

Annual Report

FOR
THE YEAR 1995-1996



THE RUBBER BOARD

[Govt. of India, Ministry of Commerce]

KEEZHKUNNU, KOTTAYAM-686 002
KERALA STATE

THE RUBBER BOARD
Annual Report on the activities for the year 1995-96

PART I	<u>INTRODUCTION</u>	01 - 03
PART II	<u>CONSTITUTION AND FUNCTIONS</u>	03 - 08
PART III	<u>RUBBER PRODUCTION</u>	09 - 36
PART IV	<u>ADMINISTRATION</u>	37
	Establishment	38 - 39
	Excise Duty	40 - 46
	Market Intelligence	46 - 47
	Marketing	47
	Publication & Publicity	47 - 48
	Labour Welfare	48 - 51
	Internal Audit	52 - 53
	Legal	53
	Vigilance	54 - 55
	Official Language Implementation	55 - 56
	Sub/Liaison Offices	56
PART V	<u>RUBBER RESEARCH</u>	57 - 64
PART VI	<u>PROCESSING & PRODUCT DEVELOPMENT</u>	65 - 70
PART VII	<u>TRAINING</u>	71 - 74
PART VIII	<u>FINANCE AND ACCOUNTS</u>	75 - 77
PART IX	<u>STATISTICS & PLANNING</u>	78 - 80
PART X	<u>TECHNICAL CONSULTANCY</u>	81
PART XI	<u>STATISTICAL TABLES</u>	82 - 87
	<u>ANNEXURE - I</u> LIST OF BOARD MEMBERS	88 - 90

ANNUAL REPORT FOR THE WORKING OF THE RUBBER BOARD
FOR 1995-96

PART - I

I N T R O D U C T I O N

This is the annual report of the Rubber Board on its working for the year 1995-96, containing a summary of the activities from 1st April, 1995 to 31st March, 1996.

Rubber plays an important role in the industrial and economic development of the country. Cultivation of rubber was introduced to the country during the first decade of this century. Large planters were the pioneers. Small holders made their appearance later. The Government of India constituted the Rubber Board as a body corporate primarily to promote natural rubber production under the Rubber Act, 1947. In order to undertake scientific, technological and economic research, the Board established the Rubber Research Institute of India in 1955.

India had to evolve suitable package of practices for development of the rubber plantations. With sustained research and development activities coupled with extension and advisory services for transfer of technology to the planters' fields, the rubber producing sector had a quick change-over from the traditional methods to modern cultivation practices. India soon became the fourth largest natural rubber producer in the world, after Thailand, Indonesia and Malaysia.

The research efforts made significant contributions to the rubber plantation industry. India evolved the high yielding clone RR II 105 with average productivity between 2000 and 2500 kg per hectare. Switch-over from seedlings to buddings, evolving fertilizer schedules for mature and immature rubber, pest and disease management practices, improved crop exploitation techniques and improved crop processing etc. played a vital role in enhancing rubber production and upgrading quality of the processed rubber. Application of fertilisers after soil and leaf analysis, evolving new clones with higher yield potential compared to RR II 105, clones suitable for different agro-climatic regions and nutrient and plant protection schedules for the non-traditional region, tissue culture and molecular approach for productivity improvement, integrated approach to reduce the cost of production and improve quality and competitiveness, crop exploitation in association with yield stimulation, processing technically specified rubber and process aid rubbers, developing blends of NR with synthetic rubbers, developing formulations and processes for manufacturing processes, development of solar dryer for curing raw rubber etc. are some of the thrust areas in research and development activities.

The Rubber Plantation Development Scheme implemented from the VI Plan period is by far the largest scheme operated for development and promotion of rubber cultivation in the country. The scheme provides for financial assistance to small growers in the traditional areas and in the non-traditional areas to undertake rubber cultivation. Input subsidy, technical advice and assistance at all stages of planting and maintenance are extended in addition. During 1994-95, 5,388 ha. was newly planted with rubber and during 1995-96, 4,735 ha. Terrorist violence in the North-east region where there is scope for large expansion of rubber cultivation continues to adversely affect the planting tempo.

Performance during 1995-96

The overall performance of the rubber plantation industry during 1995-96 has been impressive. Production of natural rubber increased to 506,910 tonnes from 471,815 tonnes recording a growth rate of 7.4%.

The consumption of natural rubber during the year increased by 8.2% to 525,465 tonnes as compared to 485,850 tonnes in 1994-95.

Price

During the year, the monthly average price of rubber was Rs.5,204/- per quintal for RSS IV grade as against Rs.3,638/- in the previous year. A quantity of 820 tonnes of different grades of natural rubber was exported during 1995-96.

PART - II

CONSTITUTION & FUNCTIONS

1) INTRODUCTION

The Indian Rubber Board was constituted under the Rubber (Promotion & Marketing) Act, 1947 which came into force on 19th April, 1947 'to promote by such measures as it thinks fit, the development of the rubber industry in India'. The Rubber Production & Marketing (Amendment) Act of 1954 made certain changes in the constitution of the Board and its name was changed as Rubber Board. This Act came into force on 1st August, 1955. The Rubber Act was further amended by the Rubber (Amendment) Act 1960, by the Rubber (Amendment) Act,

1982 and by the Rubber (Amendment) Act, 1994. The amendment in 1982 was to appoint a part time/whole time Chairman for the Board and an Executive Director on whole time basis (if considered necessary). The amendment in 1994 was to enhance the ceiling limit of cess from Re.1/- to Rs.2/- per kg.

CONSTITUTION

The Rubber Board functions under the Ministry of Commerce of the Government of India. The Board has at present a full time Chairman as principal executive, responsible for discharging the functions as laid down under Section 8 of the Rubber Act. There are 25 other members consisting of -

- (a) Two members to represent the State of Tamilnadu, of whom one shall be a person representing the rubber producing interests;
- (b) Eight members to represent the State of Kerala, six of whom shall be representing the rubber producing interests, three of such being persons representing the small growers;
- (c) Ten members to be nominated by the Central Govt. of whom two shall represent the manufacturers and four labour;
- (d) Three members of Parliament of whom two shall be elected by the Lok Sabha and one by the Rajya Sabha;
- (e) The Executive Director (ex-officio); and
- (f) The Rubber Production Commissioner (ex-officio).

The position of Executive Director has not been filled up.

List of the members of the Board as on 31.3.1996 is given at the end of this report.

Shri MD Joseph, Member representing large growers was elected as Vice Chairman for one year from 9.4.1995.

Seven Committees have been formed to review the Board's activities vis-a-vis the functions as laid down under Section 8 of the Rubber Act. These Committees examine proposals for development of natural rubber industry and make suitable recommendations to the Board. The Committees are Executive Committee, Research and Development Committee, Market Development Committee, Planting Committee, Statistics & Import/Export Committee, Labour Welfare Committee and Staff Affairs Committee.

Smt J Lalithambika IAS laid down office as Chairman of the Board on 10.5.1995.

Shri KB Pillai IAS, Chairman, MPEDA held additional charge of the Chairman, Rubber Board from 10.5.1995 to 7.6.1995.

Shri KJ Mathew IAS took over as Chairman from 7.6.1995 and continued as Chief Executive of the Board during the reporting period.

3) FUNCTIONS

The functions of the Board according to Section 8 of the Rubber Act are -

- i) Promote by such measures as it thinks fit the development of the rubber industry. The measures may provide for -
 - a) undertaking, assisting or encouraging scientific, technological and economic research;
 - b) training students in improved methods of planting, cultivation, manuring and spraying;

- c) supply of technical advice to rubber growers;
 - d) improving the marketing of rubber;
 - e) collection of statistics from owners of estates, dealers and manufacturers;
 - f) securing better working conditions and the provisions and improvement of amenities and incentives for workers; and
 - g) carrying out any other duties which may be vested with the Board.
- ii) It shall also be the duty of the Board -
- a) to advise the Central Government on all matters relating to the development of the rubber industry, including the import and export of rubber;
 - b) to advise the Central Govt. with regard to participation in any international conference or scheme relating to rubber;
 - c) to submit to the Central Govt. and such other authorities as may be prescribed half yearly reports on its activities and the working of the Act; and
 - d) to prepare and furnish such other reports relating to the rubber industry as may be required by the Central Govt. from time to time.

4) MEETING OF THE BOARD AND ITS COMMITTEES

The following meetings of the Board and of the Committees were held during the year;

- | | |
|-------------------------|--|
| a) <u>Board Meeting</u> | On 3 occasions; the 125th meeting on 7.4.1995, 126th meeting on 30.8.1995 and 127th meeting on 29.12.1995. |
|-------------------------|--|

b) Committee Meetings

Executive Committee	29.06.1995, 14.12.1995.	07.10.1995	&
Statistics & Import/ Export Committee	29.06.1995, 14.12.1995.	28.12.1995,	&
Planting Committee	18.08.1995		
Labour Welfare Committee	18.08.1995.		

5) ORGANISATIONAL SET UP

The activities of the Rubber Board were carried out by eight departments viz. Rubber Production, Administration, Rubber Research, Processing & Product Development, Training, Finance & Accounts, Statistics & Planning and Technical Consultancy; headed respectively by the Rubber Production Commissioner, the Secretary, the Director of Research, the Director (P&PD), the Director (Training), the Director (Finance), the Jt. Director (S&P) and the Jt. Director (TC).

The headquarters of the Board alongwith the Administration, Rubber Production, Statistics & Planning and Finance & Accounts Departments remained located at own premises in Keezhukunnu, Kottayam-686 002.

There are eight Sub/Liaison Offices under the Administration Department. The Rubber Production Department has 3 Zonal Offices, 2 Nucleus Rubber Estate & Training Centres, 6 Supervisory Offices, 40 Regional Offices, 2 ADOs Offices, 165 Field Offices, 15 Regional Nurseries and 25 Tappers' Training Schools located at different rubber growing regions.

The Research Department, the Department of Processing and Product Development, the Training Department and the Technical Consultancy Department functioned in the Board's own building at Kottayam-9. The Research Department runs two Regional Research Stations in Kerala, one each in Tamilnadu, Karnataka, Maharashtra (Dapchari), Orissa, West Bengal, Assam, Mizoram, Meghalaya and Tripura. The Pilot Crumb Rubber Factory located at Kottayam and the Pilot Latex Processing Factory located at the Central Experiment Station at Chethackal were run by the Department of Processing and Product Development which has also established a Pilot Plant for Radiation Vulcanisation of Natural Rubber within the RRII Campus.

The Chairman exercises administrative control over all the Departments and Offices. The total officers and staff under the Board as on 31.3.1996 were 2181; 224 under Group 'A', 586 under Group 'B', 1211 under Group 'C' and 160 under Group 'D'. Very cordial relations existed between the staff and the executive personnel. Their good work has resulted in the impressive record of achievement during the year.

The activities of the different departments are summarised in the following pages -

PART - III
RUBBER PRODUCTION

FUNCTIONS

The following main functions were performed to promote natural rubber production in the country.

- i) Planning, formulation and implementation of schemes for expansion, development and modernisation of rubber plantations.
- ii) Rendering advisory and extension services.
- iii) Production, procurement and distribution of high yielding planting materials.
- iv) Facilitating distribution of agro-inputs requiring popularisation.
- v) Training of tappers.
- vi) Demonstration and training in scientific planting and production of rubber in non-traditional rubber growing areas.

REVIEW OF ACTIVITIES

1) Rubber Plantation Development Scheme Phase I

This scheme aimed at integrated promotion of newplanting and replanting of rubber, replaced the earlier subsidy schemes separately for newplanting and replanting. The target set was 12,000 ha. per year for 5 years from 1980-81 to 1984-85.

The following incentives were offered for both replanting and newplanting of rubber.

- a) Capital subsidy of Rs.5000/- per ha. to growers owning upto 20 ha. including any area planted under the scheme and Rs.3000/- per ha. to growers owning more than 20 ha.

- b) Input subsidy to the weaker sections of growers possessing not more than 6 ha. of rubber for using approved planting materials and approved fertiliser and a subsidy of Rs.150/- per ha. for undertaking soil conservation work.
- c) The beneficiaries could avail of long term agricultural bank credit under NABARD's refinancing scheme to supplement the assistance from the Board. The maximum credit per ha. was limited to Rs.15,020/- to Rs.17,000/- and Rs.18,700/- respectively for growers owning upto 6 ha. of rubber, between 6 and 20 ha. of rubber and above 20 ha. of rubber. The loan advanced in 7 annual instalments was repayable from the 8th year. During the repayment period only simple interest was payable.
- d) The Board subsidised 3% interest to all categories of growers upto the 10th year of planting subject to limitation on the quantum of loans.
- e) Free advisory and extension support at all stages of planting and maintenance.

The cumulative progress of the scheme as on 31.3.1996 is summarised below.

	Years to which planting related					Total
	1980	1981	1982	1983	1984	
No. of subsidy permits issued	17554	19180	18970	21533	25516	102753
Area covered by permits	12123	13603	13875	15580	17556	72737

During the year under review, an amount of Rs.4,95,020/- was disbursed as subsidy including interest subsidy. Total amount disbursed towards subsidy since inception of the scheme including interest subsidy comes to Rs.40,15,05,835/-.

2) Rubber Plantation Development Scheme Phase II

The Rubber Plantation Development Scheme Phase II was implemented from 1985 onwards for a period of 5 years. The target under Phase II Scheme was only 40,000 hectares in view of the resource constraints.

The assistance offered under Phase II was to the following extent.

- i) Capital subsidy at the rate of Rs.5,000/- per ha. for growers owning upto 5 ha. of rubber in traditional areas and for all categories in the non-traditional areas.
- ii) Input subsidy for the use of high yielding planting materials of advanced growth (PB plants) @ Rs.6/- per plant subject to a maximum of 450 plants per ha. Growers in the traditional region having more than 5 ha. of rubber area and carrying out planting under the scheme were also eligible to receive this assistance.
- iii) The beneficiaries could avail of the bank loan under the Agricultural Refinance Scheme of NABARD. The loan was advanced in 7 annual instalments and was repayable in five annual instalments from the 10th year of planting with interest accrued upto the close of the 7th year payable during the 8th & 9th year.
- iv) The Board subsidised 3% interest on credit component from the 1st to the 9th year to growers eligible for the capital subsidy.
- v) Free advisory and extension support at all stages of planting, maintenance, tapping & processing of the crop. The cumulative progress of the scheme as on 31.3.1996 is summarised below.

	<u>Years to which planting related</u>					TOTAL
	1985	1986	1987	1988	1989	
No. of subsidy permit issued	23555	21246	21980	23977	23473	114231
Area covered by permits	15210	14067	14831	15633	15246	74987

During the year 1995-96 ie. as on 31.3.1996 a sum of Rs.1,50,49,088/- had been paid as subsidy including interest subsidy. The total disbursement of subsidy since inception of the scheme including interest subsidy amounted to Rs.44,67,28,340/-.

3) Rubber Plantation Development Scheme Phase III

Due to delay in approval of the 8th Five Year Plan proposals, the Board was not able to formulate Phase III of the Rubber Plantation Development Scheme. However, annual plans within the broad framework of VII Plan proposal were approved and budget provisions were also granted. The Board tentatively implemented the RPD Scheme Phase III for 1990-91, 1991-92 and 1992-93 as annual schemes on the same lines as the Phase II Scheme with a physical target of 12,000 ha. for each year.

The cumulative progress of the scheme as on 31.3.1996 is summarised below.

	Years to which planting related			TOTAL
	1990	1991	1992	
No. of subsidy permit issued	24268	27911	24591	76770
Area covered by permits in ha.	14461	16339	14488	45288

During the year 1995-96 ie. as on 31.3.1996 an amount of Rs.2,40,20,781/- was disbursed as subsidy including interest subsidy. The total amount of subsidy disbursed since inception of the scheme comes to Rs.24,26,50,616/- including interest subsidy.

