estates viz., Kodumon and Chandanappally and in other estates it varied from year to year due to inconsistencies in production levels due to deficiencies in planted area management.
- RPL fixed its production targets based on yield projections in the project report as well as the production results achieved during the previous years. Though the targets were fixed on a realistic basis, the two estates of the Company could not fully achieve the targeted production during the two years 2007-2009, in spite of intensive exploitation.

- In SFCK, production targets were arbitrarily fixed comparable to production levels achieved during previous years. Fixation of targets was unrealistic and unscientific as the productivity of rubber plantations had a close relation with their age. By following unscientific method of fixing the production targets not based on Rubber Board standards, the overall yield deficit for the five years 2004-2009 was approximately 5,429 MT as against 2,262 MT recorded by the company method. Audit noticed that none of the estates achieved the targeted performance during the five years (2004-2009) even though the targets were fixed on lower side. The non-achievement of targets was due to non-exploitation of yield applying intensive tapping methods and high rate of task vacancies.

Yield from rubber plantations

The yield from rubber plantations of three Companies was lower than State average yield and PCK recorded lowest yield of less than 50 per cent during 2004-2009

2.1.13 The yield from rubber plantations of the three Companies was lower than the State average yield estimated by the Rubber Board every year. The yield ranged from 42.70 per cent to 60.33 per cent in PCK, 61.75 per cent to 80.14 per cent in RPL and 62.12 per cent to 70.86 per cent in SFCK of the state average yield during the period 2004-2009 as given below:



Audit observed that:

- The shortfall in yield in respect of RPL and SFCK was due to the fact that major part of their plantations had completed the prime years of productivity. In PCK, shortfall in yield was significant since out of 5,268.61 hectares under own tapping (March 2009), 3,131.89 hectares (59.44 per cent) consisted of plantations of most productive age. The lower yield was due to improper maintenance of the plantations in their initial years. The Company replied (August 2009) that it could not carry out all the necessary rubber plant maintenance operations including manuring at the formative stages of development of plantations due to financial crisis faced when large extent of areas came under replanting at a time. The financial crisis was a result of ill-planned replantation scheme under which extensive areas were brought under replanting at a time leading to drop in revenue consequent to reduction in yielding areas.
- The plantations of SFCK mainly consisted of high yielding clones whereas; the other two Companies had a mix of different conventional clones.
- Intensive tapping methods were followed in RPL and SFCK when compared with PCK.

Clone-wise analysis of yield

2.1.14 Rubber plantations are raised using seedlings belonging to different 'clones' like RRIM600, GT1, RRII 105 etc., developed and named by Rubber Research Stations. Rubber Board had specified the standard yielding capacity of different clones of rubber trees in the different years of tapping. The plantations of these Companies consisted of rubber trees of different clones in different ratios. A comparison of productivity of the plantations of the three Companies, adopting the average yield per hectare of different clones in the respective years of tapping, as against the standard yield per hectare is given below:

(details in Annexure 9)

(Quantity in MT)

Year	PCK			SFCK			RPL		
	Standard	Actual (%)	Shortage	Standard	Actual (%)	Shortage	Standard	Actual (%)	Shortage
2004-05	6982	4389 (62.86)	2593	2601	2243 (86.24)	358	1920	1962 (102.19)	Nil
2005-06	7689	4285 (55.73)	3404	2606	2390 (91.71)	216	1640	1960 (119.51)	Nil
2006-07	8326	4958 (59.55)	3368	2712	2298 (84.73)	414	1464	1738 (118.72)	Nil
2007-08	7781	4854 (62.38)	2927	2746	2154 (78.44)	592	1397	1506 (107.80)	Nil
2008-09	7907	6236 (78.87)	1671	2756	2231 (80.95)	525	1313	1306 (99.47)	7
Total	**38685**	**24722 (63.91)**	**13963**	**13421**	**11316 (84.31)**	**2105**	**7734**	**8472 (109.54)**	**Nil**

It could be seen that:

The shortfall in yield as compared to standard yield during 2004-2009 in two companies was Rs. 129.46 crore (PCK Rs. 117.31 crore, SFCK Rs. 12.15 crore).

- The yield record of PCK varied between 56 per cent to 79 per cent of the standard yield potential during the five years 2004-2009. The yield deficit was due to low stand of tapping trees, non-performance of tapping tasks in full, inadequacy of field management and inadequate maintenance of replanted areas as discussed in paragraphs 2.1.15, 2.1.17 and 2.1.21 Infra.
- SFCK achieved 78 to 92 per cent of standard yield despite having 69 per cent of area planted with high yielding clone. As in the case of PCK, shortfall in yield was due to poor stand of tapping trees and short performance of tapping tasks.

- RPL, whose plantations were mostly of conventional clones recorded yield levels almost equal to or higher than (99 to 120 per cent) the standard yield despite the low stock of trees. Audit observed that relatively better practices in labour utilisation helped the company to achieve optimum production in spite of low stand of tapping trees.

Audit concludes that based on the average sales revenue per MT for the five years 2004-2009, the shortfall in yield of 16,066.76 MT (PCK-13,962 MT, SFCK-2,104.76 MT) valued an estimated Rs.129.46 crore (PCK - Rs.117.31 crore, SFCK- Rs. 12.15 crore). When compared with the targets fixed by the Companies themselves during the said period, the yield deficit for the three Companies was 7,040.50 MT (PCK-4,106 MT, SFCK-2, 262 MT and RPL- 672.5 MT) valued at Rs. 52.22 crore (PCK-Rs. 34.25 crore, SFCK-Rs. 12.68 crore and RPL-Rs. 5.29 crore).

Stand of tapping trees

2.1.15 The stand (number of trees available in a specified area) of tapping trees on an average per hectare was expected to be 310 beyond the tenth year of planting. Audit observed that, in seven estates of PCK (excluding Kodumon), four estates of SFCK and two estates of RPL, the stand/ stock was below the standard with an overall average of 235 as given in **Annexure 10.**

Audit observed that:

- The low stand of tappable trees was the major contributory cause for the shortfall in yield in the plantations of these Companies, as discussed in paragraph 2.1.13 supra.
- As against the mature area of 6,110.60 ha (PCK), 1,830.93 ha (SFCK) and 1,074.27 ha (RPL), the effective area (with 310 nos. of trees per ha) was only 4,771.99 ha (PCK), 1,462.22 ha (SFCK) and 717.38 ha (RPL). The remaining area of 1,338.61 ha (PCK), 368.71 ha (SFCK) and 356.89 ha (RPL) were thus unproductive.

The poor stand of yielding trees in PCK's estates was due to inadequate gap filling and maintenance operations in replanted areas. In respect of SFCK and RPL, the yielding areas consisted of older plantations in which reduction in number of yielding trees occurred over the years, cause-wise data of which was not on record.

Yield pattern in areas replanted by PCK

2.1.16 An analysis of yield pattern in the areas replanted by PCK in their four major estates (Kodumon, Chandanappally, Adirappally and Kallala) between 1990 and 1996 was as given in **Annexure 11.** Audit observed that the areas of Kodumon and Chandanappally having relatively better stand of tapping trees (293 to 346 per ha) could record 67 to 103 per cent of the standard yield fixed by Rubber Board whereas the yield recorded by replanted areas of Adirappally and Kallala having stand of tapping trees in the range of 227 to 245 was only 48 to 68 per cent. The overall shortfall in yield in 1,912.30 ha of replanted area (Kallala and Adirappally estates) when compared with yield recorded by plantations in 2,255.04 ha raised (Kodumon and Chandanappally) during the same period was 3,581.66 MT worth an estimated Rs. 30.22 crore for the period 2004-2009.

The productivity of other three rubber estates of the Company was still lower. The overall average stand of tapping trees in Thannithode estate was only 195 trees per ha. Based on the expected stand of 310 trees per ha, the effective tapping area of the estate would be 372.39 ha against the gross planted area of 592.01 ha. While the average stand of tapping trees in the plantations of earlier years (when there were damages due to wild life attack) in Nilambur estate was in the range of 205 to 245, the stand of newly replanted areas was still lower (94 to 194 in 1997 and 2000 areas) although most of the new plantations were raised after providing power fencing. Though the plantations of Perambra estate were of the age group of 10 to 22 years and belonged to high yielding clones of RRII 105, the productivity of the areas was no better. As against the standard yield of 1250 kg to 1843 kg per ha estimated by the Rubber Board, the actual yield achieved by the estates was in the range of 509.31 to 859.09 kg per ha per annum during the period 2004-2009.

e Effective area = Area actually required to grow the actual available yielding trees.

Thus, the overall yield shortfall suffered by PCK was due to low stand of tappable trees in five out of seven estates which was the result of inadequate maintenance of plantations during formative years.

Inadequate field supervision and internal control

2.1.17 PCK reduced staff strength in its offices and estates from 2002-03 onwards to overcome the financial crisis then prevailing. When the financial position improved later (2008), the Management decided (January 2008) to restore the staff strength to the year 2003 level. Analysis of the staff position and strength of workers in the various estates indicated that even after replenishment, the available strength would not be adequate for intensive management of plantations. In the absence of required number of employees, the production is suffering.

The technical consultant appointed (August 2007) by the Board also reported (January 2008) that the shortages of staff affected the production performance.

2.1.18 SFCK management was not exercising proper internal control over the operational and financial transactions in the estates. Estate-wise trial balance and profit and loss accounts were not prepared. In the absence of estate-wise analysis of expenditure, comparison of financial data for ensuring economy in expenditure and to enable reconciliation of physical data with financial data was not possible. Physical and financial statements on different maintenance operations like replanting, weeding etc., were also not obtained from estates and, therefore, management was not aware of efficiency and economy of operation of each estate.

Management stated (April 2009) that it required additional staff strength for meeting the above requirements. Audit recommends that estate-wise cost data may be prepared as the expenditure will be more than offset by the benefits arising out of better MIS and faster results. It may also be possible to use the existing staff for the purpose.

Manpower Management

2.1.19 The three Companies engaged both regular and casual workers for carrying out tapping and plantation maintenance works in rubber estates, cultural operations and harvesting in cashew estates. The land (area in ha)- labour (number of tappers/workers) ratios of the three Companies as on March 2009 were as indicated below: (estate-wise details in **Annexure 12**)

Company	Rubber estates		Cashew estates
	Tappers	General workers	General workers
PCK	4.96:1	6.65:1	19.06:1
SFCK	2.60:1	23.65:1	-
RPL	2.96:1	2.87:1	-

Audit observed that:

- The available manpower was unevenly deployed by PCK in the different rubber estates, at the cost of productivity. The Kodumon and Chandanappally estates having comparatively better productivity were provided with lesser number of tappers at 4.74 ha and 6.59 ha per tapper respectively, whereas the Perambra estate, which ranked last in productivity, maintained the best land-labour ratio of 3.28: 1, for tapping work.

- The estates of PCK were not keeping proper records showing activity-wise booking of labour on a day to day basis.

- SFCK was having better strength of tappers, still the Company experienced shortage of tappers due to inefficient utilisation, as discussed in paragraph 2.1.22 infra.

- RPL could carry out tapping and other plantation maintenance works by engaging own workers, whereas, PCK and SFCK resorted to contract arrangements.

Performance of Tapping Tasks

PCK suffered yield loss of 2,219 MT involving revenue loss of Rs. 19.23 crore due to non-performance of tapping tasks in full during 2004-2009.

2.1.20 While the yield potential itself was deficient due to inadequate stand of tapping trees as discussed in paragraph 2.1.14 supra, exploitation of the available yield to the full extent was also not attained in these Companies, owing to non-performance of all tapping tasks, particularly in PCK and SFCK.

Audit observed that:

SFCK suffered yield loss of 684.32 MT involving revenue loss of Rs. 5.56 crore due to non-tapping for want of tappers during 2004-2009.