4) Rubber Plantation Development Scheme Phase IV

This is successor to Phase III being implemented from 1993 onwards. The physical target for the Plan period is 83,000 ha. of which 70,000 ha. has been earmarked under the World Bank assisted Project. The Scheme envisages replanting of uneconomic rubber in 40,000 ha. in traditional areas and newplanting in 30,000 ha. including 7,000 ha. in non-traditional areas, the rest 13,000 ha. would be planted in NT areas where the World Bank assisted Rubber Project is not in operation.

Assistance offered under the Phase IV Scheme is at the following rates.

- a) Capital Subsidy @ Rs.8,000/- per ha. limited to 2 ha. for planters whose total rubber area does not exceed 5 ha. in traditional areas. All growers in non-traditional area are eligible for subsidy for planting upto 5 ha. of rubber.
- b) Input subsidy at a declining rate of Rs.350/- in the 1st year, Rs.250/- in the 2nd year, Rs.170/- in the 3rd year, Rs.90/- in the 4th year and Rs.20/- in the 5th year of implementation of the World Bank Project.
- c) Input subsidy for the use of high yielding planting materials of advanced growth (polybag plants) is also granted to a maximum of Rs.3,000/- per ha. for general category growers and Rs.4,000/- per ha. for SC/ST growers. This facility is available to all growers in traditional and non-traditional areas including those not eligible for capital subsidy.
- d) The beneficiaries could avail themselves of the bank credit under the Agricultural Refinancing Scheme of NABARD, at the existing rate. The 3% interest subsidy on the credit has been withdrawn.

Plantation insurance is made obligatory on the part of beneficiaries during the immaturity period. The premium of Rs.500/- per hectare and 5% service tax will be recovered from the 1st instalment of subsidy. Insurance is optional for growers ineligible for planting grant ie, those who own total rubber area in excess of 5 hectare.

Progress of Phase IV of the Scheme so far is as follows:-

<u>1993</u>	<u>Replanting</u>	<u>Newplanting</u>	<u>Total</u>
No. of applications received	5380	20704	26084
Area (ha)	6287	11315	17602
No. of permits issued	3771	14805	18576
Area covered by permits	4317	6880	11197
 <u>1994</u>			
No. of applications received	4854	14707	19561
Area (ha)	6214	9421	15635
No. of permits issued	4550	11832	16382
Area covered by permits	5158	5388	10546
 <u>1995</u>			
No. of applications received	5233	18435	23668
Area (ha)	6036	10556	16592
No. of permits issued	4855	9671	14526
Area covered by permits	4747	4735	9482

During the year 1995-96 an amount of Rs.8,14,66,381/- was disbursed as subsidy including addl.assistance under this scheme. Total disbursement of subsidy since inception of the scheme comes to Rs.18,62,04,246/-.

During this year 1995-96, total subsidy disbursed under RPD Scheme Phase I to IV including addl.assistance amount to Rs.12.10 crores for 1,60,000 growers.

5) Insurance for Rubber Plantations

The insurance scheme drawn up in collaboration with the National Insurance Co. Ltd. and launched during 1988-89 was continued during the year. The Board takes out a master policy and arranges to issue thereunder policy/certificates to individual rubber growers who desire to obtain insurance cover and make remittance of premium amounts to the Board.

Claims are investigated in the field by Board's field personnel and reports are furnished to the insurer. The insurance company in turn settles admitted claims through the Board. Thus as the Board undertakes and discharges bulk of the administrative work, the insurer is able to keep down premium rates and to effect claim settlement quickly.

The perils covered are fire, fire resulting from explosion, lightning, bush fire and forest fire, windstorm, tempest, hurricane, landslide, hailstorm, rockslide and subsidence. The scheme covers all immature plantations under the RPD Scheme, as well as all mature plantations upto 22 years of age.

The rate of premium for immature area is Rs.500/- per ha. irrespective of the year of planting to cover immaturity period of 1 to 8 years or part thereof and Rs.473/- for mature areas to cover a three year consecutive period.

The maximum liability of the insurer for plantations in the age group of 1 to 8 years is Rs.45,000/- per ha. and Rs.6,000/- per ha. for mature trees. No salvage value of tree destroyed is deducted from the amount of compensation. Claims can be admitted after an initial waiting in period of one year for newly planted rubber and 30 days for established plantations. The insured grower has to bear 10% of the loss in the case of immature rubber and 10% or Rs.1,000/- whichever is more in the case of mature rubber.

As on 31.3.1996, the Board obtained two master policies covering 31,708.79 hectares of immature area and 7,300 hectares of mature area. In addition two master policies covering 1,250 ha. of immature area and 155 ha. of mature rubber area were taken from M/s.New India Assurance Co. for plantations under Regional Offices at Ernakulam and Kothamangalam on the same terms and conditions fixed by the NIC.

The premium paid on master policy for immature area to NIC is Rs.1,55,62,500/- to cover an area of 31,708.79 ha. and to New India Assurance Company is Rs.6,56,250/- to cover an area of 1250 ha. The total amount paid is Rs.1,62,18,750/- to cover total area of 32,958.79 ha. since inception of the scheme.

Premium paid to NIC during 1995-96 on master policies for mature area is Rs.35,20,303/- to cover 7300 ha. and to NIAC is Rs.76,981/- to cover 155 ha. Thus the total amount paid is Rs.35,97,284/- to cover an area of 7455 ha.

Premium paid to NIC during 1995-96 for immature area is Rs.49,87,500/- to cover an area of 9,500 ha. and to NIAC Rs.3,93,750/- for an area of 750 ha. Thus the total premium paid during the financial year is Rs.53,81,250/- for covering an area of 10,250 hectares.

An amount of Rs.33,20,934/- including current recovery of Rs.1,77,419/- was released against issue of policy/certificates to individual growers for mature area of 6,898.23 ha. and for immature area the amount recovered was Rs.1,47,82,515.50 including current recovery of Rs.42,83,369.25 to cover 30,222.99 ha.

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Compensation paid since inception of the scheme comes to Rs.53,08,893.30 for 1568 insurance certificate holders at the close of this financial year. The payment during the current period is Rs.14,72,210/- to 215 certificate holders.

6) Tribal Development Rubber Plantation Project/
Tribal Development Rubber Plantation Schemes.

The Board is implementing Tribal Development Rubber Plantation Projects in Thiruvananthapuram, Kollam and Idukki Districts sponsored by the Government of Kerala. The

Project is funded by the State Government and managed by the Rubber Board. Planting of 201 ha. has been completed in Thiruvananthapuram district, 100 ha. in Kollam district and 200 ha in Idukki district. In addition, two such schemes were directly funded by the Board under Tribal Sub Plan and Special Component Plan. Planting rubber in 137 ha. under the scheme was completed in Idukki District and in 39.21 ha in Kottayam District upto 1995-96.

A project ie. All Kerala Tribal Development Rubber Project was approved by the Government of Kerala to raise rubber in 1200 ha. of tribal lands in various districts of Kerala in a period of 5 years from 1995-96 at the rate of 240 ha. per year.

Owing to late approval of the scheme only 25 ha. was planted at Urukunnu Malavedar Colony as against the target of 240 ha. during the current financial year. An area of 130 ha. has been identified in Nedumangad and 50 ha. in Kothamangalam for planting during 1996. Selection of more area was in progress.

The area newplanted and replanted during 1994 and 1995 Statewise is given below.

Statewise Rubber Plantings during 1994 & 1995
(in hectares)

S T A T E	1994		1995	
	New-planting	Re-planting	New-planting	Re-planting
1	2	3	4	5
Kerala	3770.19	4838.70	2742.33	4317.40
Tamilnadu	107.81	259.30	97.21	232.60
Karnataka	125.95	60.14	87.22	196.91
Goa	1.22	-	2.74	-

1	2	3	4	5
Tripura	1061.07	-	1508.72	-
Assam	96.21	-	161.95	-
Meghalaya	75.60	-	44.80	-
Manipur	33.90	-	17.86	-
Mizoram	9.46	-	17.67	-
West Bengal	-	-	1.54	-
Nagaland	64.32	-	45.72	-
Arunachal Pradesh	12.36	-	-	-
Orissa	0.97	-	-	-
Andhra Pradesh	4.62	-	-	-
Port Blair	24.22	-	-	-

TOTAL	5387.90	5158.14	4734.76	4746.91
=====				

7) Planting materials

It is customary for the Board to publish every year a list of planting materials approved for planting based on yield potential and secondary characters. During the year 1995-96 also the list was published.

To ensure easy availability of budgrafted plants of the recommended clones at reasonable price, continued to maintain rubber nurseries in all important rubber growing centres. Details of the nurseries are given below.

<u>Sl. No.</u>	<u>Kerala</u>	<u>Total extent in ha.</u>	<u>Region</u>
1	CN Karikkattoor	20.23	Kottayam
2	RN Kadackamon	4.04	Punalur
3	RN Perumpulickal	4.00	Adoor
4	RN Kanhikulam	4.88	Palakkad
5	RN Ulickal	5.20	Thalassery
6	RN Alakode	3.41	Taliparamba
7	RN Manjeri	2.00	Nilambur
8	RN Peruvannamoozhy	3.60	Kozhikode
Total		47.36	
=====			

<u>Sl.No.</u>	<u>Non-traditional area</u>	<u>Total extent in ha.</u>	<u>Region</u>
1	RRDS (NRETC)	1.85	South Andamans
2	RN Devarappally	2.00	Andhra Pradesh
3	RN Darangiri	3.00	Guwahati, Assam
4	RN Mijungdisha	2.00	Diphu, Assam
5	RN Hillara	10.15	Silchar, Assam
6	RN Jengitchakgre	3.50	Tura, Meghalaya
7	RN Tulakona (NRETC)	3.50	Agartala, Tripura

	TOTAL	26.00	
		=====	

Based on the cost study made, prices of planting materials raised in the nurseries were fixed at Rs.4.80 for green budded stumps (GBS), Rs.5.25 for brown budded stumps (BBS) and Rs.8.50 per metre of budwood (BW). Small growers were allowed concession on Re.1.80, Re.1/- and Rs.3.50 respectively for GBS, BBS & BW.

During 1995-96, 5,40,265 green budded and 5,60,825 brown budded stumps and 7,168 mts of budwood were sold from nurseries in Kerala, mostly to the small holders at concessional rate. The concession amounted to Rs.15,47,049.50.

In the non-traditional area, out of 4,21,159 brown budded stumps produced, 3,05,344 were supplied to the growers free of cost. Cost of polythene bags and of planting materials supplied to growers was adjusted from the grants payable under the RPD Scheme.

8) Mucuna seedlings

The Board raised Mucuna seedlings in polythene bags in the nurseries during the year and distributed to growers for multiplication and planting in their holdings. A total quantity of 61,209 polybagged seedlings was supplied to growers in traditional area @ Re.1.50 per seedling and an amount of Rs.91,813.50 was collected.

9) Supply of Rubber Seeds

During 1995, procured and supplied 209.85 lakh assorted seeds and 1.23 lakh polyclonal seeds for raising seedlings in private nurseries and in sponsored nurseries.

10) Advisory and extension services

a) The field extension officers made 101644 visits to rubber holdings to advise growers on scientific methods of rubber cultivation, production, exploitation and processing. In order to disseminate knowledge on the correct techniques of planting, maintenance and crop harvesting, 50 radio talks were recorded and broadcast.

b) Monthly publications in local languages were regularly brought out for the benefit of the growers in important non-traditional rubber growing regions and also in Tamilnadu. These are 'Tamilmalar' for Tamilnadu, 'Rubber Sangbad' for Assam, 'Rubber Sangbad' for Tripura and 'Rubber Varthan' for Karnataka.

11) Demonstration of scientific tapping

The Tapping Demonstrators attached to the various Regional offices visited 6,171 holdings and demonstrated scientific methods of tapping and processing. Thrust was given to popularise the modern trends in exploitation such as Controlled Upward Tapping (CUT) coupled with stimulation among both large and small growers. This would help the planters to bring about maximum output from the plantations due for replanting within a reasonable span of time.

Regular training in scientific tapping and processing was undertaken through the various tappers training schools opened at major rubber growing centres. At present, 19 TT Schools are functioning in the traditional area and 6 in non-traditional area. A total of 1,260 growers/tappers were trained in 87 batches and an amount of Rs.13,17,538.70 was spent for maintaining these Schools including payment of stipend. An amount of Rs.2,05,356.50 was realised from the trainees as tuition fee. The 25 TT Schools are located in various regions as detailed below.

	<u>Name of Region</u>	<u>Name of TT School</u>
1	Nagercoil	Kaliyil
2	Nedumangad	Vinobaniketan
3	Kottarakkara	Nellikunnam
4	Punalur	Vazhappara
5	Adoor	Kurathikadu
6	Changanacherry	Paruthimoodu
7	Kottayam	Pangada
8	Thodupuzha	Mrala
9	Muvattupuzha	Elenji
10	Ernakulam	Puthencruz
11	Palakkad	Mundur
12	Nilambur	Kalikavu
13	Kozhikode	Thiruvambady
14	Thalassery	Mananthavady
15	Thalassery	Madathil
16	Sreekantapuram	Payyavoor
17	Taliparamba	Padiotchal

18	Kanhangad	Padupu
19	Mangalore	Mundaji
20	Agartala	Pathaliya
21	Dharmanagar	Juri
22	Udaipur	Sachirambari
23	Udaipur	Pathicherry
24	Guwahati	Ouguri
25	Silchar	Gamaria

12) Annual Schemes

- a) Financial assistance to small growers for purchase of sheeting rollers.

In order to improve the quality of sheet rubber produced in small holdings, implemented a scheme to extend financial assistance at the rate of Rs.1,000/- per set of sheeting rollers to benefit the small and marginal growers. The scheme evoked great response and as many as 2,200 growers availed of the assistance amounting to Rs.22,00,000/- against the sanctioned budget of Rs.20 lakh.

- b) Financial assistance for construction of small smoke house.

With a view to persuading and encouraging the small growers to adopt better processing techniques, the Board implemented a scheme of offering financial assistance of Rs.3,000/- for construction of smoke houses with a minimum capacity of 85 kg. This scheme was popular among the small growers and during the period 1995-96, 732 smoke houses were constructed for which a subsidy of Rs.21,96,000/- was disbursed against the target of Rs.20 lakh. In non-traditional areas, subsidy was paid to 53 growers amounting to Rs.1.52 lakh.

- c) Scheme for supply of low volume power operated sprayer/duster.

This scheme was introduced to popularise the use of low volume power operated sprayers/dusters among small growers for control of the leaf diseases. During the period 1995-96, 60 low volume sprayers/dusters were supplied to rubber producers' societies (RPSs), individuals and Co-operative Societies and Rubber Marketing Societies. The scheme provides for grant of 50% subsidy limited to Rs.10,000/- for sprayer-cum-duster and Rs.4,000/- for sprayer without duster attachment, whichever is less. A total of Rs.3,54,800/- was disbursed as subsidy under the scheme.

- d) Financial assistance for irrigation in immature rubber plantation of NT area.

Irrigation has been found to be beneficial to ensure proper growth of the rubber plants and to reduce the immaturity period. In order to motivate the rubber growers to take up irrigation in the immature rubber holdings, the Board implemented a scheme that provides financial assistance @ Rs.2,500/- per ha. with a ceiling of Rs.50,000/- per grower for promotion of irrigation in the non-traditional rubber growing areas. An amount of Rs.56,023/- has been disbursed to eligible rubber growers in non-traditional areas, under this scheme.

- e) Procurement and distribution of cover crop seeds.

Leguminous cover crops are established in rubber plantations for retaining soil moisture, improving the fertility etc. For encouraging the small rubber growers to establish leguminous ground cover, Board is distributing leguminous cover crop seeds at concessional price. During the year, a total quantity of 936.700 kg. cover crop seeds was procured and distributed among the growers at 25% subsidy in price.

f) Assistance for fencing in non-traditional area

In non-traditional areas one of the major constraints in the expansion of rubber cultivation is cattle menace and damage caused by trespassers during the early years. In order to protect the plants from stray cattle and the trespassers, boundary protection to the planted area is essential. Due to heavy expenditure the small growers are not able to erect proper fencing and protect their young plants. Hence to encourage the growers to put up fencing around their plantations a scheme was implemented with subsidy at 2 different rates for general and SC/ST growers. Accordingly subsidy as shown below had been disbursed to general category and SC/ST growers.

<u>No. of growers</u>		<u>Subsidy (Rs.)</u>
SC	127	2,09,336.00
ST	631	13,57,394.00
General	283	2,57,539.00

		18,24,269.00
		=====

g) Scheme for supply of plantation requisites in non-traditional areas.

Most of the essential plantation requisites are not readily available in the non-traditional areas. In order to help the small growers in these areas to procure plantation requisites for increasing production and productivity, a scheme was implemented for supply of selected plantation requisites in NT rubber growing areas. Materials such as rubber sheeting rollers, tapping knives, sieves, coagulating dishes, cup hangers, spouts, plastic cups and panel protection materials etc. were purchased from available sources and transported to non-traditional areas and supplied to eligible growers, after realising the cost less an element of subsidy. The entire transporting charge is subsidised.

Plantation requisites worth Rs.15,51,598/- were purchased and distributed and the subsidy element for 1995-96 came to Rs.3,04,116/-.

13) Seminars and Campaigns

As part of mass education and technology transfer programme, a series of seminars and campaigns were conducted. During April/May 1995, a campaign to stress the need to conserve rain water in rubber holdings and for producing quality rubber sheets was organised throughout the rubber growing centres with the active participation of the rubber producers societies. During the year, 58 new RPS were organised raising the total number of RPSs to 1,507. The details of the Seminars/Campaigns are as shown below.

1	No. of seminars/campaigns	3,416
2	No. of growers/delegates attended	40,492

14) Sponsored nursery

To cope-up with the requirement of good quality planting materials at reasonable rates sponsored nurseries were established in 55 centres under the auspices of RPS and in 450 centres in the private sector. The Board had arranged supply of 1,12,80,000 seeds for establishment of seedling nurseries and 24,785 budded stumps for establishment of budwood nursery.

15) Development of rubber plantations in non-traditional regions.

For attaining self-sufficiency in natural rubber in India, continued to promote development of rubber cultivation in non-

traditional areas where the agro-climatic conditions are more or less suitable for rubber cultivation. The non-traditional areas include the States of Goa, Maharashtra, Andhra Pradesh, Orissa, West Bengal and North Eastern States. As a result of sustained efforts, a large number of new entrepreneurs have taken up rubber cultivation.

a) Goa & Maharashtra

The total area planted with rubber comes to 1,111.34 ha. in Goa and Maharashtra, planted by 345 growers. In Maharashtra, rubber plantation is of recent origin and till date 150 ha. has been planted by 35 growers. Some of the plantations have come into tapping and the yield is comparable to what is obtained in the traditional area. For promoting faster development, the Board has taken on lease an area of 7 ha. at Wakvoli from the Konkon Krishi Vidhyapit, Dapoli. A nursery of high yielding polyclonal seedlings has already been established during the year so as to make available planting materials for next years' planting.

b) Andhra Pradesh

The Board is maintaining a nursery at Devarappally in an area of 2 ha. for raising and distribution of high yielding planting materials. This nursery can cater to the needs of the rubber growers in Andhra Pradesh as well as in Ganjam District of Orissa. A Block Planting Project aiming to plant 50 ha. is under implementation in Andhra Pradesh. The expenditure for the same is shared between the Board and the Girijan Co-op. Plantation Development Corporation, Andhra Pradesh.

c) Orissa

The Board had taken up development of rubber plantation in the State of Orissa in 1988. In order to execute the development programmes, a Zonal Office was opened in Bhubaneswar in 1988 followed by 3 Regional Offices at Baripada (Mayurbhanj Dist.), Bhubaneswar (Puri Dist.) and Berhampur (Ganjam Dist.). An area of 455.97 ha. has been brought under cultivation as given below.

Orissa	275.10 ha.
Andhra Pradesh	178.87
Madhya Pradesh	2.00

d) West Bengal

A survey of suitable areas in West Bengal has revealed that selected areas in Jalpaiguri District, Siliguri and Naxalbari Sub division of Darjeeling district and certain portions of Islampur, Bhalurghat and Raiganj Sub divisions of North Dinajpur district are more or less suitable for rubber cultivation. To take up rubber cultivation in these areas, the Board had opened a field office in Siliguri in Darjeeling district. Polybags and plants were supplied to interested growers from this office for raising polybagged plants for field planting. In 1995-96, 1.54 ha. was planted by two growers.

e) NE States

The Board continued to promote development of rubber plantations in NE States. The Zonal Office in Guwahati is coordinating the development activities in all the States in the North East excepting Tripura, through regional offices stationed at Guwahati, Silchar, Diphu, Jorhat (in Assam) and Tura (in Meghalaya). The Zonal Office opened at Agartala, Tripura is

monitoring the development activities in the State of Tripura through the Regional Offices opened at Agartala, Udaipur and Dharmanagar. An area of 1,508 ha. was brought under rubber plantation in Tripura and 259.54 ha. in Assam during 1995-96. The estimated planted area at the close of 1995 is given below.

Tripura	20,932.09
Assam	10,653.53
Meghalaya	3,770.00
Mizoram	922.00
Manipur	1,150.00
Nagaland	1,380.00
Arunachal Pradesh	48.54

TOTAL:	38,856.16
	=====

Taking into consideration needs of this backward non-traditional region, the Board is offering special incentives to encourage new entrepreneurs, besides grant of financial and technical assistance. Schemes for supply of budded stumps and polybags for raising polybag nurseries and grant of cash assistance for maintenance of polybagged plants are in operation.

Block Plantation Programme

The Board in collaboration with the Tribal Welfare Department of the Govt. of Tripura has started a rubber plantation project adopting an integrated approach for rehabilitation of SC and tribal people. Already about 723.32 ha. has been planted covering 364 beneficiaries. During the year 1995-96 an area of 478.64 ha. was planted.

f) Andaman & Nicobar Islands

The Regional Office started at Port Blair in 1985 is looking after the development of rubber plantation in A&N Islands. In addition to the two public sector plantations raised in the Islands, the Regional office was instrumental to bringing under cultivation 75.61 ha. under rubber.

g) NRETC Andaman

The Rubber Board continued to maintain the Nucleus Rubber Estate and Training Centre comprising of a 202.50 ha. of rubber raised progressively from 1965 to 1968 in South Andamans. All the civil construction works entrusted to the National Building Construction Corporation (NBCC) were completed by August 1993. The NRETC has recorded a production of 110,180 kg. of rubber during the year. The Board had incurred an expenditure of Rs.46.30 lakh towards the running expenses of NRETC including capital expenditure for infrastructural development during the year 1995-96.

A rubber nursery in 1.85 ha. is also maintained for production of high yielding planting materials for own use as well as supply to interested growers in the A&N Islands.

h) NRETC Agartala

The Rubber Board has been maintaining at Agartala a Nucleus Rubber Estate & Training Centre since 1985. The 100 ha. plantation at Surendranagar (raised in a phased manner during 87,88 & 89) has entered the tapping stage. Tapping commenced in December 1993 in the plantation raised during 1987. The work connected with building up of infrastructure such as processing factory, residential buildings, internal roads etc. is nearing completion.

Periodic training programmes were organised for growers on various aspects of commencing rubber cultivation. Demonstration plots also were maintained. For generation of planting materials, seedling nurseries were raised with the participation of beneficiaries in all the block plantation projects.

The Board continued to run the 3 TT Schools in Tripura. The duration of the tappers training is 60 effective working days to impart the required skill to the trainees.

16) Rubber Producers Societies

All items of work connected with the approval of Rubber Producers' Societies were undertaken. Approval was granted to 51 RPSs during the year 1995-96. The total number of RPSs approved by the Board at the end of the reporting year stood at 1506. Regionwise distribution is furnished below.

Regionwise distribution of RPSs approved by the Board

<u>Region</u>	<u>No. of RPSs</u>
Kanhangad	71
Taliparamba, Sreekandapuram	121
Thalassery	61
Kozhikode	53
Nilambur, Manjeri	64
Palakkad, Mannarkkad	76
Thrissur	55
Ernakulam	72
Muvattupuzha	69
Kothamangalam	54

<u>Region</u>	<u>No. of RPSs</u>
Thodupuzha	80
Pala	106
Erattupetta	44
Kanjirappally	79
Kottayam	80
Changanacherry	71
Pathanamthitta	83
Punalur, Kottarakkara	98
Adoor	60
Thiruvananthapuram and Nedumangad	75
Nagercoil	10
Goa	1
Mangalore	23

TOTAL:	1506
	=====

Estate inputs such as fertilizers, fungicides, rainguarding materials etc. were procured and distributed under the Productivity Enhancement Component of the Rubber Project funded by the World Bank among the small growers from the Regional Offices of the Board through the Rubber Producers Societies. International Competitive Bidding procedures, as laid down by the World Bank were followed in procurement of inputs. The items and quantum of the inputs distributed are shown below.

<u>Items</u>	<u>Quantity</u>
Urea	3016 MT
Muriate of Potash	2500 ,,
Rock Phosphate	7259 ,,
Copper Oxychloride	110 ,,
Spray Oil	516 KL
Polythene Sheet	275 MT
Rainguarding Adhesive	868 MT
Rubber Cot	25 KL

17) World Bank Assisted Rubber Project

The World Bank Assisted Rubber Project completed the third year of its implementation. The project is a five year time slice of the long term rubber development programme of the Govt. of India and the Rubber Board, commencing from 1993-94. The main objectives are to expand and strengthen the rubber sub sector to increase production and productivity, improve processing facilities and increase on-farm and off-farm employment. It also aims at strengthening Board's research, extension and training services.

a) Replanting/Newplanting

The target for replanting/newplanting fixed for 1995&'96 is 8,000 ha. and 6,400 ha. respectively. Permits have been issued to 4,846 growers for replanting 4,550 ha. and to 9,324 growers for newplanting 4,546 ha. On disposal of the pending applications, the newplanting target is likely to be more or less achieved, while the replanting target may fall short by about 2,500 ha. The main reason for the shortfall is the tighter tergetting of financial assistance to the owners of the smallest category of rubber holdings. Inadequacy of operational staff in the field, unattractive financial assistance and the recent spurt in rubber prices etc. are also factors which have impinged on attainment of physical targets.

b) Productivity Enhancement

Implementation of the productivity enhancement component of the project is progressing well. The operation has been characterised by timely supply of inputs at prices

lower than the market price on account of bulk purchasing and distribution through Rubber Producers' Societies (RPSs). The target fixed for 1995-96 is for covering 50,000 ha. against which, inputs costing Rs.9.54 crores to cover 55,000 ha. were procured and distributed.

A baseline survey of the small holdings for the year 1993-94 has been got undertaken by the National Institute of Rural Development (NIRD), Hyderabad to assess the impact of the productivity enhancement scheme at the end of the project period. The final report has been submitted by NIRD, Hyderabad. The Board has also taken steps to carry out a survey of the RPS members availing of the input supply to find out the impact of the scheme during the course of the previous two years.

c) Processing

Under the Project, provision has been made through a line of credit to finance establishment/upgrading of rubber and rubber wood processing facilities by private entrepreneurs. The credit is operated through NABARD and Commercial Banks and engineering support from the Rubber Board. So far implementation of this component has made no progress although noticeable investments have taken place outside the project. Conditionalities applicable to the project for processing loans, stringent procurement procedures, misgivings about the attractiveness of credit facilities available through the project, are some of the weaknesses which account for this situation.

d) Women/Tribal Development

The project also includes a programme for Women/Tribal development amongst participating rubber growers in Tripura accounting over 50%. The project will ensure larger involvement of women and tribal people in planting activities and assist them

in additional income generating activities such as horticulture, pisciculture, piggery, social forestry etc. The expenditure is shared equally between the Govt. of Tripura and the Rubber Board. The activities under this component are planned and undertaken by two local Non-Governmental Organisations (NGO) in conformity with the approved Tribal Development Plan (TDP). During the year, 23 rubber plantation centres having 605 beneficiaries have been identified under the TDP, making the total to 41 centres and 1162 beneficiaries. The progress made in the implementation of TDP are summarised below.

Training on the various aspects of TDP has been imparted to the officials of the Rubber Board, TRPC, TFDPC, NGOs and staff of the Tribal Welfare Department.

Training for the beneficiaries and beneficiary workers on Fishery, Poultry and Piggery has also been completed. Gender sensitisation camps have been held in 18 plantation centres and committees of women were formed to oversee the implementation of the programme. A training programme for gender related issues for the women of the plantation centres has also been conducted.

Piglets, fish finger lings, poultry-birds, poultry, pigfeed etc. were supplied to 227 beneficiaries. Yarn has been distributed to women of 18 plantation centres for production of "Pachra" the marketing of which is also arranged. Planting of 'Banana' as an intercrop with rubber has been undertaken in 1994 and 1995 plantations.

Periodical health camps have been organised in the centres selected. Smokeless portable chulahs have been supplied to the beneficiaries in 18 rubber plantation centres. Construction of link roads and supply of drinking water in the plantation centres have been taken up on a priority basis.

e) Training

Under the project, the Rubber Board is to establish a well designed and equipped Training Centre for providing organised training to own staff, rubber growers, plantation executives, processors and product manufacturers. An area of 1.2 ha has been purchased adjacent to the Rubber Research Institute of India for setting up the Training Centre. The work on architectural designing of the Centre has been entrusted to Mr. Laurie Baker. Even in the absence of specialised facilities and manpower and with available resources and faculty services, conducted a number of training programmes during the year. From the inception of the project imparted training in different disciplines to 3,911 persons.

Under the training and technical assistance programme, scientific and technical officers, 7 from Research Department, 9 from Processing and Product Development and 17 from Rubber Production Department have been deputed overseas for training.

The final reports on Baseline Survey of small holdings undertaken by the National Institute of Rural Development (NIRD), Hyderabad, Land use plan for Tripura by National Bureau of Soil Survey and Land use plan, Nagpur and Training Plan by Academy of Human Resources Development, Ahmedabad on a consultancy basis have been received. The reports will in a big way help in future, to make impact assessment under Productivity Enhancement Scheme, in fixing planting targets for Tripura and implementation of training programme.

f) Project Expenditure

The particulars of expenditure incurred by the Board for the year ending under report are given below.

<u>Sl.No.</u>	<u>Head of Account</u>	<u>Expenditure</u> <u>(Rs/Million)</u>
01	Replanting	48.37
02	Newplanting	29.43
03	Productivity enhancement	95.47
04	Processing	2.98
05	Research	5.87
06	Extension	2.43
07	Training & Technical assistance	7.79
08	RB Organisation	3.66
09	Project Co-ordination	0.64
10	Women & Tribal Development	-
TOTAL:		196.64
		=====

The Board submitted bills for Rs.133.27 million to the Govt. of India, Ministry of Finance, Dept. of Economic Affairs during the year for obtaining reimbursements of Rs.92.39 from IDA. The cumulative total of expenditure under the Scheme comes to Rs.294.25 million.

A Mid-Term Appraisal Mission of the World Bank headed by Dr.NDA Hameed visited the Rubber Board during March, 1996, and reviewed the progress of implementation of the project in great detail. They will be submitting their report and restructuring proposals to the World Bank for the effective implementation of a project proposal during the remainder period of the Project.