- PCK suffered loss of yield of approximately 2,219 MT involving possible revenue of Rs.19.23 crore on non-performance of 1.44 lakh tappable tasks (8.02 per cent of the total tasks) during the five years 2004-2009.
- In SFCK, the tasks unperformed during 2004-2009 were 50,299 nos.(6.03 per cent), involving yield loss of 684.32 MT worth Rs. 5.56 crore.

Audit observed that large scale absenteeism of workers on rolls was the main cause of non-performance of tapping tasks in full which was avoidable by adopting better management practices.

Delay in commencement of tapping in newly developed plantations of PCK

2.1.21 Rubber trees attain the minimum tappable girth of 45-50 cm (at a height of 125 cm from bottom) by the seventh year of planting.

Commencement of tapping in a gross area of 882.39 ha replanted between 1994 and 2000 in six rubber estates of PCK, had to be postponed up to eleventh year of planting, due to non-attainment of required girth standards, as well as non availability of additional tappers, to open new areas.

The inefficient maintenance and upkeep of newly raised plantations and failure in engaging need based additional tappers resulted in loss of production.

Under performance of Tapping Tasks in SFCK

2.1.22 According to labour norms followed, a tapping task comprises of 300 to 350 tappable trees on an average. As the number of trees gets reduced, due to natural damages during the course of time, the tapping tasks need to be re-tasked periodically to maintain the task-norms fixed. Such re-tasking was not done in RPL and SFCK, as a result of which, the average number of trees per task as of March 2008 stood at 226 in RPL estates and 268 in SFCK estates, as against the norm of 300 trees in PCK, where re-tasking was done periodically. Since the RPL areas were already earmarked for replanting from 2001 onwards, intensive tapping was going on in its estates and hence norm was liberalised.

Failure of SFCK Management in enforcing the labour norms for tapping during 2004-09 resulted in a loss of Rs. 5.75 crore.

SFCK's tapping areas were either under normal tapping or 'Controlled Upward Tapping' (CUT), requiring systematic refixing of tappable tasks. At the instance of Audit, Management decided in November 2008 to re-block the areas fixing the number of tapping trees as 300 per task and envisaged gain from re-fixing tapping tasks was Rs. 1.15 crore per annum. The minimum loss incurred by the Company due to its failure in enforcing the labour norms earlier i.e., during the five years 2004-2009 amounted to approximately Rs.5.75 crore.

Productivity of tappers

2.1.23 The average crop collection in PCK was 13.40 kg. to 15.77 kg. per task, while in SFCK it was in the range of 12.92 kg. to 14.19 kg. In RPL it was in the range of 9.55 kg. to 12.28 kg. during the period 2004-08. The highest productivity record of PCK however, was due to contribution of its most productive estates at Kodumon and Chandanappally. The performance of other estates of PCK was at par or below par, when compared with SFCK/RPL estates. When compared with the standard of Kodumon and Chandanappally in task performance the extra cost on tapping and collection incurred by other estates of PCK worked out to Rs. 1.01 crore per annum.

RPL Management attributed (February 2009) the lower output of its tappers to the fall in yield of trees due to ageing.

PCK Management reasoned (August 2009) the higher cost in estates other than Kodumon and Chandanappally to the lower task performance and stated that re-tasking was in progress in those estates.

Higher cost of rain guarding in PCK estates

Avoidable extra expenditure due to payment of higher rates for rain guarding work by PCK during 2004-09 amounted to Rs. 75.85 lakh.

2.1.24 The tapping areas in PCK were having trees with relatively shorter girth standards when compared with those of SFCK and RPL due to age factors. Therefore, the rain guarding works should have been easier in PCK estates. Yet, the Company had been, allowing abnormally high labour rates for rain guarding work. While the rates admitted by SFCK and RPL were in the range of Re.1 to Rs. 2 per tree during the five years 2004-2009, the rates of PCK ranged between Rs. 2.31 and Rs. 2.99 per tree on an average during the same period. When compared with average wage rates paid for by other two Companies, the avoidable extra expenditure incurred by PCK for rain guarding work for the five years 2004-2009, amounted to Rs. 75.85 lakh.

It was observed that Rubber Board had recommended rain guarding only in areas where the yield was 675 kg. per hectare per annum or more and 25 or more tapping days were annually lost by rain. Though, the Company was having large extent of areas with yield below 675 kg. per annum, and tapping was done once in four days, no cost benefit analysis of rain guarding had been carried out and all the areas were rain guarded irrespective of yield potential.

Economy of field operations was therefore not given due consideration by PCK Management as evidenced by these instances.

Cost of tapping and collection

cost of tapping per task was higher in PCK at 213.15 against Rs. 159 in SFCK and Rs. 129.31 in RPL.

2.1.25 High operating cost coupled with low productivity per tree had escalated the cost of tapping and collection for PCK. Analysis in Audit based on figures for 2007-08 revealed that average cost of tapping per task was Rs. 213.15 in PCK as against Rs. 159 in SFCK and Rs. 129.31 in RPL. The tapping cost per kg. of production was Rs. 13.47 per kg. for PCK, as against Rs. 12.20 for SFCK and Rs. 12.84 for RPL.

The cost of tapping was as high as Rs. 21.07 per kg. of rubber and Rs. 17.27 per kg. for Perambra and Thannithode estates of PCK respectively, and when expressed as a percentage of revenue realisation, it was 22.44 per cent for Perambra and 18.29 per cent for Thannithode against 11 to 13 per cent in other estates.

Inappropriate classification of tapping tasks

2.1.26 All the three Companies followed the decisions of Plantation Labour Committee (PLC), a joint body of Government, Company Managements and Labour Unions formed to fix the wage rates of plantation workers. Accordingly, the tapping tasks in the estates were to be classified into four classes, based on yield, taking yield per 100 trees per annum as the norm. Over kil[f] wages for collection of rubber in excess of the standard minimum fixed for each class were to be distributed among tappers as an incentive for encouraging labour and maximising production.

Audit noticed that, due care was not exercised by PCK and SFCK to follow the classification norms, and many blocks remained incorrectly classified by PCK, whereas, SFCK arbitrarily classified the blocks, clone-wise, ignoring the stipulation of PLC to link it with productivity of tree rather than clone. In most of these cases the tasks were classified in classes higher than the appropriate one. The inappropriate classification had negative impact on productivity.

Replanting Programmes

Delay in replanting old plantations with low yield by PCK

2.1.27 According to an expert engaged by SFCK (November 2008), rubber plantations that were past the productive age of 30 years could be felled and replanted, when the yield per hectare dropped below 75 per cent of national average yield, (1705 kg.-1874 kg. per ha.) unless the market prices of rubber were so high that a lesser yield could also fetch adequate revenue to maintain viability.

Both PCK and RPL were having plantations raised between 1973 and 1978 to the extent of 791.75 and 1,779.4 ha. respectively. Though the productivity of

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f Extra charges paid for collection of latex and scrap in excess of the standards fix for different classes.

PCK plantations was only around 30 to 40 per cent of national average yield, the Management proposed replanting only from the year 2010. At the same time RPL had already replanted 1095.45 ha., although major part of their plantations was having productivity in excess of 75 per cent of national average.

RPL also adopted intensive tapping in these plantations and exploited the crop potential to the maximum extent. In the case of PCK, crop exploitation from older plantations was given the least priority owing to shortage of tappers and declining yield from trees. Thus, the overall average yield from older PCK plantations decreased steadily year to year (713.643 kg. per ha. in 2004-05 to 227.99 kg. in 2007-08 and to 119.38 kg. in 2008-09) whereas, it was on the increase in RPL till 2006-07 (1339 kg. per ha. in 2004-05 and 1462.43 kg. per ha. in 2006-07) since when there was marginal yield reduction consequent to optimum exploitation (1,339.580 kg. in 2007-08 and 1,191.11 kg. in 2008-09).

In view of the above, retention of the above plantations by PCK beyond the period of 30-32 years with yield levels below 50 per cent of national average was not appropriate, though the Company's financial position was conducive for taking up replantation as it held surplus funds in the range of Rs. 8.10 crore to Rs. 60.75 crore in fixed deposits during the period 2005-06 to 2008-09.

Improper implementation of Controlled Upward Tapping (CUT) in PCK

2.1.28 In order to tide over the financial crisis following implementation of extensive replantation programme, PCK decided (March 2000), in consultation with Rubber Board, to introduce Controlled Upward Tapping (CUT) in 1,102 ha. aiming at projected yield increase of upto 50 to 70 per cent, estimated by Rubber Board. Rubber Board cautioned the Company to exercise control measures over the new tapping system and insisted for strict supervision, failing which it would not be result oriented. Five years after implementation of CUT (2004-05), Management noted (November 2005) that the system was practised in the estates in a callous manner with excess bark consumption, rendering renewed bark unfit for tapping and necessitating premature commencement of slaughter tapping before the normal period of exploitation (sixteen years) under CUT.

Company sought for (December 2005) the advice of Rubber Board in the matter and inspection revealed (March/April 2006) that severe damages had already occurred in the CUT areas due to improper implementation. The massive losses sustained by the Company due to reduction in economical life of plantations by about eleven years were, however, not assessed by Management. Decision of Board of Directors to conduct a detailed enquiry to fix responsibility for the losses was also not implemented.

Under exploitation of revenue potential from slaughter tapping areas

2.1.29 As recommended (December 2006) by Rubber Board, PCK decided (December 2006) to commence early slaughter tapping in failed CUT areas and replant them in phases from 2010 onwards. Considering the dearth of tappers and the opinion of Rubber Board not to engage own tappers for slaughter tapping, the Management decided to sell the slaughter tapping rights on contract basis. Though it was initially decided to give away the entire area of 1,102 ha. for contract tapping, the Board later (March 2007) decided to exclude 287.96 ha. on the plea that undertaking replanting in an extensive area at a time would be a difficult task. The rest of the areas (814.04 ha.) was offered (March/April 2007) for sale in blocks of 1,000 tapping trees fixing benchmark price of Rs. 10 lakh per block for two years' slaughter tapping, most of which were sold out.

Decision of PCK to retain 287.96 ha under CUT instead of giving for contract slaughter tapping resulted in a revenue loss of Rs. 5.11 crore.

Slaughter tapping not undertaken in the excluded area of 287.96 ha. resulted in phenomenal yield loss, realising which the Management finally decided (November 2008) to sell off those areas also for contract tapping. Tender-cum-auction process for sale was in progress (May 2009). The loss sustained by the Company on not giving away these areas for slaughter tapping contract along with other areas worked out to Rs. 5.11 crore based on actual yield/ revenue realisation from those areas up to March 2009.

Improper scheduling of slaughter tapping

2.1.30 The contract period of areas which were given for slaughter tapping by PCK was due to expire by May /June 2009. These areas could, therefore, be replanted only after one year. Audit observed that RPL finalised the felling contracts of rubber trees by November-December of a year and the felling activity was carried out between January to March of next year. The Company carried on with tapping even when the felling of trees was in progress and, therefore, crop exploitation to the maximum extent was made. Yield exploitation in PCK from areas earmarked for felling did not have the desired intensity as observed in RPL.

Processing of Natural Rubber

Shortages in field latex received at processing factories

2.1.31 The system of reconciliation of field weight of latex collected, as recorded in collecting stations, with the factory weight recorded at processing factories, was not in existence in PCK and SFCK. It was not ensured that the quantities transferred to factories, were properly taken into stock and there was no abnormal loss or pilferage in transit. Reconciliation made in Audit disclosed substantial quantity shortages in field latex taken into stock by the centrifuging factories of these Companies.

Audit noticed:

Unreconciled shortage of field latex in PCK factories was 884.02 MT valuing Rs. 7.28 crore. Similar shortage in SFCK was to the extent of 66.78 MT worth Rs. 0.62 crore.

- In PCK, based on factory figures, there were short receipts of field latex to the extent of 884.02 MT valuing Rs. 7.28 crore during the period 2004-2009. The reasons for the abnormal shortages recorded at factories were not investigated, despite adopting factory receipt figures at gates. Shortage in quantity of latex already acknowledged by the factories to the extent of 15 MT valuing Rs. 14.08 lakh in 2007-08 as detected in Kodumon estate and reported by Audit was also not investigated by the Management. The field wet weight of latex was also recorded by Kodumon estate from 2008-09 onwards and it recorded a difference (net) of 21.020 MT (up to February 2009) with factory weight. Dry Rubber Content (DRC) test conducted by estate, in Rubber Board laboratory disclosed that the DRC reported by Factory Lab was lower.

- Similar short receipts at the processing factory of SFCK during the period 2005-08 were to the extent of 66.78 MT (DRC) valuing Rs. 0.62 crore.
- RPL had reconciled the field weight with factory weight and no abnormal variation between the two was observed in their estates, where the factory weight was in fact higher than field weight in the two estates. The overall excess was 233.12 MT in respect of Kulathupuzha estate and 36.71 MT in respect of Ayiranallur estate for the period 2004-2009.

The huge quantity variations between field and factory stock accounts in SFCK and PCK exhibit absence of effective internal control over the vital areas of production, despatches and stock accounting.

PCK Management stated (August 2009) that the field weighment systems were unscientific and that steps will be taken to improve them. SFCK also agreed to introduce systematic reconciliation of quantity accounts.

Short production of Cenex due to lower centrifuging efficiency

Low rate of recovery of Cenex due to low centrifuging efficiency of factories of PCK and RPL resulted in a loss of revenue of Rs. 3.00 crore.

2.1.32 According to industry standards, not less than 87 per cent of the input field latex should be obtained as Cenex in the latex Centrifuging Factories. Against this, processing efficiency of PCK's centrifuging factories at Kodumon and Kallala ranged between 81.15 and 85.25 per cent during 2004-2009. The loss of revenue on account of low rate of recovery of cenex amounted to Rs. 2.64 crore for the period 2004-2009. Similar loss sustained by RPL (2004-2009) where the average efficiency was in the range of 84.64 to 86.72 per cent amounted to Rs. 0.36 crore.

Audit observed that the centrifuging machines of the factories of PCK were installed in 1972 (Kodumon) and 1978 (Kallala) and their inefficiency was the major reason for short recovery of cenex.

Cost of conversion

2.1.33 The cost of conversion of field latex into cenex differed (2004-2009) from Company to Company. On an average, it amounted to Rs. 8.61 per kg. in PCK, Rs. 10.77 per kg. in SFCK and Rs. 15.74 per kg. in RPL during 2007-2008. The higher cost of conversion in RPL and SFCK was due to lower capacity utilisation.

Uneconomic production of crumb rubber

Conversion of field scrap as crumb rubber using outdated technology by PCK and RPL resulted in loss of Rs. 4.84 crore.

2.1.34 PCK and RPL manufactured ISNR[g] grade Rubber (crumb rubber) out of field scrap collected from estates and marketed it through dealers on tender cum auction basis. The Companies had been using outdated technology for processing and hence desired quality standards were not maintained for this value added product. Out of a gross quantity of 3,734.35 MT of crumb rubber produced by PCK during 2004-2008, 1,425.65 MT (38.18 per cent) was of inferior grade. Generation of inferior grade by RPL was 252 MT out of total production of 991 MT. As a result, the cost of production was as high as Rs. 11.31 to Rs.14.86 per kg. for PCK and Rs. 9.55 to Rs. 14.16 per kg. for RPL (prime cost excluding overheads) whereas, the additional price advantage on value addition was very less. When compared with the prices realised by SFCK which is selling scrap totally unprocessed, the extra prices realised by PCK and RPL were meager. Loss due to conversion of scrap as crumb rubber by PCK and RPL amounted to Rs. 4.84 crore (PCK Rs. 3.44 crore, RPL Rs. 1.40 crore) during 2004-2008.

RPL modernised (February 2009) its crumb rubber factory, investing Rs. 1.09 crore by replacing the existing diesel based drier with bio-fuel (Gasifire) based drier. Scrap rubber required to maintain single shift operation in a year was 600 MT. The actual generation of scrap for the last three years (2005-2008) was only 300 MT per annum and with more areas coming under replantation in future years, it would take a fairly long period for the Company to ensure captive

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g Indian Standard Natural Rubber.

availability of scrap, to the required extent. The marginal contribution on processing being negligible, outsourcing the raw material was also not a viable option. The Management was yet (May 2009) to formulate a plan for meeting the raw material requirement.

PCK is also contemplating modernisation of its crumb rubber factory. As and when the proposal materialises, it would be still more difficult for RPL to utilise the spare capacity as the supplies from SFCK or PCK were the dependable source for RPL for meeting the raw material requirement at present.

Marketing Management

Short realisation of prices of Cenex

2.1.35 The three Companies fixed the prices of Cenex on mutual consultation. A price fixation committee represented by Government and Rubber Board was also involved in the pricing decisions. A comparison of selling prices fixed for the period 2005-2009, however, disclosed several instances of mismatches in prices resulting in price of one Company being lesser than that of the other two Companies. The aggregate shortfall in revenue of the three Companies during the period amounted to Rs. 1.69 crore (PCK Rs. 126.13 lakh, SFCK Rs. 32.96 lakh and RPL Rs. 9.63 lakh).

Lower sales realisation for skim crepe

2.1.36 Analysis of sales realisation of skim crepe marketed by SFCK in comparison with the realisation recorded by the other two companies indicated, that the price realised by the Company was on the lower side most of the time during 2004-2009. The monthly average price realisation of the Company in 19 out of 21 months (for which comparable data was available) between April 2004 to March 2009 was lower. As compared to the higher prices obtained by the other two Companies, there was overall shortfall in revenue of Rs. 19.08 lakh.

It was further observed that the Company idled its crepe milling plant and resorted to uneconomical sale of unprocessed skim (skim coagulum). Better revenue generation opportunity was thus lost. Revenue loss on this account during 2004-2009 amounted to Rs.61.59 lakh.

The Management attributed (July 2009) the lower price realisation to the absence of proper drying facility and frequent breakdown of the mill because of which the quality of the product was inferior. Audit observed that Company had sufficient resources to modernise the mill but the inertia in doing so caused the short realisation.

Low productivity of cashew estates of PCK

2.1.37 Bulk of the crop from PCK's exclusive estates of Kasaragod (959.50 ha.), Rajapuram (1,281.68 ha.), Cheemeni (959.50 ha.) and Mannarghat (504.50 ha.) were sold out at flowering stage rendering yield potential of the areas unascertainable. Based on revenue realisation (2005-2009), the income generation from these areas was in the range of Rs. 3,024 to Rs. 9,469 per ha. as against the estimated revenue potential of about Rs. 30,000 per ha based on yield statistics of cashew planted areas in the state published by Directorate of Cashew and Cocoa Development (DCCD). The revenue deficit in comparison with state average worked out to about Rs. 49.25 crore for the period 2005-2009. Audit noticed that the average stand of yielding trees was only 70 to 95 numbers per ha. in different estates (4,198.28 ha.) as against the general norm of 200 trees per ha. Areas to the extent of 783.13 ha. (16 per cent of total area) was having stock of below 50 trees per ha. and stock in 2014 ha. (41.50 per cent of total area) was between 50 and 100 Nos. The effective area under cashew cultivation based on stand of trees was only 2,236.58 ha. as against the gross extent of 4,918.28 ha. used for cashew cultivation in these estates. Considering the low revenue yielding capacity of the estates, the Company was not carrying out all the cultural operations except periodical weeding. Inadequate maintenance operations had contributed to lower productivity in these estates.

Cashew plantations in Rubber estates

2.1.38 The productivity of cashew area in rubber estates of PCK in 1,230.47 ha. (March 2009) was worse than that of the exclusive cashew estates. The revenue generation from these areas was as shown in *Annexure 13*.

Audit observed that:

- The net revenue was not even sufficient to meet the direct overheads on area management in the case of Thannithode estate having 58.08 ha. of cashew plantation. The net income (Rs. 448 to 551 per ha.) was lesser than the lease rent (Rs. 1300 per ha.) payable.

- The cashew areas of 33 ha. replanted in Perambra during year 2000 season incurring Rs.6.56 lakh and those replanted during the year 2005 (1.59 ha.) and 2006 (5.59 ha.) incurring Rs. 1.69 lakh were having a stand of only 81, 15 and 39 trees per ha. respectively.
- The stand per ha. in cashew plantation raised (1994-2007) over 73 hectares in Nilambur estate at a cost of Rs. 30.48 lakh was only in the range of 9 to 93 Nos.. The net income from these areas was less than Rs. 100 per ha. per annum.

Fund Management

Attractive prices prevailed during the period 2004-2009 helped the Companies to maintain consistent profitability and record sound reserves and surplus position. Deficiencies in fund management observed during the course of the performance audit are mentioned below:

Premature closure of Fixed deposits carrying higher rates of interest

Injudicious decision by SFCK to close high interest bearing deposits vice low interest bearing deposits resulted in loss of potential income of Rs. 19.34 lakh.

2.1.39 In order to meet (March 2008) the demand for Agricultural Income Tax (AIT) (Rs.7.54 crore), SFCK prematurely closed (March 2008) fixed deposits of Rs. 5.04 crore with Treasury and Rs. 2.50 crore with Kollam District Co-operative Bank fetching higher rates of interest, retaining other fixed deposits fetching lower rate of interest. The choice of deposits for closure was made, so as to maintain the ratio of treasury deposits and bank deposits at 1:1, as decided (February 2007) by the Board. As the Board was at 39 Audit Report (Commercial) for the year ended 31st March, 2009 Injudicious decision by SFCK to close high interest bearing deposits vice low interest bearing deposits resulted in loss of potential income of Rs. 19.34 lakh. Liberty to change the ratio as and when required in the best financial interest of the Company, the reasons attributed were not justified. The Company was also having funds in fixed deposits with treasury much in excess of the mandatory requirement for claiming, replanting reserves as an allowable expenditure for AIT assessment. Thus, injudicious decision to close high interest bearing deposits vice low interest bearing deposits resulted in loss of potential interest income of Rs. 19.34 lakh during the period March 2008 to March 2009.

Non-utilisation of tax relief under Agricultural Income Tax, 1991 by SFCK

Non-utilisation of tax relief under Agricultural Income Tax Act resulted in loss of rebate and interest amounting to Rs. 1.84 crore to SFCK.

2.1.40 According to Section 9(3) of the Agricultural Income Tax Act, 1991, (a Kerala State Act) a sum not exceeding 20 per cent of the total agricultural income of the assessee, deposited under Investment Deposit Scheme (IDS) during previous year, could be claimed as rebate for the respective assessment year. The amount so deposited, could be withdrawn in future for the purpose of replantation, modernisation of factory, land development etc., covering the main spheres of activities.

Audit observed that the Company had funds amounting to Rs. 2.86 crore during the four years 2004-2008 in fixed deposits fetching interest at 7.5 per cent only as against 10 per cent receivable on IDS. The income foregone by the Company by not depositing in IDS together with rebates foregone amounted to Rs. 1.84 crore (Rebate Rs. 1.72 crore and interest Rs. 12.04 lakh) during 2004-2008.

Non-utilisation of tax benefits under Rubber Development Account Scheme

2.1.41 The Government of India introduced (2004-05) a scheme for promotion of rubber cultivation viz., Rubber Development Account Scheme (RDAS) as per which an income tax assessee carrying on business in rubber planting sector was eligible for a deduction of 40 per cent of its business income, under Section 33AB of Income Tax Act, in computing total income, if it deposited an equal amount with NABARD in any specified Scheme approved by Rubber Board. The amount so deposited also attracted simple interest at 5.5 per cent and was available for withdrawal for meeting capital expenditure after a period of six months. None of the three Companies availed of the tax benefits under the Scheme. The amount of unutilised tax benefits was, however, not ascertainable in respect of RPL and SFCK since, the income tax assessments of these Companies for the relevant period (2004-2008) were not finalised till date (May 2009).