PART IV

The major functions in Administration consists of constitution/reconstitution of the Board and its Committees, recruitment of personnel for different departments, maintenance of the establishment and house keeping operations, collection of cess, licensing of rubber dealers, rubber manufacturers and rubber processors, market intelligence, price collection and marketing, collection of statistics, publicise Board's schemes and activities, carry out labour welfare measures, attend to vigilance and legal functions, official language implementation and disbursement of employees' entitlements including retirement benefits.

The functions are carried out through the following sections/divisions/offices.

- | | |
|----|---|
| 01 | Establishment (General Administration, Personnel
Administration & Entitlement) |
| 02 | Excise Duty |
| 03 | Market Intelligence |
| 04 | Marketing |
| 05 | Publication & Publicity |
| 06 | Labour Welfare |
| 07 | Internal Audit |
| 08 | Legal |
| 09 | Vigilance |
| 10 | Official Language Implementation & |
| 11 | Sub Offices & Liaison Offices. |

1.1 General Administration

The activities of the Board for the year 1994-95 were documented through the Annual Report which was presented to the Government as required under Clause 8 (3) (c) of the Rubber Act, along with the Annual Accounts.

The Headquarters offices were formally inaugurated by the Hon'ble Union Minister of State for Commerce Shri P Chidambaram on 19.10.1995. The services of the post, telegraph, telephone and telex were harnessed to provide good communication facilities between the Board and its clientele.

1.2 Entitlement

During the period, 35 employees were given financial assistance for construction of own houses by advancing Rs.29,35,550/- and 48 employees were given vehicle advance amounting to Rs.9,19,619/- (Rs.9,11,619 as two wheeler advance to 61, Rs.7,200/- to 12 as Cycle advance and Rs.800/- as fan advance to 2).

Service books, leave accounts and personal files of employees were properly maintained. Retirement benefits were newly given to 27 employees including one who left on voluntary retirement and three on invalid pension. In addition there were two cases of pension to the widows of employees who died in harness. As on 31.3.1996, there were 254 pensioners on the Board's rolls, the addition during the reporting period being 29.

1.3 Personnel administration

Selection of suitable personnel to vacant positions for the smooth functioning of the Board was ensured by following recognised recruitment rules and statutory provisions relating to reservations of posts for candidates from the SC/ST/OBC communities. There were properly constituted Selection Committee/DPCs for selection of personnel by evaluating the merits/skills of the candidates. Periodical returns on the personnel recruited were sent to the Government separately showing the personnel under reservation categories.

The total number of officers and staff under the Board as on 31.3.1996 was 2181 as detailed below.

Name of Dept.	Group A	Group B	Group C	Group D	Total
Administration	28	64	154	22	268
Rubber Production	85	367	752	92	1296
Research	73	112	189	35	409
P&PD	11	15	21	2	49
Finance & Accounts	12	18	62	6	98
Statistics & Plannin	4	2	17	1	24
Training	2	1	4	1	8
Technical Consultancy	6	7	9	1	23
Project Co-ordination Unit	3	-	3	-	6
TOTAL:	224	586	1211	160	2181

2 Excise Duty/Licensing

The Rubber Board has been entrusted with the responsibility of assessing and collecting the duty of excise (cess) on all rubber produced in India under Section 12 of the Rubber Act, 1947. The cess is collected on the quantity of rubber purchased or otherwise acquired by the manufacturers who consume it. Every manufacturer has to obtain a licence to acquire natural rubber and is bound to give monthly and half yearly returns showing the quantity of rubber acquired and consumed. It is on the basis of the purchases reported in their half yearly returns that the assessment of cess is normally made.

2.1 Issuance of licence

a) Issuance of licence for the year 1995-96

Issue of licences includes the work of issue of new licences to prospective manufacturing units and renewal of the existing licences for the subsequent years. Licences issued during 1995-96 are -

Fresh licences	521	Nos.
Renewal of licences	5058	,,

	5579	Nos.
	=====	

During the period, licence in respect of 4 manufacturers were suspended on account of serious irregularities and malpractices in their business. Besides, licences in respect of 3 units were cancelled on the basis of their request. Thus, the total number of licensed manufacturers at the end of 31.3.1996 was 5572. The statewise distribution of licensed manufacturers as at the end of 31st March, 1996 are detailed hereunder.

Sl.No.	Name of State/Union Territory	No. of units
01	Kerala	947
02	Maharashtra	613
03	Punjab	602
04	Tamilnadu	537
05	West Bengal	512
06	Uttar Pradesh	486
07	Gujarat	414
08	Delhi	358
09	Haryana	305
10	Karnataka	253
11	Andhra Pradesh	174
12	Rajasthan	105
13	Madhya Pradesh	96
14	Bihar	37
15	Pondicherry	32
16	Chandigarh	21
17	Goa	19
18	Orissa	17
19	Himachal Pradesh	13
20	Daman, Diue	10
21	Jammu & Kashmir	9
22	Assam	4
23	Tripura	4
24	Dadra & Nagerhaveli	2
25	Sikkim	1
26	Manipur	1
TOTAL:		5572

Also prepared and supplied a list of licensed manufacturers for reference to the various offices of the Rubber Board, rubber dealers and other public.

b) Issuance of licence for the year 1996-97

Renewed the licence of 3630 existing manufacturers and issued 39 licences to new manufacturing units for the year 1996-97.

2.2 Letters of authorisation

Apart from the issuance of licences to the manufacturers, registered 1776 letters of authorisation issued by various manufacturers in favour of dealers to purchase and despatch rubber on their behalf.

Special authorisations to 10 Organisations/Institutions to acquire rubber for experimental purpose were issued, after collecting the cess amount in advance. A special authorisation was also issued for trading in rubber in Jammu & Kashmir, after collecting the cess in advance.

2.3 Registration of Branch/Purchase Depot

On the basis of the applications from the manufacturers 4 new branches/purchase depots were registered.

2.4 Assessment of duty of excise (cess)

The assessment of cess on rubber for the year was Rs.43.61 crores as against Rs.26.95 crores of the previous year. Thus there was an increase of 61.81% in assessment during the year over the last year's assessment mainly on account of the enhancement of cess to Re.1/- per kg. from Re.0.50 per kg, from 1.7.1994.

During the year, 10848 Nos. half yearly returns (in Form M) received from various manufacturers and sole crepe producers were assessed. Received 1542 inspection reports

from Liaison Offices which facilitated detection of clandestine transaction in rubber by certain manufacturers. As a consequence additional assessments were made in 80 cases on a quantity of 817.6 tonnes of rubber involving cess to the tune of Rs.5.57 lakh.

2.5 Collection of the duty of excise (cess)

The total amount of cess on rubber collected during the year was Rs.43.58 crore over the last year's collection of Rs. 26.24 crore registering an increase of 66%. This amount includes Rs.33.68 lakh collected out of old arrears. Out of this, an amount of Rs.87 lakh was appropriated towards cost of collection and the balance of Rs.42.71 crore was remitted to the Central Bank of India for credit to the Consolidated Fund of India.

A sum of Rs.19.50 lakh was also collected towards interest on belated payment of cess. Apart from this an amount of Rs.12.53 lakh was collected from various manufacturers towards licence fee and service charge. A sum of Rs.3,020/- was collected towards price of the list of licenced manufacturers. These amounts were duly credited to the General Fund Account of the Board.

2.6 Miscellaneous

With a view to help the small rubber goods manufacturers it was decided to treat reports of the Board's Excise Duty Officer, Asst.Excise Duty Officers and Excise Duty Inspectors equivalent to the report from Registered Auditors for the purpose of certifying correctness of the returns submitted by them as required under Rule 33 (f) of the Rubber Rules, 1955, vide Office Order No.741 dt.4.8.1994.

2.7 Licensing of dealers and processors

During the year under report, 1891 new licences to deal in rubber were granted. The period of validity of 5408 licenses was renewed which includes two short period licences as well.

The number of dealers who were holding licences to deal in rubber was 8295 at the beginning of the year under report. Their strength has risen to 9533 at the end of the year.

The licensed Processors numbered 161 during 1994-95. This went down to 149 on 31.3.1996, including issue of 6 fresh licences and renewal of 68.

2.8 An amount of Rs.7,93,382/50 was collected from dealers towards cess on rubber for the loss sustained by the Board by their irregular sales of rubber.

Rs.40,000/- was also received from banks towards forfeiture of bank guarantees furnished by the dealers, who violated the conditions of the licences.

2.9 Books of declaration forms numbering 5984.6 were supplied for interstate transport of rubber (N Form) to 6029 parties consisting of estate owners, dealers, processors and manufacturers.

2.10 Distribution of dealers and processors

Statewise distribution of licensed dealers and procesors as on 31.3.1996 is given below.

Sl.No.	Name of State	No.of dealers	No.of processors
01	Kerala	8304	132
02	Tamilnadu	214	11
03	Delhi	181	
04	Punjab	210	
05	West Bengal	115	
06	Uttar Pradesh	,89	
07	Maharashtra	90	
08	Karnataka	104	4
09	Haryana	46	
10	Tripura	79	1
11	Gujarat	28	
12	Madhya Pradesh	14	
13	Rajasthan	12	
14	Assam	15	
15	Chandigarh	7	
16	Andaman & Nicobar	8	
17	Meghalaya	4	
18	Bihar	4	
19	Andhra Pradesh	4	1
20	Orissa	2	
21	Goa, Daman & Diu	1	
22	Jammu & Kashmir	1	
23	Pondicherry	1	
TOTAL:		9533	149

2.11 Districtwise distribution of dealers licenced in Kerala

01	Alappuzha	115
02	Ernakulam	1188
03	Idukki	434
04	Kannur	403
05	Kasaragode	94
06	Kollam	964
07	Kottayam	2345
08	Kozhikode	197
09	Malappuram	320
10	Palakkad	235

11	Pathanamthitta	1106
12	Trivandrum	699
13	Thrissur	152
14	Wynad	52

	TOTAL:	8304
		=====

3 Market Intelligence

Detection of bogus/unlicenced dealing in rubber, arranging surprise inspection of the business premises of dealers for verification of their books of accounts and correctness of physical stock and verification of the correctness of statutory returns filed by dealers/manufacturers and processors for ascertaining the correctness of the quantity of rubber acquired to prevent evasion of cess on rubber form the major function of market intelligence. Assessment of suitability of the applicants and their business premises to issue licence to deal in rubber and registration of branches of the dealers and approval of new/additional premises also formed part of the function.

3.1 Cross checking of monthly returns/Form N declarations of 220 dealers, 41 manufacturers and 8 processors with those of their suppliers/purchasers were carried out and unaccounted/unauthorised transactions were detected. Action initiated to realise cess involved on the quantities. A sum of Rs.14,40,925/- was collected towards cess on such rubber.

3.2 As per daily statements received the checkpost of Walayar, Manjeswaram and Kavalkinar, 48,480 consignments of rubber had passed through the 3 checkposts during the period under report. The number of consignments passed through each of the checkposts is as shown below.

<u>Name of Checkpost</u>	<u>No. of consignments</u>
Walayar, Palakkad Dist.	41312
Manjeswaram, Kasaragod Dist.	3928
Kavalkinar, Thirunelveli Dist.	3240

TOTAL:	48480
	=====

4 Marketing

4.1 Price Collection

Collected and compiled price of various grades of natural rubber and reported to the press for publication. Information provided to the press are daily average price of RSS-4 and ungraded rubber in Kochi and Kottayam markets, weekly price of all grades of rubber in Kottayam market, and daily price of various grades of rubber in Malaysia. Average price of scrap rubber was also given for publication twice a week. Compiled monthly average price of various grades of rubber, price of centrifuged latex, ISNR grades, PLC grades etc. The information collected were supplied to the Ministry from time to time and also to other agencies associated with the rubber goods manufacturing industry.

5 Publication and Publicity

Circulation of the 'Rubber' Malayalam monthly recorded an average 13238 copies a month during the period under report. The scheme for enrolling life membership continued during the period and 190 subscribers for life membership were newly enrolled. The total number under the category touched 4,781. Also brought out leaflets on various aspects of rubber cultivation.

The sale of the publication 'Vithu Muthal Vipani Vare' and 'Rubber Enna Kalpadhenu' continued. Rubber Statistical News in 12 issues, each with 600 copies were brought out and sent to subscribers.

5.1 The Rubber Growers Companion 1996 (Delux-300, With text-3800 and without text-2900) was brought out in December, 1995. The book on Rubber and its cultivation was reprinted with 750 copies.

5.2 Press handouts on various topics were released to the national as well as local dailies which secured wide coverage and 15 farm features were prepared and issued to 'Karshikarangam' pages of various Malayalam dailies. A total of 43 press releases and 64 advertisements were issued.

5.3 During the period under report 7 exhibitions were arranged at various places. Also organised seminars and conducted growers' meetings.

5.4 Utilised services of the AIR and Doordarshan for dissemination of scientific knowledge on rubber cultivation, crop processing and marketing.

6 Labour Welfare

Section 8 (2) (f) of the Rubber Act empowers the Board to undertake measures for better working condition and improvement of amenities and incentives for rubber plantation workers.

The Board devised many schemes for the welfare of the workers for which an amount of Rs.101 lakh was spent during the year under report.

a) Educational Stipend Scheme

The scheme gives financial assistance for educating the children of rubber plantation workers both in Colleges and Schools.

The assistance consists of payment of Tuition fee, Hostel/Boarding fee and Lumpsum grant for purchase of books, instruments etc.

An amount of Rs.15,78,976/- was spent under this scheme during 1995-96.

b) Educational Scholarship Scheme

The scheme provides children of rubber plantation workers incentive for high performance in academic courses under educational stipend scheme. Scholarship ranging from Rs.250/- to Rs.2,000/- is paid per student. An amount of Rs.24,550/- was spent under this during the year.

c) Group Insurance-cum-Deposit Scheme (7 Phases)

This is a social security measure for the workers not covered by the Plantation Labour Act against death and injuries caused by accidents.

This scheme also encourages the habit of saving. It has reached the seventh phase in 1995-96. The first phase started in 1986-87.

Each of the individual schemes will be in operation for a period of ten years. The workers enrolled have to renew membership every year by remitting their share of insurance premia. During 1995-96 the Board remitted Rs.7,68,600/- as Board's share after ensuring that the workers have remitted an equal amount as their share. The insurance company paid compensation to 35 workers amounting to Rs.46,952/- for injuries/death by accident.

d) Housing Subsidy Scheme (unorganised Non-Marginal Holdings)

The scheme provides assistance to rubber plantation workers not covered by the Plantation Labour Act, 1951, for construction of own house. The assistance is limited to Rs.7,500/- per worker for house built in brick and mortar. For house built with mud walls and grass thatch, the assistance would be Rs.4,000/- only. But houses with mud wall and tin or aluminium roof, the assistance would be Rs.5,000/-. An amount of Rs.21,97,620/- was disbursed during 1995-96 in favour of 299 applicants.

e) Housing Subsidy Scheme (unorganised sector marginal holdings)

This scheme provides for assistance in house construction for workers employed in holdings, each with area between 0.75 ha and 1 ha. All other conditions of the scheme for housing subsidy for rubber plantation workers in the unorganised sector (non-marginal holdings) are applicable to this scheme. Amount disbursed during 1995-96 was Rs.21,16,875/- in favour of 288 applicants.

f) Housing Subsidy Scheme (Organised sector)

This scheme provides financial assistance to workers covered by the Plantation Labour Act, 1951, for the construction of own house. The assistance is limited to Rs.6,000/- per worker. Amount disbursed during 1995-96 was Rs.8,14,750/- in favour of 136 applicants.

g) Scheme for providing sanitary facilities

The scheme provides assistance to build latrines as per prescribed plan and estimate by the rubber plantation workers.