Failure to utilise tax benefits under Rubber Development Account Scheme resulted in avoidable payment (2007-08) of income tax by PCK amounting to Rs. 37.92 lakh.

It was noticed that PCK had not availed the benefit of the above scheme during the financial year 2007-08 (Assessment year 2008-09) during which it submitted a return with total business income of Rs. 3.16 crore and total tax liability of Rs. 1.08 crore. Had the Company opted to deposit Rs. 1.26 crore being 40 per cent of the total business income under RDAS, it could have reduced the income tax liability by Rs. 37.92 lakh when the Company was also keeping necessary surplus funds in fixed deposit.

Non-utilisation of financial assistance available from Rubber Board

2.1.42 Rubber Board formulated (December 2005) a scheme for financial assistance to large rubber growers in public sector for modernisation of latex centrifuging factories during 2005-06. SFCK obtained approval (January 2006) of Rubber Board for modernisation of their Effluent Treatment Plant (ETP) under this scheme. The Company failed in completing the project within the time limit (March 2009) fixed by Rubber Board. Thus, the Company had to forego the full amount of financial assistance amounting to Rs.10 lakh available under the scheme. The delay in completion of work was attributed by Company to the delay in supply of required materials by the Company to the work contractor because of which no penalty was also recovered from the contractor.

[Audit paragraph 2.1.1-2.1.42 contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March 2009 (Commercial)].

Notes furnished by the Government on the audit para is given in the *Appendix II*

1. The Committee enquired about the total area of landholdings, utilization of land and completion of survey and demarcation processes of The State Farming Corporation of Kerala (SFCK), The Plantation Corporation of Kerala (PCK) under Agriculture Department and The Rehabilitation Plantation Limited (RPL) under Labour and Rehabilitation Department. The Managing Director of State Farming Corporation of Kerala (SFCK) informed that as per the assessment made in 1972, land holding of SFCK was 2380 Ha. after relinquishing a portion of the alloted land Nilakkal for Sabarimala.

2. The Committee enquired whether the Corporation's land had been demarcated by fencing to clear the boundary. The Managing Director explained that the Corporation had started replantation from 2014 and the replanting area had been surveyed and protected with adequate fencing and also putting gendas was in progress. He added that steps were also being taken to demarcate the boundary of alloted land of which 80% had been completed and the rest would be completed within three months. The Committee noticed that fencing and demarcating boundaries had not been completed even after a long period of nine years. The Committee criticised the Corporation for its improper maintenance of landholdings and inordinate delay in completion of the survey proceedings and demarcation process.

3. The Committee pointed out that the Chithalvetty Estate of State Farming Corporation of Kerala was subjected to encroachments by private parties and blamed the Corporation for its inefficiency to construct boundaries over the alloted land. The Committee enquired about the reason which hinders the construction of boundaries and remarked that the officials of SFCK has not taken adequate measures to protect the land from encroachment. The witness replied that surveying of land holding of the Corporation were being carried out by the surveyors from outside. The Committee opined that more surveyors should be appointed for surveying and demarcating the land.

4. The Committee enquired about the area of land holdings under Rehabilitation Plantation Limited (RPL). The Managing Director informed that out of the 2193 Ha. area under possession of RPL, an area of 2056 Ha. was earmarked for rubber plantations and survey and demarcation of land were completed there and fencing was provided to protect the land from encroachments. He added that rest of the land was utilized for the construction of employees quarters and other related buildings and there was no encroachment in RPL and fencing and providing gendas were also completed.

5. When the Committee enquired about the present status of land utilization in Plantation Corporation of Kerala (PCK), the Managing Director replied that out of 14,975 Ha. of land under possession, Cashew Plantation was 5,350 Ha. and Rubber Plantation was 7,230 Ha. He added that much of the remaining area was

forest land and the ownership of the land in Kasaragod was vested with the Corporation itself. The witness also revealed that due to some disputes, the survey and demarcation process could not be completed in Cheemeni and Mannarghat Estates of PCK. Since a case of encroachement of 3.6 acres of land in Cheemeni by a private party that was subjudice, the demarcation could not be done in that area. Even though the Corporation had approached the Revenue Department to conduct survey over the disputed land and to demarcate it, the Revenue Department had not taken any action.

6. The Committee contended that the areas of Kasaragod Estate of PCK was subjected to encroachments by private parties. The Committee also noted that the survey and demarcation processes were not completed and the Corporation could not undertake any boundary protection measures. The Manager, PCK responded that the survey and demarcation processes would be completed within one month, in areas other than disputed ones. In the case of areas where disputes prevails, survey and boundary detection programme would be carried out after settling the issues.

7. The Committee pointed out the mismatch regarding the total land holdings of the Plantation Corporation between the area mentioned in the Audit Report (15176 Ha.) and that revealed by the Managing Director (14975 Ha.). The Managing Director informed that as per the latest survey and assessment, only 14975 Ha. area was lying under possession of the PCK, which was included in the Audit Report 2015-16 of the C&AG. The Committee suggested to submit before it latest information regarding the matter.

8. To a query of the Committee the witness replied that, 1000 Acres of land given to Thermal Power Station was from the Cashew Plantation in Cheemeni Estate.

9. The Committee sought explanation for not executing lease deeds for the holdings of PCK at its various estates and for the non payment of lease rent which was in arrears from 1999 onwards due to disputes over rates of rent. The Committee blamed the Corporation for its irresponsibility in the final settlement of lease rent arrears on account of the contradictions in the different orders issued by the Government from time to time for fixing rates of lease rent. The Manager of

PCK replied that the estimation of lease rent arrears up to 2015-16 was almost completed. He also informed that the final settlement of the arrears could be completed after a high level meeting of the PCK with the Forest Department.

10. The Committee expressed its serious concern over the lesser yield in PCK. The Committee noted that the yield deficit was due to the shortfall in the number of tapping trees and opined that as a result of inadequate gap filling and improper maintenance of replanted areas the overall average yield was declining drastically year to year and that the implementation of Controlled Upward Tapping (CUT) done irrationally and without any supervision resulted in the reduction of productive life of plantations to about eleven years thus leading to massive loss. The Committee criticised the Corporation for not assessing the reduction of productive life of plantations and for its failure to implement the CUT processes in a judicious way.

11. The Manager of PCK briefed that inorder to render a healthy Controlled Upward Tapping (CUT), the Corporation had started tapping training school where the scientific tapping training was being provided. The Committee was thoroughly displeased with the vague and irresponsible reply on behalf of the witness without realising the audit objections. The Committee pointed out that, PCK had not conducted detailed enquiry and not taken disciplinary action against the erring officials. The Committee blamed the officers for not keeping related records in this matter.

12. The MD, PCK brought to the notice of the Committee a matter that 581 Ha. area lying under possession of the Corporation at Kasaragod, had to be distributed among incumbents with title deeds. Hon'ble High Court had delivered a verdict in this regard in 1999, but no action had been taken so far by the Revenue Department. The Committee replied that it would go deep into the matter and would do the needful.

13. The Committee noted that eventhough the functioning of these three PSU's are similar, these companies have separate Managing Directors and staff. The Committee discussed the possibility of merging the three PSU's, SFCK, PCK and RPL into one institution as they are performing similar activities.

Recommendations

14. The Committee recommends to take boundary protection measures to protect the land holdings of PCK, RPL and SFCK from encroachment.

15. The Committee recommends that survey and demarcation processes in PCK, SFCK & RPL should be completed within three months and the progress of fencing and providing gendas in boundaries should be intimated to the Committee.

16. The Committee recommends to take urgent steps for appointing adequate surveyors in PCK, SFCK and RPL inorder to avoid delay in survey and demarcation processes.

17. The Committee recommends to formulate an action plan and to implement adequate measures to achieve productivity of PCK, SFCK and RPL with State/National average.

18. The Committee recommends that a detailed enquiry should be conducted on the yield deficit due to the non scientific implementa tion of Controlled Upward Tapping (CUT) in PCK and fix responsibility for the massive losses occurred in the yield.

19. The Committee wants to furnish a detailed report on the audit findings that PCK allowed abnormally higher rate for rain guarding works for the year 2004-2009 incurring an extra expenditure of 75.85 lakh.

20. The Committee wants to know whether there is improvement in filed weighment system in both PCK & SFCK and whether the maximum capacity utilization at the factory level had been achieved and the cost of conversion of field latex into cenex had been reduced.

21. The Committee recommends that the final settlement of lease rent arrears in PCK from 1999 onwards should be completed urgently after conducting meeting with Forest Department and that ambiguities in Government orders on land leased out to PCK should be removed to facilitate speedy settlement of lease rent arrears.

22. **The Committee recommends that PCK and SFCK should undertake replanting of older plantations and should plant cashew and other suitable crops in addition to rubber in the replanting areas and also in unutilized areas.**

23. **The Committee recommends that the Government should examine the possibility of merging PCK and SFCK functioning under Agriculture Department and RPL functioning under Labour and Rehabilitation Department since they perform similar activities.**

C. DIVAKARAN,
Chairman,
Committee on Public Undertakings.

Thiruvananthapuram,
12th March, 2018.

Appendix I

SUMMARY OF MAIN CONCLUSION/RECOMMENDATIONS

Sl. No.	Para No.	Department concerned	Conclusions/Recommendations
1	2	3	4
1	14	Agriculture, Labour & Skills	The Committee recommends to take boundary protection measures to protect the land holdings of PCK, RPL and SFCK from encroachment.
2	15	Agriculture, Labour & Skills	The Committee recommends that survey and demarcation processes in PCK, SFCK & RPL should be completed within three months and the progress of fencing and providing gendas in boundaries should be intimated to the Committee.
3	16	Agriculture, Labour & Skills	The Committee recommends to take urgent steps for appointing adequate surveyors in PCK, SFCK and RPL inorder to avoid delay in survey and demarcation processes.
4	17	Agriculture, Labour & Skills	The Committee recommends to formulate an action plan and to implement adequate measures to achieve productivity of PCK, SFCK and RPL with State/ National average.
5	18	Agriculture	The Committee recommends that a detailed enquiry should be conducted on the yield deficit due to the non scientific implementation of Controlled Upward Tapping (CUT) in PCK and fix responsibility for the massive losses occurred in the yield.
6	19	Agriculture	The Committee wants to furnish a detailed report on the audit findings that PCK allowed abnormally higher rate for rain guarding works for the year 2004-2009 incurring an extra expenditure of 75.85 lakh.

1	2	3	4
7	20	Agriculture	The Committee wants to know whether there is improvement in filed weighment system in both PCK & SFCK and whether the maximum capacity utilization at the factory level had been achieved and the cost of conversion of field latex into cenex had been reduced.
8	21	Agriculture	The Committee recommends that the final settlement of lease rent arrears in PCK from 1999 onwards should be completed urgently after conducting meeting with Forest Department and that ambiguities in government orders on land leased out to PCK should be removed to facilitate speedy settlement of lease rent arrears.
9	22	Agriculture	The Committee recommends that PCK and SFCK should undertake replanting of older plantations and should plant cashew and other suitable crops in addition to rubber in the replanting areas and also in unutilized areas.
10	23	Agriculture, Labour & Skills	The Committee recommends that the Government should examine the possibility of merging PCK and SFCK functioning under Agriculture Department and RPL functioning under Labour and Rehabilitation Department since they perform similar activities.

NOTES FURNISHED BY GOVERNMENT ON THE AUDIT PARAGRAPHS

Sl. No	Audit Para No.		Reply furnished by Government
1	2.1		Agriculture Dept. The comparison of yield has been based on the estate average reported by the Rubber Board. The State average is the total production attained divided by the total area under tapping. Here the total number of tapping per year is not taken into consideration as well as the system of tapping adopted State Farming Corporation of Kerala is following S2D2 and S2D3 system of tapping where the number of tapping is restricted to 150 to 100 tapping in an year. Whereas the small growers do tapping every day depending on the climatic conditions and the number of tapping may range between 200 to 250 per year. This is contributing to the high State average production. The tree stand per hectre is 234/ hectre against the 324/ per hectre at the beginning. The plantations of State Farming Corporation of Kerala are 1982-83 plantations consisting of age old trees. The yield at the rate of national average or above can be obtained only after replantation. The Plantation Corporation of Kerala is possessing generally young plantations after the replanting. The per hectre production is increasing every year in Plantation Corporation of Kerala. In certain areas the stock of trees are below average due to damages being caused on account of wind, rain, flood, diseases etc. The Plantation Corporation of Kerala has now 48 years' standing in the field of rubber cultivation and latex processing which are being done on modern scientific ways after taking guidance as and when required from the Rubber Board also.

		State Farming Corporation of Kerala is having only one value added product such as 60% centrifuged latex(ie cenex). Thus there is no scope for change in product mix. However State Farming Corporation of Kerala is conducting periodical cost benefit analysis for the value added product. As far as Plantation Corporation of Kerala is concerned the manufacturing of value added products is now carried out with proper cost benefit analysis with a view to avoid possible loss.
		As far as State Farming Corporation of Kerala is concerned, all expenditures are at par or below the expenses of other public Sector Plantations. Plantation Corporation of Kerala has a system of cost Analysis.
		Now SFCK is doing controlled upward Tapping (CUT) in the areas due for replantation and by which production has been improved. The slaughter Tapping can be commenced on that area after completing the CUT.

		As far as SFCK is concerned, the matter of strengthening the internal control system has been discussed in the board and the board directed that a concurrent auditing system has to be introduced. Thus the board accorded sanction to appoint a permanent employee as Internal Auditor and action has been initiated for recruitment of an Internal Auditor to ensure the Internal control in Corporation. Plantation Corporation of Kerala has noted it for future action.
		From 2005-06 PCK has taken up a large scale replanting in cashew estates with hybrid varieties. So far PCK has completed replanting in 1848 Hactre.
		SFCK has taken up the matter of providing fencing or gendas with forest Department to protect the forest land from encroachments. Necessary arrangements can be made with the participation and direction of Forest Department since the land is owned by forest Department. The Land holdings under the PCK is safeguarded from encroachment. Fencing and gendas are provided in almost all areas besides arranging effective watching. The matter of finalising lease/rent arrears is progressing.

2 | 2.1 | Labour & Reh. Dept

(1) **Land Utilization:**

The leased out land in the possession of the Company is 2193.77 hectares and the boundaries of the land is properly demarcated. The Company put security arrangements in order to prevent encroachment of rubber plantations. The replanting of rubber trees are going on in a phased manner in the Company's estates considering the trees are old. Survey is conducted in the replanted areas and put proper fencing at the surveyed area. The Company is planning for chain fencing at the boundaries of the estates in a phased manner and provision has been given in the annual budget of the Company for the same.

(2) **Plantation Management:**

The lesser yield as stated in the report is not because of the low productivity of the labour force of the Company. The Company has started controlled upward tapping in full swing in the estates of the Company by the year 2004-05 and the yield shown an increasing trend from 2004-05 to 2006-07 because of the newly opened upward panel on the trees which were tapped with the increased rate of stimulation. As the newly opened upward bark tapped at the maximum by the year 2006-07 the yield from the remaining upward bark shown a considerable deduction in the subsequent years. The age of the trees also contributed considerably to the reduction in yield. During the year 2006-07 the Company could not arrange the aerial spraying due to unavailability of Helicopter and hence resorted to ground spraying. The ground spraying was not as effective as the Helicopter spraying which also contributed to the reduction in yield. Moreover the spreading of Chickun Guinea epidemic in the estate has also resorted in low per capita turn over. The rubber plantations of the Company are also and due for replanting. The rubber trees completed the prime years of productivity. The first plantation of the company was undertaken during the year 1972 and completed by 1978. The rubber trees became tappable during the 7 years and then the tapping life of rubber tree is 25 years. The highest yield in the rubber plantation obtained after 10th year of tapping and after ten years the production declines. Thus the major area in the Company is under old plantations and yield is less. The Company started its replanting operation from 2011 onwards for the same reason. Moreover the estate of the Company situated in wind prone area and thus the Company was compelled to plant rubber clones that were resisting to wind damage. These rubber clones are low yielding. In order to obtain maximum yield from aged plantation the Company has started intensive exploitation of latex by round tapping/daily tapping, more lengthy rapping cuts with ethiphone application etc. Consequent to the replanting programme the Company planted high yielding clones of RRII-400 and RRII-105 etc. Thus in the coming years the Company is expecting better yield from the plantations.

(3) Manpower Management:

The workers in the estates of the Rehabilitation Plantations Limited are repatriates from Srilanka. The plantations of the Company are solely aimed at the welfare and rehabilitation of repatriates as per the scheme and the Company is dedicated to employ workers through out the year. So the Company aims to employ the workers in tapping where they are having better skills. The Company has employed its own workers for all types of tapping system and slaughter system and not outsourcing workers for tapping. While exploiting slaughter tapping by utilizing Company workers during the period the Company has obtained a revenue of ₹ 193.63 lakhs by producing 3,08,824 Kg of latex in Ayiranallur Estate alone. The latex so generated was in turn processed in the centrifuging factory of the Company and generated employment to repatriate factory workers. Hence the Company was not in a position to award contract tapping to outsiders. The Company adopted scientific management in its estates and depart effective supervision and control over field operations. The Company has got international certificate of ISO 9001-2008 for its quality assurance and ISO 14001-2004 for its Environment Management System.

(4) Replanting Project

While implementing replanting operations in the Company the Company has considered the low yielding areas also. The Company has a replanting monitoring committee to regulate the replanting operations in the estates. The empowered committee consists of experts from Rubber Board, Director from Finance Department, Government of Kerala and Managing Director. The area to be replanted is selected based on para meters like (i) Availability of bark (ii) Crop yield (iii) Market price of latex (iv) Geographical location of the area, etc. This committee meets at least once in six months and its deliberations are reported to the Board of Directors. Only after a detailed study by the committee the area was selected for replanting. However, the replanting programme implemented in the Company is based on a project report prepared by the experts and the same approved by Government of Kerala.

(5) Processing and Marketing of Natural Rubber

The Company has started replanting activities since 2001 onwards in a phased manner. Hence the production of field latex in the estates is gradually coming down. Thus maximum capacity utilization at the factory is not possible. On the other hand the fixed cost at the factory is increasing due to pay revision, enhancement of electricity tariff and hike in the other fixed overhead costs. In order to minimize the cost of conversion of field latex into cenex and optimum capacity utilization the Company has started purchase of field latex from outside source. There is stiff competition in the field latex market. However, the Company is trying to procure field latex as far as possible. With the processing of additional quantity of cenex at the factory it is expected that the overall cost of conversion will be reduced in view of the capacity utilization. It may please be noted that the higher cost of conversion for the last few years is only a temporary phenomena. By the opening of tapping in more and more replanted area the production of field latex in Company's own estates will increase considerably due to the high yield of the new variety clones planted in the replanting area. Thus within few years the Company will achieve maximum capacity utilization at the factory and the cost of conversion of field latex in to cenex will be reduced.

This has the approval of Hon'ble Minister (Labour and Rehabilitation).

2.1.10 **Para No.2.1.10**
Land management

Land leased out to the Rehabilitation Plantations Limited from the Forest Department as per the lease deed is 2193.77 Ha and the Company is paying lease rent for the same. Land utilized for plantation is given as 2040.5 1 Ha as per the audit report. This report does not cover plantations (1986-1997) in the swamp areas of the company. which comes to about 16 Ha. Thus land utilized for plantation is 2056.51 Ha and percentage of utilization is 93.75.

The Company has started replanting activities in its estates and the same was continuing in a phased manner and completed about 55% by 2008. Survey was conducted in the replanted area to find out the actual area under rubber trees segregating the areas under other trees, water courses, roads, rocky patches, labour lines. quarters etc. Every nook and corner of the land with the Company, which is suitable for rubber planting, is utilized for that purpose and extreme care is taken in the matter while replanting. infrastructure such as roads and buildings which are essential for the functioning of the company are being constructed. The rubber processing factories, effluent treatment plant etc are also in the leased out land. The Company has utilised minimum land for the infrastructure facilities in view of utilisation of land for plantations.

2.1.12 **Para 2.1.12**
Targets and achievement in rubber production

The production of latex from rubber trees depends on various factors like rain, humidity. temperature, diseases, etc. Favourable climatic condition always helps production of natural rubber from rubber plants. Even though distributed rainfall helps the production, continuous heavy rain affects the production. The pattern of distribution of rainfall is reflected in the average yield of rubber. During 2007-08 the heavy rain from mid May 2007 to November 2007 has adversely affected the production.

The reasons attributed for the low yield during 2007-08 in the Company are:

1) The low production during 2007-08 was mainly due to adverse climatic conditions
2) Unprecedented heavy rains from mid May to November 2007.
3) Wide spread chickengunia in the estates.
4) Normally targets are fixed in the company giving some marginal scope for enhancing productivity.
5) There was heavy phytophthora infestation due to lack of aerial spraying of copper oxy chloride

From the above it can be seen that the low production is due to factors.which are beyond the control of the Company.

2.1.13 **Para 2.1.13**
Yield from Rubber Plantation

The rubber plantations of the company are old and due for re-plantation. The rubber trees have completed the prime years of their productivity. The first plantation of the company was undertaken during the year 1972 and completed by 1978. The highest yield in the rubber plantations can be obtained after 10th year of tapping and after about 10 years the production declines. The company started its replanting operations from 2001 onwards due to the same reason. When plantations of the company were raised the high yielding clones like RRII-105 were not available. The company planted 50 percent of the area with clones like PR-107, PB-5/5 1, RRII-600, GTI etc. which cannot match the yield of RRII- 105. Moreover, the estates of the company is situated in wind prone area and thus the company was compelled to plant rubber clones that were resistant to wind also. These rubber clones are low yielding.

In order to obtain maximum yield from the aged plantations the company has started intensive exploitation of latex by way of round tapping / daily tapping, more lengthy tapping cuts with ethepone applications etc. Consequent to the replanting programme the company planted high yielding clones of RRII-400 series. RRII-105 series etc. Thus in the coming years the company is expecting better yield from the plantations.

2.1.15 **Para 2.1.15**
Stand of tapping trees

The average trees which were mentioned in the audit are only the rain guarded trees. The company is carrying out rain guarding only to those trees which are healthy and better yielding. There are other trees that are low yielding which are subject to tapping without rain guarding. After planting, some trees are lost due to natural calamities and diseases in due course. In the older areas, about 30-35% trees are affected by tapping panel dryness (brown bast disease). The only treatment for the TPD is giving rest. After some time these trees will he opened for tapping and if the dryness is cured, these trees can also be tapped. in the older areas, the company is making lengthy tapping cuts in the upward panels to produce more wet latex. Stand per hectare of yielding trees will be higher if we are considering the non-rain guarded trees also.

2.1.19 **Para 2.1.19**
Manpower Management

The workers in the estates of the Rehabilitation Plantations Limited are repatriates from Srilanka. The Company has employed its own workers for all types of tapping system and slaughter system and not outsourcing workers for tapping.

While exploiting slaughter system by utilizing Company workers during the period the Company has obtained a revenue of Rs.193.63 lakhs by producing 3,08,824 Kg of latex in Ayiranallur Estate alone. Hence the Company was not in a position to award contract tapping to outsiders. The Company adopted scientific management in its estates and depart effective supervision and control over fled operations. The Company has got international certificate of ISO 9001-2008 for its quality assurance and ISO 14001-2004 for its Environment Management System.