The assistance either cover 75% of the cost of construction or Rs.3,000/- of the latrine whichever is less. Total amount paid under the scheme during 1995-96 was Rs.19,67,429/- in favour of 658 applicants.

h) Medical Attendance Scheme

The scheme assists plantation workers of unorganised sector in reimbursement of medical expenses and also subsistence during the period of their inability to work in consequence of the illness. Workers who undergo sterilization operation for promotion of small family are also given assistance. During 1995-96 an amount of Rs.4,93,750/- was disbursed for 569 workers.

i) Housing and Sanitary Scheme for SC/ST rubber plantation workers.

This scheme was implemented on a pilot basis exclusively for SC/ST workers employed in rubber plantations coming under the Rubber Producer's Societies. Assistance limited to Rs.10,500/- is granted to the worker for construction of house with latrine. The scheme was financed from the SCP/TSP fund. During 1995-96 an amount of Rs.1,51,125/- was disbursed in favour of 18 workers.

7 Internal Audit

Main function of the Internal Audit is inspection/audit of various offices/units of the Board. During the period under report internal audit inspections were conducted in 38 offices/units located all over Kerala, Tamilnadu, Delhi, Jullundur, Tripura, Orissa and South Andamans.

7.1 Replies to AG's Audit objections were sent in time. The total number of outstanding paras on 31.3.1996 was 82.

7.2 Review of Attendance Register as a measure of enforcement of office discipline was undertaken. Expert opinion/advice was given in 175 cases including 57 pension gratuity cases, leave encashment, pay fixation, service verification etc.

7.3 Economy in the use and maintenance of vehicles and consumption of fuel was ensured by follow-up of procedures and Government Orders strictly.

7.4 Annual physical verification of stock was brought upto date by initiating follow-up action with concerned offices/units and ensured the disposal of unserviceable items.

7.5 The unsettled and outstanding contingent, LTC and TA advances were settled by strict, regular enforcement of rules on drawal of advance.

7.6 Audit of accounts of the Board for the year 1994-95 was taken up by the AG Kerala. The extracts of the report were forwarded to each Department/Division for furnishing replies for onward submission to the Ministry. Inspection

reports for 1986-87 & 1987-88 were got finally closed by dropping 68 paras. Out of 32 paras in the audit report of AG Kerala for 1991-92, 23 paras were got dropped. Outstanding audit objections pending finalisation as on 31.3.1996 are 82, out of which 24 relate to the year 1994-95. Replies to these paras were furnished to the Ministry of Commerce for transmission to the AG Kerala with comments.

8 Legal matters

During the year under report, timely action was taken and advice was rendered on 505 files under House Building Advance Scheme, 114 applications were scrutinised for determining the eligibility of applicants under Rules. Legal documents to be executed were drafted/prepared. Appropriate steps were taken through lawyers to safeguard the interests of the Board in 98 litigations pending in various courts. Parawise comments and necessary instructions were given to Standing Counsels and the Central Government pleaders in cases pending in High Court. In 27 consumer disputes filed before Redressal Forums in various districts, prepared and filed replies.

Legal assistance was given to RRS Dhenkanal, RRDS Andamans, Central Experiment Station, Chethackal, RRII Farm, HBSS at Nettana and Paraliar, Nurseries/Farms of the RP Department etc. in dealing with labour matters. The papers required for examination by the Parliament Committee on various statutory matters were prepared. Also prepared draft amendments to Rubber Act, Rubber Rules, Rubber Board Employees Conduct Rules and Rubber Board Service (Classification Control & Appeal) Rules.

9 Vigilance

a) Complaints

During the year under report, took up for enquiry/ verification 28 complaints containing allegations against 12 officers of Groups A & B status and 16 officials of Groups C & D status. The allegations mainly related to misappropriation of Board's funds, forgery and fabrication of documents, acceptance of illegal gratification from truck/lorry drivers of rubber consignments passing through the Checkpost, favouring certain individuals which resulted in financial loss to the Board, attempting to defraud the Board by producing bogus voucher for transportation of personal effects, moral turpitude, habitual unauthorised absence resulting in disruption to the smooth functioning of the office, making false complaints against senior officers of the Board, criticising the senior officers in filthy language etc. Enquiries were made and appropriate deterrent action was taken against the erring officials.

b) Cases

Major penalty proceedings against 9 officials and minor penalty action against 6 officials were instituted during the year under report.

c) Property statements and acquisition/disposal of
immovable/movable property

Annual statements of immovable property as on 31.12.1995 were called for from all officers of Groups A & B status. The statements received were scrutinised. Also dealt with/processed 101 applications of the employees

pertaining to acquisition/disposal of immovable property and 54 applications/intimations relating to transactions in movable properties such as motor cars, two wheelers, refrigerators, televisions, washing machines etc.

10 Official Language Implementation

Two meetings of the Official Language Implementation Committee were held on 5.10.1995 and 14.3.1996. Annual programme for the year was prepared and approved in the first meeting. Shri MK Velayudhan Nair, Secretary, Kerala Hindi Prachar Sabha, Thiruvananthapuram attended the meetings.

10.1 Hindi workshops were conducted in the Regional offices at Nagercoil, Thiruvananthapuram, Nedumangad, Kottarakkara, Adoor, Punalur, Pathanamthitta, Changanacherry, Kottayam, Pala, Erattupetta, Kanjirappally, Thodupuzha, Muvattupuzha, Kothamangalam, Ernakulam, Thrissur, Kozhikode, Thalassery, Palakkadu, Mannarghat, Manjeri, Nilambur, Taliparamba, Sreekandapuram, Kanhangad, Mangalore, Kundapuram and at CES Chethackal and Licensing Section, Kochi.

10.2 A State level Hindi Week Celebration was organised on 19.9.1995 at Thiruvananthapuram at the initiative of the Rubber Board. Central Govt. employees working in the various offices at Thiruvananthapuram attended the meeting.

10.3 Hindi week was celebrated from 14th September, 1995 in various offices of the Board. Competition in Hindi noting & drafting, elocution & essay writing, recitation in Hindi, Hindi Typewriting and Hindi quiz were conducted. Token prizes and cash awards were given to the I & II winners of the competitions. Separate competitions were also conducted for the children of

employees of the Board. An Official Language Conference was held on 29th January, 1996.

10.4 Four issues of the Hindi bulletin were published during the year.

10.5 Hindi classes were conducted in which 60 employees were trained during the year. Facilities for training in Hindi through correspondence course were also arranged. Training in Hindi Typewriting was given to 13 employees.

10.6 The Hindi Library was utilised by the employees to improve their knowledge in Hindi.

11 Sub/Liaison Offices

There are 8 Sub Offices in the major consuming centres outside Kerala; at Ahmedabad, Bangalore, Bombay, Calcutta, Jullundur, Kanpur, Madras and New Delhi. These offices assessed suitability of applicants to hold licence to deal in rubber or acquire rubber for rubber goods manufacture. The purchases made by the rubber manufacturers and the stock held by the rubber dealers were verified at random. The books of accounts and records of the licence holders were also verified to ensure that all rubber procured were brought to book for subjecting to assessment of cess. Surprise inspections were also conducted to detect unlicensed dealing in rubber and unlicensed manufacturing of rubber goods in contravention of the provisions of the Rubber Act and Rule, in order to prevent possible loss of revenue towards cess.

PART V

RUBBER RESEARCH

Rubber Research Institute of India has its Headquarters at Kottayam where it has 35 ha. experimental rubber plantation and 250 ha. plantation at Central Experiment Station, Chethackal. There are 4 Regional Research Stations for North Eastern Region at Guwahati (Assam), Tura (Meghalaya), Kolasib (Mizoram), Agartala (Tripura). Four Regional Research Stations are located in non-traditional regions; Dapchari (Maharashtra), Nagrakatta (West Bengal), Sukma (Madhya Pradesh) and Dhenkanal (Orissa). There are also 2 Hevea Breeding Sub-Stations at Nettana (Karnataka), and Paraliar (Kanyakumari). At the Regional Research Stations 20.77 ha. rubber plantations have been established.

Botany Division reported that out of the 23 hybrid clones produced by the combination of RR II 105 X RR IC 100, six clones continued to show more yield than RR II 105 in the first 3 years of tapping. Budwood of 3 top yielders was distributed to 5 planters for experimental block planting. A total of 15,000 hand pollinations of 14 cross combinations, selected on the basis of genetic distance were carried out. A polyclonal garden with nine prepotent clones was laid at HBSS, Nettana in an area of 9 ha. Bilateral clone exchange programme was undertaken by India with Indonesia, by which Clones BPM 24, PR 255 and PR 261 were introduced to India. In a collaborative study with Biotechnology Division anatomical and developmental aspects of somatic embryos of Hevea were elucidated.

Germplasm Division completed genetic divergence studies of 35 clones from the conservation garden. Forty genotypes identified as drought tolerant from nursery screening are being subjected to hot-spot screening. About 500 genotypes were identified to show various degree of resistance to abnormal leaf fall disease. A trial has been started at Regional Research Station, Padiyoor for evaluation of 81 selected genotypes having better yield, girth, bark thickness and latex vessel rows.

Agronomy Division found that the optimum requirement of N and K₂O to be 20 and 30 kg ha⁻¹ year⁻¹ respectively. Irrigation of young rubber plants at 50% and above of ETC enhanced the growth of rubber significantly. Irrigation improved the leaf water content, turgour pressure and canopy spread. Intercropping coffee in mature rubber indicated that the yield and growth of rubber was not affected. Liming significantly increased the dry matter production and uptake of major nutrients in the cover crop Pueraria phaseoloids. A software package was developed to offer discriminatory fertilizer recommendation system based on soil data. Discriminatory fertilizer recommendations were offered to 7,000 small growers and 31 estates after analysis of 10,300 soil and 2800 leaf samples.

Plant Pathology Division identified that mancozeb and phosphorous acid gave better control for bark rot control. Ridomil Mz was found to be very effective for the control of Gloesporium. A positive relation was found between disease incidence and increased dose of nitrogen fertilization in the case of *Corynespora* leaf fall disease. Control of root-knot nematode in Pueraria phaseoloides using different plant materials showed that leaves of Pongamia glabra was effective.

Two automatic weather stations were installed, one inside the rubber canopy and the other in open air, to study the effect of climate inside the canopy. Variation in temperature and humidity was maximum around nine hours and more pronounced during wet weather season. A new project was initiated on networking the physiological studies at RRS, Dapchari and Agartala, primarily concerned with drought and low temperature effects on rubber growth and yield. In the studies on tapping Panel Dryness, increased presence of free radical scavenging enzymes and reduced capacity for the conversion of sucrose into isoprenes were observed in TPD affected trees. A pilot model biogas plant was installed at RRII and gas was produced using a substrate mixture consisting of sheet serum factory effluent and rubber wood saw dust.

In Biotechnology Division molecular identification of DNA marked by RAPD techniques for traits such as TPD and disease resistance are being established. DNA recombinant technology to incorporate commercially viable genes into rubber is also being developed and significant achievements have been made in this area. Plants are being produced through somatic embryogenesis system developed for regenerating plants from explant tissues.

Rubber Chemistry, Physics and Technology Division is evaluating the performance of 96 sheets capacity solar cum smoke drier with full load of sheets under different climatic conditions. Blending of NR and SBR at the latex stage was attempted. Studies on the effect of different ageing conditions of dry field coagulum and fresh latex coagulum has shown that 3 days ageing drastically reduced plasticity. Use of upto 20 phr of devulcanised tyre crumbs (using a recently commercialised devulcanising agent) in retread compound, maintained most of the properties of control compound with added advantage of lower heat build up and cost. Rubber modified urea showed negligible volatilisation loss and hygroscopicity when compared with

commercial urea. Analysed 922 advisory samples relating to rubber processing and product manufacture for various parameters.

Agricultural Economics Division built up a data base consisting of information from 5,642 fields for the information on planting materials under commercial cultivation. The role of Rubber Producer's Societies in the adoption of improved cultural practices by covering 300 households has been completed. In the primary processing of rubber wood in Kerala, the need for technological upgradation of processing and manufacturing sectors for maximum recovery rates and value addition was felt.

Statistics Division developed computer programmes for most of the statistical analysis of the data collected from the laboratory/field experiments. All Divisions can have access to these through LAN. Computers have been installed in three Regional Laboratories to undertake the computerised fertilizer recommendation based on soil and leaf analysis. The existing Local Area Network was upgraded with a pentium server and expanded with diskless pentium nodes. Instrumentation Section attended to 423 maintenance and repairs work of various Scientific equipments. 34 new instruments have been added to the laboratories at RRII, 8 Regional Research Stations and in the Department of Processing and Product Development.

At the RRII Library, 195 new books and 2010 bound volume of journals were added. The total collection of books and periodicals in the library was 21,205 and 19,391 respectively. The library subscribed to 158 journals and 8 dailies, and 103 journals were received as gift or on

exchange. Four issues of Documentation list, four numbers of Rubber Alert, hundred issues of SDI Bulletin and one issue of list of new additions were compiled and distributed. As part of database development 13,000 documents have been indexed during the period.

At the Regional Research Stations, clone trials are being conducted to identify appropriate clones for each region. In general RRIM 600 was found to perform better compared to RRII 105 and PB 235. Powdery Mildew Disease was found to be a problem of much less importance in non-traditional areas compared to traditional areas. For the control of lalang grass, in the long run glyphosate was found to be more effective than gramaxone. Field experiments on optimum fertilizer requirement, impact of cold climate and drought on various clones, natural calamities such as hailstorm are being studied in Regional Research Stations. Since most of the rubber plantations are owned by the tribals in the North Eastern Region and some of the non-traditional areas, experiments are being conducted for identification of the best intercrops in rubber, which can provide some income to the rubber growers during the immaturity period. A few field experiments at RRS, Agartala and Orissa were affected due to hailstorm.

Under the Research Component Exploitation Studies were conducted for evolving low frequency tapping in popular clones in different ecoclimatic conditions, maximising production in final years of the trees, production losses due to rain and latex diagnosis for optimising the tapping systems. Twelve field experiments on low frequency tapping system were laid out in 163 ha. in different districts of Kerala and Kanyakumari district of Tamilnadu. Under d/4 system of tapping, RRII 105 gave an average yield of 1000 kg/400 trees over 10 months period and

GT1 700 kg/400 trees and RRIM 600, 600 kg/400 trees over a period of 8 months. Experiments on controlled upward tapping is also in progress.

For Latex diagnosis studies, four experiments were designed to fix base value parameters like sucrose, thiols and inorganic phosphorous of clone RR11 105 under two tapping systems on two panels - BO1 and BO2.

Clone evaluation studies were conducted to study regionwise performance of various clones through scientific experimentation and survey in existing plantations. Recording of growth characters was started in three existing field trials of Kanyakumari region. One large scale clone evaluation trial is planned at the RRS, Padiyoor and 3 block trials are envisaged in the north (2) and South (1) Kerala. Preparation of planting materials etc. are in progress. Survey work in estates and small holdings was initiated.

Studies in Biotechnology/Tissue Culture such as in vitro plant regeneration, Somatic embryogenesis and transgenic plant synthesis are in progress. Extensive survey of clones belonging to category I, II and III for in vitro response has been done. Replicated trials with 12 clones showed that nutritional requirement is clone specific and hence separate media formulation needs to be developed for each of the commercial clones.

A plant hardening facility is nearing completion. In a collaborative effort with Nottingham University, successful somatic embryos could be developed from protoplasts. Incorporation experiments with a reporter gene named "Gus" into rubber was attempted.

For Hot Spot screening of Brazilian germplasm for drought and cold tolerance, a field trial using a number of clones has been planned at the RRS, Sukma (Madhya Pradesh). Planting materials have already been raised and maintained in polybags. For genome analysis studies, a laboratory is being set up at RRII and a number of equipments have been ordered for.

In order to strengthen the soil and tissue testing facilities in the Regional and Satellite laboratories, a number of equipments have been procured. The laboratories were reorganised for efficient functioning of various units. Personal Computers have been supplied to three Regional Laboratories and the Central Lab at RRII to computerise the fertilizer recommendations. Mobile soil camps were organised and on the spot fertilizer recommendations were given, wherever possible.