2.1.23 **Para 2.1.23**
Productivity of Tappers

The lower output noticed in the tappers of the Company are as follows.

1) Controlled Upward Tapping (CUT) started in full swing in the estate by the year 2004-05. and the yield showed an increasing trend from 2004-05 to 2006-07 as the newly opened upward panels were tapped with increased rate of stimulation. As the newly opened upward barks tapped at maximum by the year 2006-07 the yields from the remaining upward bark shown a considerable reduction in the subsequent year. The aging of the trees also contributed considerably to the reduction in yield.

2) 118 ha of rubber trees were cut between December 2007 & January 2008 for replanting. Thus the yield of latex that could have been obtained otherwise till March 2008 was lost. Thus low yield/tapper.

3) During 2006-07 the company could not arrange the Aerial spraying due to the unavailability of helicopter and hence resorted to ground spraying. The ground spraying was not as effective as the helicopter spraying which also contributed to the reduction in the yield.

4) The Chikun Gunia epidemic has also resulted in low per capital turnover.

In Ayiranallur Estate of the company, the replanting operations were carried out as per schedule. Most of the areas of 1974 and 1975 plantations due for felling were subjected to intensive exploitation like round tapping/daily tapping, more lengthy tapping cuts with ethepone application had naturally boosted the yield. Accordingly, intensive tapping was re-sorted in these areas. But later on company had decided to extend the replanting schedule and hence felling of these areas were prolonged, because of the better price for latex in the market. Hence due to the intensive tapping aimed to fell the trees during 2000-05 has resulted in substantial reduction in the yield of these plantations during the extended period of replanting.

2.1.32 **Para 2.1.32**

Short Production of Cenex due to lower centrifuging efficiency

Efficiency of centrifuging process or the cenex recovery percentage depend on several factors of which feed tube used, processing methods and the DRC of the input material etc.

Details of percentage latex processed with each feed tube in the company

YEAR	% of latex processed with each feed tube		
	9 mm	10.5 mm	11.5 mm
2004-05	80.34	17.91	1.75
2005-06	82.13	17.87	0
2006-07	100	0	0
2007-08	88.31	11.69	0

So depending on the extent to which high feed tubes were used efficiency decreases. Higher feed tubes were used from August to January months in order to process the abundant crop during the peak season.

Normal processing is to produce cenex of ISI parameters. When special grade latex is required by M/s.HLL, special processing (including dilute processing & double centrifuging) is resorted to meet the specifications of special grade latex.

Details of HLL processing

Year	Special grade latex processed (in B/S)	% of special Total grade production	Total production (in B/S)
2004-05	4680	37.66	12426
2005-06	3148	24.42	12890
2006-07	No supply	0	0
2007-08	1259	12.26	10270

Moreover from 2006-07 onwards, M/s.HLL have made their specification of special grade latex further stringent, ie. maximum NRS level from 1.3% to 1.0% in the cenex. Hence extent of special processing required to meet the specification especially in dry season is increased from 2007-08 onwards. Double centrifuging and dilute processing are methods by which quality of the cenex is improved at the cost of efficiency.

Centrifuging machine is designed to give better efficiency within a small range of input DRC. So input DRC is usually standardized in between 28-30%, when latex is having high DRC. But due to the slaughter tapping and stimulant application, the field DRC of the latex decreased. This trend is indicated by the average DRC as shown below:

Year	Average DRC	
	Kulathupuzha Estate	Ayiranallur Estate
2005-06	31.69	31.21
2006-07	30.51	29.38
2007-08	29.82	27.06
2008-09	27.38	24.62

Out of the 4 centrifuging machines two are older versions on Alfa Lavan make (1984) they have in built limitations in recovery.

Cumulative effect of all the above factors especially the low DRC affects the efficiency of centrifuging process which resulted in lowering of cenex recovery during 2007-08.

2.1.33 **Para 2.1.33**
Cost of Conversion

The company has started Replanting activities since 2001 onwards in a phased manner. Hence the production of field latex in the estates is gradually coming down. Thus maximum capacity utilization at the factory is not possible. On the other hand the Fixed cost at the factory is increasing due to pay revision, enhancement of electricity tariff and hike in the other fixed overhead costs.

In order to minimize the cost of conversion of field latex into cenex and optimum capacity utilization the company has started purchase of field latex from outside source. There is still competition in the field latex market. However, the company is trying to procure field latex as far as possible. With the processing of additional quantity of cenex at the factory it is expected that the overall cost of conversion will he reduced in view of the capacity utilization.

It may please be noted that the higher cost of conversion for the last few years is only a temporary phenomena. Thus within few years the company can achieve maximum capacity utilization at the factory and the cost of conversion of field latex in to cenex will be reduced.

2.1.34 **Para 2.1.34**
Uneconomic production of Crumb rubber

There are different grades of ISNR namely ISNR 10, ISNR 20, ISNR 50 etc. The grading of the ISNR is based on its purity and other parameters. In the Crumb Rubber Factory scrap rubber is processed and the process loss is less than 1.73% of the input material.

The old technology, older machines, hike in the electricity charges etc resulted in higher production cost of the crumb rubber during previous years. Hence the Company modernized the crumb rubber Factory on the advice of Rubber Board. One of the objectives of the modernization project is to bring uniformity in the processing and thereby improving the quality.

At present the Crumb Rubber Factory is upgraded with latest technology and fuel used in the process is Bio mass gasifire. Since change in technology,the fuel cost will be reduced drastically and thereby reducing the production cost.

The price of natural rubber went down steeply during the months of July, August & September, 2006. The prices of natural rubber is highly fluctuating one. Wide changes in natural rubber price will take place in short periods due to various factors. During July, August & September, 2006 the rubber prices were on a downward trend. Hence the price realization came down during the above three months.

2.1.35 **Para 2.1.35**
Short realisation of prices of Cenex

The prices of cenex is fixed in the company after considering the rubber market trend, demand and supply position, international market trend etc. Before fixing the price of concentrated latex in the company one internal sales advisory committee consisting of Finance Manager, Company Secretary, Factory Manager(LCF), and Deputy Manager(Sales) will analyse the market rates and rates of the sister concerns like State Farming Corporation of Kerala Ltd and Plantation Corporation of Kerala Ltd. and other public sector plantations. Then the internal committee recommends a price revision according to the present rubber market conditions to the sales committee, which is a subcommittee of Board of Directors of the Company for consideration.

The sub-committee consist of Managing Director, Director from Finance Department, Govt.of Kerala, a Senior Officer from Rubber Board. The Committee will fix the price of cenex after considering all these parameters. The fixation of price of cenex is done independently by the 3 companies.

In certain occasions the Rehabilitation Plantations Ltd. revises the price of cenex the next day after the revision of price of State Farming Corporation of Kerala I.A. Normally the price of cenex fixed by Rehabilitation Plantations Ltd will be 50ps or Rs.1/- higher than that of M/s State Farming Corporation of Kerala Ltd and Plantation Corporation of Kerala Ltd. If the audit will consider the price realization for the whole year certainly the realisation of the prices of cenex in RPL is higher than State Farming Corporation of Kerala Ltd and Plantation Corporation of Kerala Ltd. .

If there is an increasing trend of prices of cenex in the market the company will stop the sales on hearing that the State Farming Corporation of Kerala Ltd or Plantation Corporation of Kerala Ltd. revised their price of cenex. Then the Company will be issuing material only for those orders for which the Demand Drafts on the date of closing of the sales. This was done in 2006-07 and 2007-08 and now by the introduction of Real Time Gross Settlement (RTGS) in banks, the above said problem is solved.

2.1.41 **Para 2.1.41**
Non utilization of tax benefit under Rubber Development Account Scheme

The Government of India has introduced a new scheme called Rubber Development Account Scheme and included in the Income Tax Act under Sec.33AB. The relevant portion of the section is given below:

Where an assessee carrying on business of (growing and manufacturing tea or coffee or rubber) in India has, before the expiry of six months from the end of the previous year or before the due date of furnishing the return of his income, whichever is earlier,

(a) deposited with the National Bank any amount or amounts in an account (hereinafter in this section referred to as the special account) maintained by the assessee with that Bank in accordance with, and for the purposes specified in, a scheme (hereinafter in this section referred to as the Scheme) [approved in this behalf by the Tea Board or the Coffee Board or the Rubber Board]: or

(b) deposited any amount in an account (hereinafter in this section referred to as the Deposit Account) opened by the assessee in accordance with, and for the purposes specified in, a scheme framed by the Tea Board or the Coffee Board or the Rubber Board as the case may he (hereafter in this section referred to as the deposit scheme) with the previous approval of the Central Government.

The assessee shall, subject to the provisions of this section, be allowed a deduction such deduction being allowed before the loss, if any brought forward from earlier veal's is set-off under section 72) of-

1 aa) a sum equal to the amount or the aggregate of the amounts so deposited: or

1. ab) sum equal to forty per cent of the profits of such business computed under the head "profits and gains of' business or profession" before making any deduction under this section, whichever is less.

Thus the deduction under the section can only be claimed only if there is profit under the head Profit and gains of business or profession' before making any deduction under this section.

Due to the replanting operations the company has no profit from the activity of growing and manufacturing of rubber. The company earns profit from interest income from Treasury / bank term deposits and sale of old rubber trees. Even though in books both the above receipts are included in the Profit and Loss Account and is part of profits of the company, for the purpose of Central Income Tax, interest income assessed fully under Income from other sources and sale proceeds of old rubber trees are treated as Capital Receipts.

During the periods when the company had profits under agricultural operations the company had deposited amounts limiting to 20% of the profit with Govt. Treasury for availing the tax rebate. Thereby the company had obtained tax rebate under Agricultural Income tax Act @ 60% to 50% of tax which were more than the tax rebate offered by the Central Income tax scheme.

According to the opinion of the tax consultants of the company also there will be no tax rebate u/s 33AB if there is no profit from Agricultural operation. Hence the company has not lost any Income tax rebate due to non operation of Rubber Development Account Scheme.