Projects such as improvement of drying conditions of sheet rubber in small holdings, basic studies on drying of raw rubber, techno economic survey on different forms of processed rubber and modified forms of NR, were in progress. Evaluation of ready made smoke house modified as Solar-cum-Smoke dryer, has shown that there is a definite reduction in firewood consumption compared to unmodified one. The quality of sheets was found to be comparable to that of smoke dried sheets. In a comparative study of electric and oil fired dryers although the PRI of dried rubber tends to be higher in the case of diesel drier, the breakdown properties were not influenced by the type of drying. Swelling behaviour of ENR in vegetable oils, butter and six different carboxylic acids was assessed, in comparison with NR and nitrile rubber (NBR). The order of swelling was found to be $NBR > ENR > NR$.

Detailed project proposal from the Kerala Agricultural University, Trivandrum for Studies on copper residue in rubber growing soils was submitted to World Bank for approval.

UPASI R&D Centre, Kottayam was selected as NGO Centre for soil and tissue analysis. Memorandum of Understanding was executed and an advance of Rs.10.21 lakh was given. Essential equipments are being procured by the centre and analytical staff are being positioned.

PART VI
PROCESSING AND PRODUCT DEVELOPMENT

The activities of the Department of Processing and Product Development centred around support to rubber processing and rubber goods manufacturing sectors in areas of factory design, product development, quality improvement and treatment and disposal of effluents from rubber processing factories.

Two seminars were organised for the benefit of rubber processing industry in the country. The first was on 20th December, 1995 at Ootty, Tamilnadu on ISO 9000 System certification for Rubber Processors and Rubber goods manufacturing industry. This was organised with the support and co-operation of the Association of Natural Rubber Producing Countries. An international expert also presented a paper in the seminar. The second seminar was organised at Kottayam for the benefit of processors of Technically Specified Rubber. Most of the Processors of Technically Specified Rubber deputed delegates for participation in the seminar.

1 Engineering Consultancy

Continued to provide engineering and technical assistance to Crumb Rubber Processing Factories established under the Kerala Agricultural Development Project. Also provided support to the new entrepreneurs in setting up rubber processing factories under private, cooperative and Govt. undertakings. Started providing assistance to rubber wood processing and treatment units. During the year provided assistance to two rubber wood processing factories.

The following processing factories were commissioned during the reporting period.

a) Latex creaming factory of M/s.Kaduthuruthy Cooperative Rubber Marketing & Processing Society Ltd.

b) Latex creaming factory of M/s.Monippally Cooperative Rubber Marketing Society Ltd.

c) In addition civil works of the Rubber Wood Processing Unit of M/s.Meenachil Treated Rubber Wood (P) Ltd. were completed. Machinery installation of the factory is in progress. Electrification work was commenced.

d) The factory building for the crumb rubber unit of M/s.Meenachil Rubber Marketing & Cooperative Society Ltd. was completed. The effluent treatment plant of factory is under construction.

e) Prepared site plan, layout plan, design, drawings, estimate and tender documents for the civil works of the rubber wood processing unit of M/s.Malankara Wood Ltd. The factory building construction is progressing.

f) Under the World Bank aided rubber development project technical assistance was given to two crumb rubber factories for preparing project report and layout plan for the expansion of their project. A bid document was prepared for the selection of a consultant for rubber wood processing and the document was sent to World Bank, New Delhi for their approval.

g) Technical assistance was given to M/s.Tripura Forest Development Plantation Corporation for the purchase of machinery and also for selection of technical personnel. A comparative study of the performance of smoke houses designed by different fabricators was made. The fuel efficiency of the smoke houses that are now being popularised among the plantations is more or less the same.

2 Processing & Quality Control

Details of the analytical work done are given below.

	<u>Parameters tested</u>
Central Lab	53127
Specifications Lab	10066

Received Rs.16 lakh for the various types of services provided to the industry. Out of this Rs.6 lakh is the share of marking fee transferred by the Bureau of Indian Standard to the Rubber Board.

Ten project reports were prepared during the period for establishing rubber processing factories.

Two sets of samples received under the international round robin cross check scheme were tested and the result sent to the RRIM which is the coordinating laboratory of this scheme.

3 Factory Management

The Pilot Crumb Rubber Factory produced 434.5 tonnes of technically Specified Rubber during the period. The Pilot Latex Processing Centre processed 204.8 tonnes of concentrated latex. The RVNRL project processed six batches of concentrated latex and produced vulcanised latex through gama radiation.

The turnover of PCRF during the period was Rs.2.29 crore while that in Pilot Latex Processing Centre was Rs.83.59 lakh. These two factories have earned marginal profit during the period of operation. The RVNRL Plant which is only a Research and Development Project, has not reached the level of break-even production.

4 Performance of factories established under Rubber Board Companies.

a) Pazhassi Rubbers(P) Ltd.

Pazhassi Rubbers has improved substantially in performance of production and reached almost 100% capacity utilisation. The financial results of the factory is still not satisfactory. During the year, the company could not generate profit but reduced the loss in comparison to previous years.

b) Pamba Rubbers (P) Ltd.

The factory is working in all the three shifts although there was shortfall in production during the last quarter of this financial year. The factory has no accumulated loss.

c) Kavanar Latex (P) Ltd.

The factory has reached a capacity utilisation of around 50% during the year. A net profit generated during the current financial year. There is no accumulated loss or dues on payment on term loan instalment.

d) Ponmudi Rubbers (P) Ltd.

The factory is operating at a capacity of around 70 to 75%. It is expected that the company will generate profits during the period. There is no accumulated loss or dues of term loan instalments.

e) Periyar Latex (P) Ltd.

The factory is operating at capacity utilisation of 80% during the period. It is expected that the factory will generate operating profit. There is no arrears on term loan payment, but the accumulated loss is expected to be wiped out during the period.

f) Sreekandapuram Latex (P) Ltd.

One constraint in the profitable working of this factory is regular availability of fresh field latex for processing. At present the unit is working as a viable unit. There is no accumulated loss or term loan arrears.

g) Meenachil Treated Rubber Wood (P) Ltd.

The factory building construction is over and machinery erection is progressing. Electrification work has just commenced. It is expected that the factory will start production by June or July, 1996.

5 Finance and Accounts

Details of the equipments issued for establishing Latex/Scrap Collection Centres are given under.

Platform Balance, Chemical Balance and Air Oven were issued to 22 different Rubber Producers Societies for establishing Latex Collection Centres. Platform Balances were also issued to two Rubber Producers Societies for establishing Sheet/Scrap Collection Centres.

Under the scheme for quality improvement of graded rubber sheets, Rs.38.7 lakh was disbursed to Rubber Marketing Cooperative Societies for procuring and marketing grade rubber sheets produced by small rubber growers.

Under a separate scheme Rs.20 lakh was paid to Rubber Processing Companies for improving the marketing of rubber sheets produced by the small rubber growers and for helping small growers to get better price for higher quality rubber by improving the processing.

Share capital assistance to the tune of Rs.10 lakh was given to the Meenachil Treated Rubber Wood (P) Ltd. to procure processing and quality improvement machinery. Also Rs.585,000 was given to Rubber Processing Companies under the scheme through share capital assistance for establishing testing equipments.

PART VII
T R A I N I N G

Continued the on-going training courses for the rubber growers, small-scale rubber goods manufacturers and Board's own personnel. Crop familiarisation and demonstration cum training programmes were also organised.

1 Training Courses

a) Rubber culture and estate management

Two batches of this eighteen-day course were organised for thirty eight participants from Assam, Meghalaya, Karnataka and Kerala. Out of the 38, two represented scheduled caste to whom 50% fee concession was allowed.

b) Training for small-holders

This five-day course in Malayalam language was held in two batches for twenty nine small growers from Kerala.

c) Training for rubber goods manufacturer

Separate courses were conducted for manufacturers of latex goods and dry rubber products.

Four batches of five-day course on manufacture of products from latex were held for sixty five persons from Andhra Pradesh, Haryana, Kerala, Maharashtra, Madhya Pradesh, Rajasthan and Tamilnadu.

Four batches of the eight-day course on manufacture of products from dry forms of rubber were organised for sixty three participants from Andhra Pradesh, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa and Tripura.

d) Rubber Processing

Two batches of this five-day course were conducted for thirty seven participants from Kerala.

e) Micron spraying

Five participants took part this one-day programme held on 5th May, 1995.

f) Grading

Two batches of this one-day programme were held on 4th September, 1995 and 28th February, 1996 for six participants.

g) Budding

Six batches of the one-day programme on budding were conducted in which 113 participants took part.

h) Beekeeping

In the course on beekeeping held on 28th March, 1996 twenty two persons participated.

2 Special Courses

i) Latex gloves

Two batches of the three-day course on latex gloves were run, in which four entrepreneurs from Maharashtra participated.

ii) Latex thread

This four-day course was attended by five entrepreneurs from Karnataka and Kerala.

iii) Balloon

Two entrepreneurs were given training on production of balloon from 9th to 12th October 1995.

iv) Sheet grading and quality control

Five officers from the State Trading Corporation of India, Cochin have undergone this two-day specialised course from 22nd to 23rd November, 1995.

v) Rubber band

This four-day course was organised for three lady entrepreneurs from Kerala from 13th to 16th November, 1995.

vi) Training on raw rubber, rubber vulcanisates and rubber processing.

Two deputees of Government Polytechnic, Kottayam participated in this training programme held between 13th October and 16th November, 1995.

vii) Training on discriminatory fertilizer recommendation, exploitation and disease control.

The six-day course was organised for the members of Rubber Producers' Societies. Twenty eight participants from Muvattupuzha region took part in the course held from 7th to 14th March, 1996.

3 Inservice Personnel
 Training for Jr.Field Officers

Twenty Junior Field Officers had undergone this comprehensive training programme held in two batches from 4.7.1995 to 28.7.1995 and 4.10.1995 to 31.10.1995.

Newly recruited Junior Field Officers totalling 20 were trained in two batches from 14.8. 1995 to 22.8.1995.

4 Sasthra Darsan and Field Training

During the period under report thirty one one-day training on familiarisation of cultural operation of natural rubber were organised under the Sasthra Darsan Programme in which 699 rubber growers, inclusive of RPS members and members of other voluntary organisation and University students took part in this programme.

Eight one-day/half-day field training cum demonstration programme on tapping and the problems of bad tapping, controlled upward tapping on high panel, pests and diseases of rubber and their control measures and beekeeping in rubber plantations in various estates of M/s.Harrisons Malayalam Ltd. and RPSs were organised for 533 members of rubber growing community.

Prepared a manual in Malayalam language on beekeeping for issue to the trainees and one pamphlet on tapping procedure for issue to Tappers Trainees.

5 Revenue

Received a total amount of Rs.1,78,200/- towards course fee for conducting various training courses during the period under report.

PART VIII
FINANCE & ACCOUNTS

The following activities were undertaken during the year.

- 1 Prepared Annual Budget, Performance Budget, Foreign Exchange Budget and exercised budgetary control.
- 2 Maintained accounts of the Board, prepared Annual Accounts and presented for audit by the Accountant General Kerala and the audited accounts to the Ministry.
- 3 Placed demands for grant from Government from time to time, collection and release of funds to various departments.
- 4 Rendered advice on financial propriety and regularity of transactions and payments.
- 5 Assisted the Cost Accounts Branch of the Ministry of Finance in ascertaining the cost of production of Natural Rubber.
- 6 Prepared financial statements for project reports and schemes.
- 7 Prepared detailed cost tables and other financial statements supporting the proposals presented to the World Bank Mission for Mid Term Review and restructuring of the World Bank Assisted Rubber Project.

Annual Accounts 1994-95

The Annual Accounts for the year 1994-95 were prepared and given to AG Kerala within the stipulated time.

Revised Estimate 1995-96 and Budget Estimate 1996-97.

The Revised Budget for 1995-96 and Budget Estimate for 1996-97 were prepared within the stipulated time limit and forwarded to the Government. Budget sanctioned for the year 1995-96 both Plan & Non-Plan put together was Rs.56.87 crore. As against this, budget sanctioned for 1996-97 is only Rs.54.38 crore whereas the total budget estimates proposed for the year was Rs.67.32 crore.

Funds Management

Funds received from Government as budgetary support amounted to Rs.36.44 crore including Rs.19.17 crore towards Foreign Aid during the year 1995-96. The internal resource during the year was about 9.2 crore. The total expenditure for the year was Rs.50.41 crore. The accumulations in the General Provident Fund and Pension Fund were invested to maximise the return. For the year 1995-96, declared interest on the GPF accumulations @ 13% p.a.

Cost Accounts

Continued to collect cost data for furnishing to the Government and to ANRPC. Cost of raising rubber plantation in one hectare in different regions has been updated. Conducted study of cost of production of planting materials in own nurseries for fixing selling price of planting materials.

Also handled Sales Tax and Agricultural Income Tax matters. Project report in respect of large scale plantations in Tripura, in Karnataka and in tribal land in Kerala was prepared and Management Information System was monitored.

Electronic Data Processing

Processed pay roll of approximately 1200 employees and handled the financial accounting for the year. For the purpose of preparation of Budget, Nominal Rolls were prepared. GPF Account and Bankwise statement of pensioners were also prepared. Financial statements in respect of various Project Reports have also been prepared during the year.

PART IX

STATISTICS AND PLANNING

Monitored supply, demand, stock, price etc. of natural rubber regularly. During the period under report, the Statistics & Import/Export Committee of the Board met on 29.6.95, 28.12.95 and 29.3.96 to review the supply-demand position of rubber. The Rubber Board which met on 7.4.95 and 30.8.95 also reviewed the situation for which background notes with supporting statistical data were prepared for identifying the gap between demand and supply and make appropriate recommendations on import of rubber.

The statutory monthly returns from rubber growers, dealers, processors and manufacturers were collected, compiled and analysed every month. In order to ascertain the monthly variation in production, stock etc. pertaining to small growers, sample studies in small holding sector were continued. The data collected from various sources were compiled and production, import and stock of rubber were worked out on monthly basis. The required statistical information for publishing the 'Rubber Statistical News' (monthly) was prepared. This publication covers trend in production, consumption, stock, import/export of natural rubber, synthetic rubber and reclaimed rubber, price of natural rubber and many other details.

Compiled tables for the 'Indian Rubber Statistics' Vol.21(1996) using in-house computer facilities. This covers all latest information connected with production, compilation, stock etc. of natural, synthetic and reclaimed rubber, No. of manufacturers, dealers, productwise consumption of rubber, employment of labour, world rubber statistics etc. A sample study was carried out for ascertaining the extent of adoption of polybagged plants for planting rubber in traditional areas.

About 95% of area newplanting/replanting is carried out with polybagged plants. A quick study to ascertain the gradewise production of rubber by small holding sector was also conducted.

Furnished relevant statistical information to the various organisations connected with the rubber industry. For answering Parliament questions and Legislative Assembly questions pertaining to the import/export, production of rubber etc. and the various aspects of rubber industry materials were prepared and furnished.

To ascertain the production of various grades of rubber, installed capacity etc. during 1994-95, annual reports were collected from processors of centrifuged latex, block rubber, PLC and crepe mills.

The census work initiated in 1988 was continued in the reporting period also. Temporary enumerators were appointed for carrying out the field work during 1995-96 and about 54,500 reports were collected which are under process.

Planning

The Annual Plan for 1996-97 was prepared and forwarded to the Government. Preliminary steps were initiated for preparing the Ninth Plan proposals on Rubber.

Supply of information to World Organisations

Continued to supply information about the natural rubber industry in India to world organisations like the Association of Natural Rubber Producing Countries (ANRPC), Kuala Lumpur, Malaysia and the International Rubber Study Group (IRSG), London.

India hosted the fifth Meeting of the ANRPC Committee on Processing, Quality and Marketing held on 19th & 21st December, 1995, at Ootty. The Meeting was attended by delegates from India, Indonesia, Malaysia, Sri Lanka and Thailand. A seminar on ISO-9000 was also held in conjunction with the Assembly on 20th December, 1995.

PART X
TECHNICAL CONSULTANCY

Continued to extend technical support to (1) Entrepreneurs desirous of setting up rubber goods manufacturing units and (2) to existing rubber goods manufacturers. For the former category, the main type of assistance included project identification, conducting of market survey, preparation of project feasibility report, training in product manufacture and technical assistance for trial runs. For the rubber goods manufacturers, technical assistance was given for improving quality of products, reducing cost of production, diversification and for identifying export market for rubber goods. The services provided have been acknowledged and appreciated by the clientele in general.

Prepared 9 Project Reports on rubber products. Developed technology for the production of rubber grip pads, rubber bearings and foam rubber underlay for coir carpet. Pre-feasibility report for the establishment of a Rubber Park in Ernakulam District was prepared and submitted for approval of the Government of India.

Aartee

PART XI
STATISTICAL TABLES

Table-1

PRODUCTION, IMPORT & CONSUMPTION OF NR
(Tonnes)

Month		Production	Import*	Consumption (Indigenous & imported)
April	1995	35,300	774	41,770
May	"	37,210	384	41,525
June	"	29,660	4,021	41,140
July	"	32,540	11,564	43,455
August	"	39,475	15,295	43,265
September	"	48,260	11,507	41,250
October	"	53,040	2,610	43,855
November	"	58,815	2,490	46,480
December	"	62,660	1,389	45,650
January	1996	55,990	974	45,485
February	"	25,085	1,066	44,410
March	"	28,875	1,151	47,180
TOTAL		506,910	53,225	525,465

* Provisional . Compiled from monthly returns
furnished by manufacturers.

Table-2

STOCK OF NATURAL RUBBER AT THE END OF EACH MONTH
(Tonnes)

Month		Growers, dealers & processors	Manufa- cturers	Total (rounded)
April	1995	29,105	34,615	63,720
May	"	31,245	28,510	59,755
June	"	28,310	23,960	52,270
July	"	29,995	22,800	52,795
August	"	35,575	28,490	64,065
September	"	51,605	30,960	82,565
October	"	62,830	31,500	94,330
November	"	71,745	37,365	109,110
December	"	78,110	49,240	127,350
January	1996	81,640	57,125	138,765
February	"	66,445	53,935	120,380
March	"	50,960	52,230	103,190

Table-3

PRODUCTION, IMPORT & CONSUMPTION OF SYNTHETIC RUBBER
(Tonnes)

		Production*	Import*	Consumption
April	1995	3,617	5,455	11,050
May	"	4,804	5,945	11,005
June	"	6,417	5,862	11,180
July	"	7,120	6,289	11,040
August	"	7,140	4,897	11,155
September	"	4,405	5,842	11,230
October	"	5,978	5,579	10,810
November	"	5,024	7,403	11,025
December	"	6,629	4,567	10,965
January	1996	5,304	5,795	10,940
February	"	5,669	5,356	11,045
March	"	6,149	5,640	12,640
TOTAL		68,256	68,630	134,085

*Provisional

Table-4

PRODUCTION & CONSUMPTION OF RECLAIMED RUBBER
(Tonnes)

		Production*	Consumption
April	1995	5,630	5,350
May	"	5,200	5,010
June	"	5,100	5,365
July	"	5,095	5,290
August	"	5,310	5,360
September	"	5,380	5,350
October	"	5,495	5,435
November	"	5,655	5,870
December	"	5,785	5,900
January	1996	5,870	5,610
February	"	5,745	5,615
March	"	5,515	5,620
TOTAL		65,780	65,775

*Indigenous purchase by manufacturers.

Table-5

MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NATURAL RUBBER IN INDIA
(Rs/quintal)

	RSS 1	RSS 2	RSS 3	RSS 4	RSS 5	Ungraded	ISNR 5	ISNR 10	ISNR 20	ISNR 50
April 1995	5803	5650	5605	5441	5415	5350	6008	5650	5477	NT
May "	6633	NT	NT	6047	5966	5898	6470	6079	5889	5607
June "	6674	NT	NT	6171	5797	5729	6761	6332	5801	5232
July "	5768	NT	NT	5231	5065	4793	5778	5550	4960	4764
August "	4921	NT	NT	4295	4116	3982	4600	4080	3758	3580
September "	4800	4500	4225	4197	4121	4064	4511	4079	3939	3671
October "	5354	NT	NT	4694	4350	4153	4968	4490	4110	3570
November "	5493	5350	NT	4925	4461	4219	5317	4696	4176	3924
December "	6082	NT	NT	5598	5390	5243	5844	5330	5140	4688
January 1996	6171	5880	5800	5588	5347	5124	6050	5663	5350	4968
February "	5788	5500	5400	5249	5148	5068	5690	5361	5123	4904
March "	5613	5500	5300	5006	4948	4865	5448	5255	4990	4860
Yearly average (1995-96)	5758	5397	5266	5204	5010	4874	5620	5214	4893	4524

NT: No Transaction

Table-6

MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NR IN INTERNATIONAL MARKET
(Rs/quintal)

MONTH	RSS 1	RSS 2	RSS 3	RSS 4	RSS 5	SMR 5	SMR 10	SMR 20
April 1995	5792	5748	5735	5640	5577	5628	5413	5401
May "	5383	5338	5324	5230	5166	5269	5050	5033
June "	4823	4772	4759	4662	4598	4724	4524	4498
July "	4218	4167	4154	4058	3994	3979	3878	3841
August "	4068	4018	4005	3910	3846	3953	3886	3862
September "	4432	4383	4370	4272	4206	4405	4287	4268
October "	4859	4811	4798	4695	4627	4704	4604	4591
November "	5564	5511	5498	5396	5327	5608	5510	5490
December "	5644	5516	5503	5400	5331	5854	5678	5634
January 1996	5533	5393	5379	5274	5204	5806	5628	5577
February "	5658	5515	5500	5393	5321	5723	5558	5500
March "	5305	5176	5162	5061	4994	5192	5089	5042
Yearly average (1995-96)	5107	5029	5016	4916	4849	5070	4925	4895

LIST OF MEMBERS OF THE RUBBER BOARD

AS ON 31.03.1996

01	Shri KJ Mathew IAS	:	Chairman, Rubber Board
02	Shri V Krishnamoorthy IAS APC, Kerala.		Nominated by the Govt. of Kerala to represent that
03	Vacant		State.
04	Vacant		Nominated by the Govt. of Tamilnadu to represent them.
05	Shri George John Kailash Rubber Company Ltd. Ancheril Bank Building Kottayam, Kerala.		Elected by the Large Growers in the State of Kerala.
06	Shri MD Joseph Manniparampil Kanjirappally Kottayam, Kerala.		- do -
07	Shri KJ Thomas Akkarakalam Manager, South Indian Plantations Ltd., Devi Vilas Buildings Jetty Road Alappuzha, Kerala.		- do -
08	Shri PN Subramanion Pioneer Nagamony - Plantations, Town Junction Nagercoil Kanyakumari Dist.		Elected by the Large Growers in the State of Tamilnadu.

09	Shri Dwarka Nath Dass, MP 188, South Avenue New Delhi - 110 011.	Elected by Lok Sabha	They will hold Office upto 20th Jan.1997 or till the date on which they cease to be Member of Parlia- ment whichever is earlier.
10	Shri VS Vijayaraghavan, MP B-101, MS Flats Baba Kharak Singh Marg New Delhi - 110 001.		
11	Shri Vayalar Ravi, MP 15, Pandit Pant Marg New Delhi - 110 001.	Elected by Rajya Sabha	He will hold Office upto 20th Jan.1997 or till the date on which he ceases to be Member of Parliament whichever is earlier.
12	Prof.KK Abraham Kayathinkara, Pala Kerala.	Nominated by the Govt. to represent growers of Kerala.	Central small
13	Shri K Joseph Monipally 7/508 A, Mavelipuram Housing Colony, Kakkanad, Cochin - 682 030.	Nominated by the Govt. to represent growers of Kerala.	Central small
14	Shri Kodumon Gopinathan Nair President, National Federation of Rubber Producers, Kodumon East, Pathanamthitta Dist. Kerala.	- do -	
15	Shri VK Modi Managing Director M/s.Modi Rubber Limited Henkunt Towers New Friends Colony, 13th Floor Nehru Place, New Delhi - 110 019.	Nominated by the Govt. to represent goods manufacturers.	Central rubber
16	Shri SA Shah Partner, Kantilal Chotalal & Company, Subhash Road Off Caves Road Jogeshwari (East) Bombay - 400 060.	- do -	

17	Shri PV Sankaranarayanan General Secretary INTUC, Kerala Branch Asha Azchavatom Kozhikode, Kerala.	Nominated by the Central Govt. to represent Labour interests.
18	Shri PK Gopalan General Secretary Malabar Estate Workers Union (INTUC), PO Meppadi Wyanad Dist., Kerala.	- do -
19	Shri Tom Thomas Secretary, Hind Mazdoor Sabha Ponkunnam, Kerala.	- do -
20	Shri PD George General Secretary Thirukochi Thottam - Thozhilali Union Mundakayam, Kerala.	- do -
21	Shri Thalekunnil Basheer, Ex.MP Kochar Road, Sasthamangalam PO Thiruvananthapuram, Kerala.	Nominated by the Central Govt. to represent 'other interests'.
22	Shri Jacob Thomas Kalapurackal House Muttambalam, Kottayam Dist. Kerala.	- do -
23	Shri ET Varghese President, Rubber Dealers Association, C/o. United Rubbers, KK Road, Kottayam-1.	- do -
24	Shri Ashok Bhattacharya Jay Nagar (Opp.Agartala Judicial Court) Agartala, Tripura.	- do -
25	Dr.AK Krishnakumar Rubber Production Commissioner Rubber Board, Kottayam.	(Ex-officio)
26	Vacant (Executive Director)	

ANNUAL REPORT

FOR
THE YEAR 1996-1997



THE RUBBER BOARD

[Govt. of India, Ministry of Commerce]

KEEZHKUNNU, KOTTAYAM—686 002
KERALA STATE

THE RUBBER BOARD

Annual Report on the activities for the year
1996-97

PART I	INTRODUCTION	01 - 03
PART II	CONSTITUTION & FUNCTIONS	03 - 08
PART III	RUBBER PRODUCTION	09 - 42
PART IV	ADMINISTRATION	43
	Establishment	44 - 45
	Excise Duty	46 - 51
	Market Intelligence	51 - 54
	Marketing	54 - 55
	Publication & Publicity	55 - 56
	Labour Welfare	56 - 59
	Internal Audit	59 - 60
	Legal	60 - 61
	Vigilance	61 - 62
	Official Language I	62 - 63
	Implementation I	
	Sub/Liaison Offices	64
PART V	RUBBER RESEARCH	65 - 68
PART VI	PROCESSING & PRODUCT DEVELOPMENT	69 - 73
PART VII	TRAINING	74 - 76
PART VIII	FINANCE & ACCOUNTS	77 - 79
PART IX	STATISTICS & PLANNING	80 - 82
PART X	TECHNICAL CONSULTANCY	83 - 84
PART XI	STATISTICAL TABLES	85 - 90
	<u>ANNEXURE - I</u>	
	LIST OF BOARD MEMBERS	91 - 93

**ANNUAL REPORT FOR THE WORKING OF THE RUBBER BOARD
FOR 1996-97**

PART - I
I N T R O D U C T I O N

This is the annual report of the Rubber Board on its working for the year 1996-97, containing a summary of the activities from 1st April, 1996 to 31st March, 1997.

Rubber plays an important role in the industrial and economic development of the country. Cultivation of rubber was introduced to the country during the first decade of this century. Large planters were the pioneers. Small holders made their appearance later. The Government of India constituted the Rubber Board as a body corporate primarily to promote natural rubber production under the Rubber Act, 1947. In order to undertake scientific, technological and economic research, the Board established the Rubber Research Institute of India in 1955.

India had to evolve suitable package of practices for development of the rubber plantations. With sustained research and development activities coupled with extension and advisory services for transfer of technology to the planters' fields, the rubber producing sector had a quick change-over from the traditional methods to modern cultivation practices. India soon became the fourth largest natural rubber producer in the world, after Thailand, Indonesia and Malaysia.

The research efforts made significant contributions to the rubber plantation industry. India evolved the high yielding clone RRII 105 with average productivity around 2000 kg per hectare. Switch-over from seedlings to buddings, evolving fertilizer schedules for mature and immature rubber, pest and disease management practices, improved crop exploitation techniques and improved crop processing etc. played a vital role in enhancing rubber production and upgrading quality of the processed rubber. Application of fertilizers after soil and leaf analysis, evolving new clones with higher yield potential compared to RRII 105 suitable for different agro-climatic regions and nutrient and plant protection schedules for the non-traditional region, tissue culture and molecular approach for productivity improvement, integrated approach to reduce the cost of production and improve quality and competitiveness, crop exploitation in association with yield stimulation, processing technically specified rubber and process aid rubbers, developing blends of NR with synthetic rubbers, developing formulations and processes for manufacturing processes, development of solar dryer for curing raw rubber etc. are some of the thrust areas in research and development activities.

The Rubber Plantation Development Scheme implemented from the VI Plan period is by far the largest scheme operated for development and promotion of rubber cultivation in the country. The scheme provides for financial assistance to small growers in the traditional areas and in the non-traditional areas to undertake rubber cultivation. Input subsidy, technical advice and assistance at all stages of planting and maintenance are extended in addition. During 1995-96, 5845 ha. was newly

planted with rubber and during 1996-97, 6772 ha. Terrorist violence in the North-east region where there is scope for large expansion of rubber cultivation continues to adversely affect the planting tempo.

Performance during 1996-97

The overall performance of the rubber plantation industry during 1996-97 has been impressive. Production of natural rubber increased to 549,425 tonnes from 506,910 tonnes recording a growth rate of 8.4%.

The consumption of natural rubber during the year increased by 6.9% to 561,765 tonnes as compared to 525,465 tonnes in 1995-96.

Price

During the year, the monthly average price of rubber was Rs.4901/- per quintal for RSS-4 grade as against Rs.5204/- in the previous year. A quantity of 1598.29 tonnes of different grades of natural rubber was exported during 1996-97.

PART - II

CONSTITUTION & FUNCTIONS

1) INTRODUCTION

The Indian Rubber Board was constituted under the Rubber (Production & Marketing) Act, 1947 which came into force on 19th April, 1947 'to promote by such measures as it thinks fit, the development of the rubber industry in India'.

The Rubber Production & Marketing (Amendment) Act of 1954 made certain changes in the constitution of the Board and its name was changed as Rubber Board. This Act came into force on 1st August, 1955. The Rubber Act was further amended by the Rubber (Amendment) Act 1960, the Rubber (Amendment) Act, 1982 and by the Rubber (Amendment) Act, 1994. The amendment in 1982 was to appoint a part time/whole time Chairman for the Board and an Executive Director on whole time basis (if considered necessary). The amendment in 1994 was to enhance the ceiling limit of cess from Re.0.50 to Rs.2/- per kg.

CONSTITUTION

The Rubber Board functions under the Ministry of Commerce of the Government of India. The Board has at present a full time Chairman as principal executive, responsible for discharging the functions as laid down under Section 8 of the Rubber Act. There are 25 other members consisting of -

- a) Two members to represent the State of Tamilnadu of whom one shall be a person representing the rubber producing interests;
- b) Eight members to represent the State of Kerala, six of whom shall represent the rubber producing interests, three of such being persons representing small growers;
- c) Ten members to be nominated by the Central Govt. of whom two shall represent the manufacturers and four labour;
- d) Three members of Parliament of whom two shall be elected by the Lok Sabha and one by the Rajya Sabha;
- e) The Executive Director (ex-officio); and
- f) The Rubber Production Commissioner (ex-officio).