Annexure 7

(Referred to in paragraph 2.1.9)

Financial Position of three Plantation Companies

(Rs. in lakh)

Particulars	RPL					SFCK					PCK				
	2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**
Sources															
Share Capital	339.27	339.27	339.27	339.27	339.27	903.57	903.57	903.57	903.57	903.57	556.88	556.88	556.88	556.88	556.88
Loan						203.08	134.49	137.74	141.00	144.25	441.45	122.46	42.73	48.21	48.21
Reserves and Surplus	5457.82	6109.01	6993.10	7657.30	8252.37	3676.74	3996.08	2460.24	3056.62	3014.52	1626.13	1806.95	3025.74	4331.20	6060.56
Total	**5797.09**	**6448.28**	**7332.37**	**7996.57**	**8591.64**	**4783.39**	**5034.14**	**3501.55**	**4101.19**	**4062.34**	**2624.46**	**2486.29**	**3625.35**	**4936.29**	**6665.65**
Applications															
Fixed Assets & Development Expenses	1846.36	2114.11	2408.23	2814.73	3399.22	2138.44	1988.80	1953.27	1979.11	1945.03	4532.23	4933.66	5048.19	5172.65	5421.68
Capital Work in Progress	13.98	6.12	2.37	2.36	20.38	286.87	286.87	325.55	286.87	293.39	237.75	35.07	9.69	10.03	78.37
Investments	1.00	1.00	1.00	1.00	1.00	100.20	100.20	100.20	100.20	100.20	125.01	125.01	150.01	150.01	150.01
Deferred Tax	42.39	42.05	59.00	61.67	57.24										
Current Assets, Loans & Advances	5167.95	5771.26	6398.79	6634.70	6849.17	4012.36	4895.01	6082.02	7413.31	8034.48	1858.57	2212.75	3700.81	5902.98	8702.41
less *Current Liabilities & Provisions*	*1274.59*	*1486.26*	*1537.02*	*1517.89*	*1735.37*	*1754.48*	*2236.74*	*4959.49*	*5678.30*	6310.76	*4129.10*	*4820.20*	*5283.35*	*6299.38*	7686.82
Net	3893.36	4285.00	4861.77	5116.81	5113.80	2257.88	2658.27	1122.53	1735.01	1723.72	(2270.53)	(2607.45)	(1582.54)	(396.40)	1015.59
Total	**5797.09**	**6448.28**	**7332.37**	**7996.57**	**8591.64**	**4783.39**	**5034.14**	**3501.55**	**4101.19**	**4062.34**	**2624.46**	**2486.29**	**3625.35**	**4936.29**	**6665.65**

Annexure 8

(Referred to in Paragraph 2.1.9)

Working Results of three Plantation Companies

(Rs. in lakh)

Particulars	RPL					SFCK					PCK				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Income															
Sales	1408.23	1794.58	2144.58	1907.99	1972.58	1521.70	2106.53	1892.62	2509.64	2284.89	3111.84	4470.53	5030.88	5257.91	7022.88
Interest	187.72	308.28	290.38	373.95	451.03	75.57	130.07	188.44	249.95	273.11	7.73	9.63	38.92	254.41	484.25
Other Income	3.52	7.80	17.11	5.56	8.81	49.18	4.35	4.33	23.10	7.70	19.71	30.12	149.73	576.23	596.33
Stock differential	*(36.43)*	*(142.35)*	*(44.29)*	*84.90*	*(15.91)*	*100.87*	*(154.64)*	*429.38*	*(96.21)*	*(103.47)*	*325.12*	*(447.45)*	*196.90*	*9.77*	*(85.12)*
Total	**1563.04**	**1968.31**	**2407.78**	**2372.40**	**2416.51**	**1747.32**	**2086.31**	**2514.77**	**2686.48**	**2462.23**	**3464.40**	**4062.83**	**5416.43**	**6098.32**	**8018.34**
Expenditure															
Agriculture and other operations	473.59	722.36	529.48	692.92	767.46	737.05	677.07	692.88	780.43	1017.24	2313.47	2981.[illegible]	3325.81	3749.06	4666.24
Establishment Expenses	515.17	593.47	693.13	748.26	832.71	403.45	394.00	533.84	555.48	1099.62	559.85	815.00	810.38	897.13	1185.27
Depreciation	47.65	50.26	52.84	57.86	58.71	83.39	131.00	62.67	73.49	66.78	40.82	42.83	61.47	64.82	88.73
Total	**1036.41**	**1366.09**	**1275.45**	**1499.04**	**1658.88**	**1223.89**	**1202.07**	**1289.39**	**1409.40**	**2183.64**	**2914.14**	**3839.03**	**4197.66**	**4711.01**	**5940.24**
Profit before tax	**526.63**	**602.22**	**1132.33**	**873.36**	**757.63**	**523.43**	**884.24**	**1225.38**	**1277.08**	**278.59**	**550.26**	**223.80**	**1218.77**	**1387.31**	**2078.10**
Profit as a percentage of turnover	37.40	33.56	52.80	45.77	38.41	34.40	41.98	64.75	50.89	12.19	17.68	5.01	24.23	26.39	29.59
Tax	117.85	143.11	168.85	129.77	83.18	310.26	564.90	2761.22*	635.52	275.51		60.00	33.00	103.42	352.76
Dividend	77.13	104.70	79.38	79.38	79.38				45.18	45.18				32.57	32.58
Replantation Reserve	33.68	(113.15)	15.46	5.87	8.21	37.46	52.26	46.92	62.23	56.37				87.00	89.00
	228.66	**134.66**	**263.69**	**215.02**	**170.77**	**347.72**	**617.17**	**2808.14**	**742.93**	**377.06**	**0**	**60.00**	**33.00**	**222.99**	**474.34**
Net Profit	**297.97**	**467.56**	**868.64**	**658.34**	**586.86**	**175.71**	**267.07**	**1582.76**	**534.15**	**-98.47**	**550.26**	**163.80**	**1185.77**	**1164.32**	**1603.76**

* Including arrears of Agricultural Income tax

Annexure 9

(Referred to in paragraph 2.1.14)

Comparative Statement showing Age-wise Yield and shortage of yield 2004-05

(Area in hectare and yield in kilogram)

Year of Planting	Standard Yield/Ha	PCK				SFCK				RPL			
		Area	Yield/ Ha	Yield *Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield
1973	1267	120.39	854.107	49708	67.41					186.75	1225.885	7678	96.75
1974	1184	201.67	821.257	73154	69.36					312.83	1351.967	-52545	114.19
1975	1210	93.49	721.082	45709	59.59					371.61	1278.095	-25305	105.63
1976	1249	140.99	744.07	71190	59.57					258.59	1379.152	-33656	110.42
1977	1509	206.09	526.386	202507	34.88					255.42	1368.378	35918	90.68
1978	1430	29.12	541.68	25868	37.88					91.28	1139.056	26557	79.65
1979	1509	87.68	550.36	84054	36.47								
1980	1632	5	999.6	3162	61.25								
1981	1418	105	751.781	69953	53.02								
1982	1398	27.56	666.9	20149	47.70	679.8	1157.783	163300	82.82				
1983	1500	186.46	712.816	146778	47.52	553.15	1197.916	167098	79.86				
1984	1388					468.14	1395.997	-3744	100.58				
1985	1562	84.5	706.72	72271	45.24								
1986	1391	56	861.48	29653	61.93					6	1724.5	-2001	123.98
1987	1426												
1988	1532	30	867.967	19921	56.66								
1989	1545	183.91	1405.949	25573	91.00								
1990	1616	310.74	1172.691	137754	72.57	93.41	1276.159	31745	78.97				
1991	1748	438.99	997.847	329310	57.09								
1992	1542	635.7	974.29	360893	63.18	10.6	1512.735	310	98.10	3	1219.667	967	79.10
1993	1550	421.86	874.096	285137	56.39					7.42	1446.631	767	93.33
1994	1445	707.69	974.377	333055	67.43								
1995	1285	408.05	842.427	180592	65.56	1.24	1666.935	-474	129.72				
1996	1081	287.97	1025.104	16096	94.83								
1997	825	211.7	854.917	-6333	103.63								
1998	825	42.42	424.689	16981	51.48								
Nursery						2.38	907.183						
Total		**5022.98**	**873.882**	**2593135**		**1808.72**	**1239.926**	**358235**		**1492.9**	**1314.008**	**-41620**	

* Yield Shortage = Area x (Standard yield per Ha – Yield per Ha)

Comparative Statement showing Age-wise Yield and shortage of yield 2005-06

Year of Planting	Standard Yield/Ha	PCK				SFCK				RPL			
		Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield
1973	1267	120.39	836.008	51887	65.98					119.15	1631.97	-43486	128.81
1974	1267	201.67	646.601	125116	51.03					208.83	1692.44	-88845	133.58
1975	1184	93.49	502.76	63689	42.46					365.11	1442.25	-94290	121.81
1976	1210	139.99	540.446	93731	44.66					257.99	1522.4	-80596	125.82
1977	1249	206.09	424.441	169933	33.98					249.92	1410.62	-40392	112.94
1978	1509	29.12	582.55	26978	38.61					91.28	1174.35	30547	77.82
1979	1430	87.68	568.476	75538	39.75								
1980	1509	5	962.6	2732	63.79								
1981	1632	105	711.495	96653	43.60								
1982	1418	27.56	536.865	24284	37.86	679.8	1273.41	98292	89.80				
1983	1398	186.46	623.833	144351	44.62	553.15	1311.874	47641	93.84				
1984	1500					468.14	1404.405	44752	93.63				
1985	1388	84.5	543.325	71375	39.14					3	1428	-120	102.88
1986	1562	56	735.411	46289	47.08					6	2091	-3174	133.87
1987	1391												
1988	1426	30	750.433	20267	52.63								
1989	1532	183.91	1075.716	83915	70.22								
1990	1545	310.74	1043.593	155807	67.55	93.41	1315.18	21467	85.12				
1991	1616	438.99	1100.467	226314	68.10								
1992	1748	635.7	847.758	572284	48.50	10.6	1438.207	3284	82.28	3	1344	1212	76.89
1993	1542	421.86	776.179	323069	50.34					7.42	1702.56	-1191	110.41
1994	1550	709.92	900.446	461131	58.09								
1995	1445	418.3	895.757	229748	61.99	1.24	1373.387	89	95.04				
1996	1285	318.51	932.372	112316	72.56								
1997	1081	275.82	603.592	131679	55.84								
1998	825	219.24	394.335	94419	47.80								
1999	825	74.84	289.7	40062	35.12								
Nursery						2.38	793.277						
Total		5380.78	796.415	3403505		1808.72	1321.527	215525		1311.7	1494.589	-320335	

Comparative Statement showing Age-wise Yield and shortage of yield 2006-07

Year of Planting	Standard Yield/Ha	PCK				SFCK				RPL			
		Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield
1973	1267	120.39	557.181	85455	43.98					74.15	1585.3	-23602	125.12
1974	1267	189.67	561.748	133765	44.34					173.38	1238.56	4931	97.76
1975	1267	70.01	231.967	72463	18.31					307.08	1522.93	-78591	120.20
1976	1184	139.99	278.384	126777	23.51					263.84	1556.35	-98241	131.45
1977	1210	206.09	371.736	172758	30.72					249.92	1509.67	-74894	124.77
1978	1249	29.12	404.56	24590	32.39					91.28	1183.5	5979	94.76
1979	1509	87.68	396.23	97568	26.26								
1980	1430	5	744.2	3429	52.04								
1981	1509	105	655.124	89657	43.41								
1982	1632	27.56	419.086	33428	25.68	679.8	1184.69	304081	72.59				
1983	1418	186.46	551.936	161486	38.92	553.15	1257.586	88733	88.69				
1984	1398					468.14	1410.082	-5656	100.86				
1985	1500	84.5	527.491	82177	35.17					3	1360	420	90.67
1986	1388	56	747.411	35873	53.85					6	2434.5	-6279	175.40
1987	1562												
1988	1391	30	793.567	17923	57.05								
1989	1426	183.91	1300.065	23161	91.17								
1990	1532	310.74	1227.634	94579	80.13	93.41	1293.876	22243	84.46				
1991	1545	438.99	1362.122	80282	88.16								
1992	1616	568.9	1062.215	315048	65.73	10.6	1217.358	4226	75.33	3	1300	948	80.45
1993	1748	521.86	736.732	527740	42.15					7.42	1970.49	-1651	112.73
1994	1542	711.78	677.25	615512	43.92								
1995	1550	455.56	1038.82	232873	67.02	1.24	1076.613	587	69.46				
1996	1445	366.58	981.726	169827	67.94								
1997	1285	334.92	880.231	135565	68.50					2	2888.5	-3207	224.79
1998	1081	230.67	922.469	36568	85.33								
1999	825	71.84	575.165	17948	69.72								
2000	825	15.2	391.645	6587	47.47								
Nursery						2.38	942.857						
Total		**5548.42**	**893.641**	**3368504**		**1808.72**	**1270.758**	**414214**		**1181.07**	**1471.545**	**-274187**	

Comparative Statement showing Age-wise Yield and shortage of yield 2007-08

Year of Planting	Standard Yield/Ha	PCK				SFCK				RPL			
		Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield
1973	1267			0						19	1723.58	-8675	136.04
1974	1267	25	378.84	22204	29.90					173.38	970.84	51348	76.63
1975	1267									307.08	1145.95	37172	90.45
1976	1267	107.85	189.912	116164	14.99					228.14	1487.33	-50266	117.39
1977	1184	98.35	231.418	93686	19.55					249.92	1452.84	-67188	122.71
1978	1210									91.28	1932.02	-65906	159.67
1979	1249												
1980	1509												
1981	1430	105	501.343	97509	35.06								
1982	1509	27.52	1007.449	13803	66.76	679.8	1225.788	192527	81.23				
1983	1632	260.85	468.254	303563	28.69	553.15	1111.071	288152	68.08				
1984	1418					468.14	1247.672	79738	87.99				
1985	1398	84.5	512.722	74806	36.68					3	1429	-93	102.22
1986	1500	56	654.554	47345	43.64					6	2127	-3762	141.80
1987	1388												
1988	1562	30	652.467	27286	41.77								
1989	1391	183.91	1282.818	19896	92.22								
1990	1426	310.74	1092.103	103755	76.59	93.41	1103.897	30088	77.41				
1991	1532	438.63	1138.787	172475	74.33								
1992	1545	631.7	1028.487	326282	66.57	10.6	1374.434	1808	88.96	3	1013	1596	65.57
1993	1616	277.86	1417.779	55078	87.73					7.45	1633.15	-128	101.06
1994	1748	718.32	1034.178	512752	59.16								
1995	1542	437.88	1025.018	226376	66.47	1.24	1695.161	-190	109.93				
1996	1550	380.36	1012.204	204556	65.30								
1997	1445	378.93	962.611	182792	66.62					2	2823.5	-2757	195.40
1998	1285	325.71	932.253	114893	72.55								
1999	1081	213.19	578.925	107037	53.55								
2000	825	141.52	86.362	104532	10.47								
2001										46.77	771.22	-36070	
2002													
Nursery						2.38	874.79						
Total		**5233.82**	**927.42**	**2926790**		**1808.7**	**1190.81**	**592123**		**1137**	**1324.26**	**-108659**	

760/2018.

Comparative Statement showing Age-wise Yield and shortage of yield 2008-09

Year of Planting	Standard Yield/Ha	PCK				SFCK				RPL			
		Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield	Area	Yield/ Ha	Yield Shortage	% of Yield
1973	1267	0											
1974	1267	7.45	822.68	3310	64.93					114.03	869.02	45382	68.59
1975	1267									300.48	986.58	84261	77.87
1976	1267	107.85	124.05	123267	9.79					213.21	1350.98	-17905	106.63
1977	1267	95.35	59.14	115169	4.67					244.01	1287.51	-5005	101.62
1978	1184									91.28	1635.44	-41207	138.13
1979	1210												
1980	1249												
1981	1509	11	1721.82		114.10								
1982	1430	6	1448.33		101.28	688.62	1290.26	96228	90.23				
1983	1509	291.52	624.58	257826	41.39	555.75	1161.93	192884	77.00				
1984	1632	0	0.00	0	0.00	470.45	1192.58	206725	73.07				
1985	1418	84.5	583.35	70528	41.14	10.12	1388.72	296	97.94	3.00	1415.67	7	99.84
1986	1398	56	972.09	23851	69.53					6.00	2113.67	-4294	151.19
1987	1500												
1988	1388	25	937.08	11273	67.51								
1989	1562	188.91	1463.78	18555	93.71								
1990	1391	310.74	1223.93	51915	87.99	84.90	1091.11	25461	78.44				
1991	1426	439.25	1247.21	78534	87.46								
1992	1532	631.7	1298.13	147736	84.73	19.84	1403.58	2548	91.62	3.00	1280.33	755	83.57
1993	1545	423.17	1213.16	140425	78.52					7.42	1626.69	-606	105.29
1994	1616	714.66	1341.43	196224	83.01								
1995	1748	423.46	1195.45	233983	68.39	1.25	1330.40	522	76.11				
1996	1542	351.03	1420.68	42587	92.13								
1997	1550	353.53	1269.64	99116	81.91					2.00	2801.50	-2503	180.74
1998	1445	313.8	1388.84	17623	96.11								
1999	1285	282.98	1242.89	11916	96.72								
2000	1081	149.54	906.43	26106	83.85								
2001	825	1.17	315.38	596	38.23					84.89	1460.65	-53960	177.05
2002	825									4.95	434.99	1931	52.73
Narsery													
Total		5268.61	1183.61	1670540		1830.93	1218.77	524664		1074.27	1211.56	6856	

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Annexure 10

(Referred to in paragraph 2.1.15)

Stand of tapping trees

Company	Estate	2005			2006			2007			2008			2009		
		Area	No. of Tapping Trees	Stand per Hectare	Area	No. of Tapping Trees	Stand per Hectare	Area	No. of Tapping Trees	Stand per Hectare	Area	No. of Tapping Trees	Stand per Hectare	Area	No. of Tapping Trees	Stand per Hectare
PCK	Kodumon	1112.82	351204	316	1112.82	351204	316	1141.23	374755	328	1173.31	383389	327	1189.23	361063	304
	Chandanappally	1225.75	302077	246	1225.75	317732	259	1222.27	336616	273	1394.27	347782	249	1488.63	416435	280
	Thonnithode	592.01	125387	212	592.01	121769	206	592.01	124244	210	592.01	115777	196	592.01	115777	196
	Kailala	995.16	216842	218	1042.16	225778	217	1038.16	230381	222	1123.16	252774	225	1115.49	265929	238
	Adirappally	1197.4	260695	218	1236.5	282038	228	1042.97	248683	238	1219.83	281299	231	1231.13	213043	173
	Nilambur	245.1	50995	208	299.14	64924	217	299.14	69298	232	299.14	68171	228	280.14	51439	184
	Perambra	116	19920	172	116	25885	223	147.88	41498	281	182.97	47020	257	194.97	52027	267
		5484.24	**1327120**	**242**	**5624.38**	**1389330**	**247**	**5483.66**	**1425475**	**260**	**5984.69**	**1496212**	**250**	**6091.60**	**1475713**	**242**
SFCK	Chithelvetty	595.5	189938	319	595.5	175089	294	595.5	175880	295	595.5	169181	284	595.50	160254	269
	Mullumala	421.48	98258	233	421.48	104549	248	421.48	104751	249	421.48	99376	236	421.48	98909	235
	Cherupittakavu	407.89	101765	249	407.89	98151	241	407.89	99774	245	407.89	101105	248	407.89	94934	233
	Kumaramkudy	395.98	120357	304	395.98	118340	299	395.98	104091	263	395.98	114165	288	395.98	99190	250
		1820.85	**510318**	**280**	**1820.85**	**496129**	**272**	**1820.85**	**484496**	**266**	**1820.85**	**483827**	**266**	**1820.85**	**453287**	**249**
RPL	Kulathupuzha	1070.6	215243	201	1011.85	215243	213	972.8	206303	212	899.4	192247	214	832.00	179874	216
	Ayiranallur	485.9	99341	204	406.8	79536	196	299.35	58043	194	293.22	51446	175	242.27	42514	175
		1556.50	**314584**	**202**	**1418.65**	**294779**	**208**	**1272.15**	**264346**	**208**	**1192.62**	**243693**	**204**	**1074.27**	**222388**	**207**
	Total	**7748.77**	**1800818**	**232**	**7751.06**	**1829034**	**236**	**7435.43**	**1799562**	**242**	**7824.85**	**1840343**	**235**	**7797.49**	**1790325**	**230**
	Average Stand for 5 years	**235**														

Annexure 11

(Referred to in paragraph 2.1.16)

Statement showing yield pattern in areas replanted by PCK in their major estates

(Quantity in MT)

Sl. No.	[illegible]	[illegible]	[illegible] as on 31.3.09	[illegible]		2005-06		2006-07		2007-08		2008-09	
				Standard yield	Actual yield	Standard yield	Actual yield	Standard yield	Actual yield	Standard yield	Actual yield	Standard yield	Actual yield
1	Kodumon	859.3	346	1258	1080 85.85%	1364	978 71.70%	1396	1203 86.17%	1405	1153 82.06%	1360	1402 103.09%
2	Chandanappally	880	293	1111	833 74.98%	1212	847 69.88%	1331	985 74.00%	1373	923 67.23%	1330	994 74.74%
3	Adirappally	770.4	245	1115	536 48.07%	1079	540 50.05%	1115	536 48.07%	1159	602 51.94%	1307	865 66.18%
4	Kallala	796.5	227	1155	631 54.63%	1223	550 44.97%	1262	740 58.64%	1230	746 60.65%	1312	895 68.22%

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Annexure 12

(Referred to in paragraph 2.1.19)

Statement showing estate-wise land-labour ratios of the three Companies

PCK estates

Rubber Estates	Tapping area (Ha)	No. of Tappers	Land - Labour ratio	Total area (Ha)	No. of general workers	Land-Labour ratio
Kodumon	1173.31	241	4.87 : 1	1194.06	252	4.74 : 1
Chandanappally	1394.27	232	6.01 : 1	1508.96	229	6.59 : 1
Thannithode	371.87	47	7.91 : 1	592.01	84	7.05 : 1
Kallala	1123.16	291	3.86 : 1	1169.81	58	20.17 : 1
Adirappally	1219.83	233	5.23 : 1	1276.83	158	8.08 : 1
Perambra	182.97	57	3.21 : 1	432.86	132	3.28 : 1
Nilambur	299.14	61	4.90 : 1	299.14	61	4.90 : 1
Total	5764.55	1162	4.96 : 1	6473.67	974	6.65 : 1
Cashew Estates.						
Cheemeni	-	-	-	959.50	66	14.54 : 1
Mannarghat	-	-	-	511.50	47	10.88 : 1
Rajapuram	-	-	-	1522.91	102	14.93 : 1
Kasaragod	-	-	-	2190.00	57	38.42 : 1
Total				5183.91	272	19.06 : 1

SFCK

Rubber Estates	Tapping area (Ha)	No. of Tappers	Land-Labour ratio	Total area (Ha)	No. of general workers	Land-Labour ratio
Chithelvetty	595.50	250	2.38 : 1	595.50	20	29.78 : 1
Kumaramkudy	395.98	152	2.61 : 1	395.98	21	18.86 : 1
Mullumala	421.48	157	2.68 : 1	421.48	15	28.09 : 1
Cherupittakavu	407.89	142	2.87 : 1	407.89	21	19.42 : 1
Total	1820.85	701	2.60 : 1	1820.85	77	23.65 : 1

RPL

Rubber Estates	Tapping area (Ha)	No. of Tappers	Land-Labour ratio	Total area (Ha)	No. of general workers	Land-Labour ratio
Kulathupuzha	894.40	314	2.84 : 1	1307.89	416	3.14 : 1
Ayiranallur	293.22	87	3.37 : 1	727.20	294	2.47:1
Total	1187.62	401	2.96 : 1	2035.09	710	2.87 : 1

Annexure 13

(Referred to in paragraph 2.1.38)

Statement showing revenue generated from cashew plantations in rubber estates

Sl. No.	Estate	Mature area (Ha) (March 2009)	Yielding trees (March 2009) No.	Trees per Ha (March 2009) No.	Revenue from sale of crop (Net of cost of weeding) (Rs. in lakh)				Revenue per Ha (in Rupees)			
					2005-06	2006-07	2007-08	2008-09	2005-06	2006-07	2007-08	2008-09
1	Chandanappally	50	8375	168	3.67	3.55	0.11	4.26	7340	7100	220	8520
2	Thannithode	58.08	NA	NA	0.30	0.26	0.32	0.40	517	448	551	689
3	Kallala	277.97	21019	76	17.58	17.28	16.04	11.29	6324	6216	5770	4062
4	Adirappally	307.98	27634	89	21.21	17.91	20.27	16.94	6887	5815	6582	5500
5	Nilambur	51.76	4627	89	1.56	0.58	0.97	3.83	3014	1121	1874	7400
6	Perambra	484.68	48412	100	29.91	25.38	24.68	22.69	6171	5236	5092	4681

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