The position of Executive Director has not been filled up.

List of the new members of the Board is given at the end of this report.

Seven Committees have been formed to review the Board's activities vis-a-vis the functions as laid down under Section 8 of the Rubber Act. These Committees examine proposals for development of natural rubber industry and make suitable recommendations to the Board. The Committees are Executive Committee, Research and Development Committee, Market Development Committee, Planting Committee, Statistics & Import/Export Committee, Labour Welfare Committee and Staff Affairs Committee.

Shri. MD Joseph, Member representig large growers was elected as Vice Chairman for one year from 9.4.1995.

Shri KJ Mathew IAS continued to be the Chairman of the Board.

3) FUNCTIONS

The functions of the Board according to Section 8 of the Rubber Act are -

- i) Promote by such measures as it thinks fit the development of the rubber industry. The measures may provide for -
 - a) undertaking, assisting or encouraging scientific, technological and economic research;
 - b) training students in improved methods of planting, cultivation, manuring and spraying;
 - c) supply of technical advice to rubber growers;

- d) improving the marketing of rubber;
 - e) collection of statistics from owners of estates, dealers and manufacturers;
 - f) securing better working conditions and the provisions and improvement of amenities and incentives for workers; and
 - g) carrying out any other duties which may be vested with the Board.
- ii) It shall also be the duty of the Board -
- a) to advise the Central Government on all matters relating to the development of the rubber industry, including the import and export of rubber;
 - b) to advise the Central Government with regard to participation in any international conference or scheme relating to rubber;
 - c) to submit to the Central Government and such other authorities as may be prescribed half yearly reports on its activities and the working of the Act; and
 - d) to prepare and furnish such other reports relating to the rubber industry as may be required by the Central Government from time to time.

4) MEETING OF THE BOARD AND ITS COMMITTEES

The following meetings of the Board and of the Committees were held during the year;

- a) Board Meeting On 3 occasions; 128th meeting on 8.4.1996, 129th meeting on 27.9.1996 and 130th meeting on 16.1.1997.

b) Committee Meetings

Executive Committee	3.4.1996, 1.6.1996, 4.11.1996 & 13.1.1997
Statistics & Import/Export Committee	29.3.1996, 1.6.1996 & 4.11.1996
Labour Welfare Committee	4.11.1996
Market Development Committee	20.6.1996
Staff Affairs Committee	20.6.1996 & 26.11.1996
Research & Development Committee	1.11.1996

5) ORGANISATIONAL SET UP

The activities of the Rubber Board were carried out by eight departments viz. Rubber Production, Administration, Rubber Research, Processing & Product Development, Training, Finance & Accounts, Statistics & Planning and Technical Consultancy; headed respectively by the Rubber Production Commissioner, the Secretary, the Director of Research, the Director (P&PD), the Director (Trg), the Director (Finance), the Jt. Director (S&P) and the Jt. Director (TC).

The Headquarters of the Board along with the Administration, Rubber Production, Statistics & Planning and Finance & Accounts Departments remained located at own premises in Keezhukunnu, Kottayam-686 002.

There are eight Sub/Liaison Offices under the Administration Department. The Rubber Production Department has 3 Zonal Offices, 2 Nucleus Rubber Estate & Training Centres, 6 Supervisory Offices, 40 Regional Offices, 2 ADOs offices,

170 Field Offices, 15 Regional Nurseries and 26 Tappers' Training Schools located at different rubber growing regions.

The Research Department, the Department of Processing and Product Development, the Training Department and the Technical Consultancy Department functioned in the Board's own building at Kottayam-9. The Research Department runs two Regional Research Stations in Kerala. One each in Tamilnadu, Karnataka, Maharashtra (Dapchari), Orissa, West Bengal, Assam, Mizoram, Meghalaya and Tripura. The Pilot Crumb Rubber Factory located at Kottayam and the Pilot Latex Processing Factory located at the Central Experiment Station at Chethackal were run by the Department of Processing and Product Development as also the Pilot Plant for Radiation Vulcanisation of Natural Rubber at Kottayam-9.

The Chairman exercises administrative control over all the Departments and Offices. The total of Officers and staff under the Board as on 31.3.1997 was 2214; 233 under Group 'A', 574 under Group 'B', 1245 under Group 'C', 160 under Group 'D' and 2 on consolidated pay. Very cordial relations existed between the staff and the executive personnel. Their good work has resulted in the impressive record of achievement during the year.

The activities of the different departments are summarised in the following pages.

PART - III

RUBBER PRODUCTION

FUNCTIONS

The Rubber Production Department performed the following main functions to promote natural rubber production in the country.

- i) Planning, formulation and implementation of schemes for expansion, development and modernisation of rubber plantations.
- ii) Rendering advisory and extension services
- iii) Production, procurement and distribution of high yielding planting materials
- iv) Facilitate distribution of agro-inputs requiring popularisation.
- v) Training of tappers
- vi) Demonstration and training in scientific planting and production of rubber in non-traditional rubber growing areas.

REVIEW OF ACTIVITIES

1) Rubber Plantation Development Scheme Phase I

This scheme aimed at integrated promotion of newplanting and replanting of rubber, replaced the earlier subsidy schemes separately for newplanting and replanting. The target set was 12,000 ha. per year for 5 years from 1980-81 to 1984-85.

The following incentives were offered for both replanting and newplanting of rubber.

- a) Capital subsidy of Rs.5,000/- per ha. to growers owning upto 20 ha. including any area planted under the scheme and Rs.3000/- per ha. to growers owning more than 20 ha.
- b) Input subsidy to the weaker sections of growers processing not more than 6 ha. of rubber for using approved planting materials and approved fertiliser and a subsidy of Rs.150/- per ha. for undertaking soil conservation work.
- c) The beneficiaries could avail of long term agricultural bank credit under NABARD's refinancing scheme to supplement the assistance from the Board. The maximum credit per ha. was limited to Rs.15,020/- to Rs.17,000/- and Rs.18,700/- respectively for growers owning upto 6 ha. of rubber, between 6 and 20 ha. of rubber and above 20 ha. of rubber. The loan advanced in 7 annual instalments was repayable from the 8th year. During the repayment period, only simple interest was payable.
- d) The Board subsidised 3% interest to all categories of growers upto the 10th year of planting subject to limitation on the quantum of loans.
- e) Free advisory and extension support at all stages of planting and maintenance.

The cumulative progress of the scheme as on 31.3.1997 is summarised below.

	Years to which planting related					Total
	1980	1981	1982	1983	1984	
No. of subsidy permits issued	17554	19180	18970	21533	25516	102753
Area covered by permits	12123	13603	13875	15580	17556	72737

During the year under review, an amount of Rs.1,95,781/- was disbursed as subsidy including interest subsidy. Total amount disbursed towards subsidy since inception of the scheme including interest subsidy comes to Rs.40,17,01,616/-.

2) Rubber Plantation Development Scheme Phase II

The Rubber Plantation Development Scheme Phase II was implemented from 1985 onwards for a period of 5 years. The target under Phase II scheme was only 40,000 hectares in view of the resource constraints.

The assistance offered under Phase II was to the following extent.

- i) Capital subsidy at the rate of Rs.5,000/- per ha. for growers owning upto 5 ha. of rubber in traditional areas and for all categories in the non-traditional areas.
- ii) Input subsidy for the use of high yielding planting materials of advanced growth (polybag plants) @ Rs.6/- per plant subject to a maximum of 450 plants per ha. Growers in the traditional region having more than 5 ha. of rubber area and carrying out planting under the scheme were also eligible to receive this assistance.
- iii) The beneficiaries could avail of the bank loan under the Agricultural Refinance Scheme of NABARD. The loan was advanced in 7 annual instalments and was repayable in five annual instalments from the 10th year of planting with interest accrued upto the close of the 7th year payable during the 8th & 9th year.
- iv) The Board subsidised 3% interest on credit component from the 1st to the 9th year to growers eligible for the capital subsidy.

- v) Free advisory and extension support at all stages of planting, maintenance, tapping and processing of the crop. The cumulative progress of the scheme as on 31.3.1997 is summarised below.

	<u>Years to which planting related</u>					Total
	1985	1986	1987	1988	1989	
No.of subsidy permit issued	23557	21247	21986	24001	23517	114308
Area covered by permits	15210	14067	14832	15636	15253	74998

During the year 1996-97 a sum of Rs.75,85,467/- had been paid as subsidy including interest subsidy. The total disbursement of subsidy since inception of the scheme including interest subsidy amounted to Rs.45,43,13,807/-.

3) Rubber Plantation Development Scheme Phase III

Due to delay in approval of the 8th Five Year Plan proposals, the Board was not able to formulate Phase III of the Rubber Plantation Development Scheme. However, annual plans within the broad framework of VII Plan proposal were approved and budget provisions were also granted. The Board tentatively implemented the RPD Scheme Phase III for 1990-91, 1991-92 and 1992-93 as annual schemes on the same lines as the Phase II Scheme with a physical target of 12,000 ha. for each year.

The cumulative progress of the scheme as on 31.3.1997 is summarised below.

	<u>Years to which planting related</u>			Total
	1990	1991	1992	
No. of subsidy permit issued	24399	28131	24941	77471
Area covered by permits in ha.	14525	16406	14522	45453

During the year 1996-97 an amount of Rs.2,17,98,698/- was disbursed as subsidy including interest subsidy. The total amount of subsidy disbursed since inception of the scheme comes to Rs.26,44,49,314/- including interest subsidy.

4) Rubber Plantation Development Scheme Phase IV

This is successor to Phase III being implemented from 1993 onwards. The physical target for the Plan period is 83,000 ha. of which 70,000 ha. has been earmarked under the World Bank assisted project. The Scheme envisages replanting of uneconomic rubber in 40,000 ha. in traditional areas and newplanting in 30,000 ha. including 7,000 ha. in non-traditional areas. The remaining 13,000 ha. would be planted in non-traditional areas where the World Bank assisted Rubber Project is not in operation.

Assistance offered under the Phase IV Scheme is at the following rates.

- a) Capital Subsidy @ Rs.8,000/- per ha. limited to 2 ha. for planters whose total rubber area does not exceed 5 ha. in traditional region. All growers in non-traditional region are eligible for subsidy for planting upto 5 ha. of rubber.

- b) Input Subsidy at a declining rate of Rs.350/- in the 1st year, Rs.250/- in the 2nd year, Rs.170/- in the 3rd year, Rs.90/- in the 4th year and Rs.20/- in the 5th year of implementation of the World Bank Project.
- c) Input subsidy for the use of high yielding planting materials of advanced growth (polybag plants) is also granted to a maximum of Rs.3,000/- per ha. for general category growers and Rs.4,000/- per ha. for SC/ST growers. This facility is available to all growers in traditional and non-traditional areas including those not eligible for capital subsidy.
- d) The beneficiaries could avail themselves of the bank credit under the Agricultural Refinancing Scheme of NABARD, at the existing rate. The 3% interest subsidy on the credit has been withdrawn.

Plantation insurance is made obligatory on the beneficiaries of the Plantation Development Scheme during the immaturity period. The premium of Rs.500/- per hectare and 5% service tax will be recovered from the 1st instalment of subsidy. Insurance is optional for growers ineligible for planting grant ie, those who own total rubber area in excess of 5 hectare.

Progress of Phase IV of the Scheme so far is as follows.

	<u>Replanting</u>	<u>Newplanting</u>	<u>Total</u>
<u>1993</u>			
No. of applications received	5460	21100	26560
Area (ha.)	6323	11429	17752
No. of permits issued	3897	15413	19310
Area covered by permits	4401	7020	11421

	<u>Replanting</u>	<u>Newplanting</u>	<u>Total</u>
<u>1994</u>			
No. of applications received	4965	17316	22281
Area (ha.)	6267	9609	15876
No. of permits issued	4765	12768	17533
Area covered by permits	5284	5712	10996
<u>1995</u>			
No. of applications received	5724	20004	25728
Area (ha.)	6216	11078	17294
No. of permits issued	6258	12802	19060
Area covered by permits	5543	5845	11388
<u>1996</u>			
No. of applications received	5393	27617	33010
Area (ha.)	5664	14862	20526
No. of permits issued	5398	15103	20501
Area covered by permits	4572	6772	11344

During the year 1996-97 an amount of Rs.9,34,83,780/- was disbursed as subsidy including additional assistance under this scheme. Total disbursement of subsidy since inception of the scheme comes to Rs.27,96,88,026/-.

During this year 1996-97, total subsidy disbursed under RPD Scheme Phase I to IV including additional assistance amounts to Rs.12.31 crore in favour of 1,87,690 growers.

5) Insurance for Rubber Plantations

The insurance scheme drawn up in collaboration with the National Insurance Company Ltd. and launched during 1988-89 was continued during the year, to compensate damages in the plantations arising out of natural calamities. The Board takes out a master policy and arranges to issue thereunder policy/certificates to individual rubber growers who desire to obtain insurance cover and make remittance of premium amount. Claims are investigated in the field by Board's field personnel and reports are furnished to the insurer. The insurance company in turn settles admitted claims through the Board. Thus as the Board undertakes and discharges bulk of the administrative work, the insurer is able to keep down premium rates and to effect claim settlement quickly.

The perils covered are fire, fire resulting from explosion, lightning bush and forest fire, windstorm, tempest, hurricane, landslide, hailstorm, rockslide and subsidence. The scheme covers all immature plantations under the RPD Scheme, as well as all mature plantations upto 22 years of age.

The rate of premium for immature area is Rs.500/- per ha. irrespective of the year of planting to cover immaturity period of 1 to 8 years or part thereof and Rs.473/- for mature areas to cover a three year consecutive period.

The maximum liability of the insurer for plantations in the age group of 1 to 8 years is Rs.45,000/- per ha. and Rs.6000/- per ha. for mature trees. No salvage value

of trees destroyed is deducted from the amount of compensation. Claims can be admitted after an initial waiting in period of one year for newly planted rubber and 30 days for established plantations. The insured grower has to bear 10% of the loss in the case of immature rubber and 10% or Rs.1,000/- whichever is more in the case of mature rubber.

As on 31.3.1997, the Board obtained two master policies covering 39,708.79 hectares of immature area and 8,300 ha. of mature area. In addition two master policies covering 1450 ha. of immature area and 155 ha. of mature rubber area were taken from M/s.New India Assurance Co. for plantations under Regional Offices Ernakulam and Kothamangalam on the same terms and conditions fixed by the National Insurance Co. The premia paid on master policy for immature area to National Insurance Company is Rs.1,97,62,500/- and to New India Assurance Company Rs.7,61,250/-. A total of Rs.2,05,23,750/- was paid to cover 41,158.79 ha. since inception of the scheme.

During 1996-97 an amount of Rs.40,16,953/- was paid to NIC on master policies to cover 8300 ha. of mature area and Rs.76,981/- to NIAC to cover 155 ha. making a total of Rs.40,93,934/- for 8,455 ha. Premia paid to NIC during 1996-97 for immature area is Rs.42,00,000/- to cover 8,000 ha. and to NIAC Rs.1,05,000/- for an area of 200 ha. Thus total premia paid during the financial year is Rs.43,05,000/- to cover 8,200 ha.

An amount of Rs.38,60,528/- including current recovery of Rs.2,75,874/- was released against issue of policy/certificates to individual growers for mature area of 8,000.78 ha. and for immature area the amount recovered was Rs.1,95,40,347/- including current recovery of Rs.37,58,087/- to cover 39,085.64 ha.

Compensation paid since inception of the scheme comes to Rs.85,63,596.30 for 2,084 insurance certificate holders including payment of Rs.32,54,703/- to 516 certificate holders during the reporting period.

6) Tribal Development Rubber Plantation Project/
Tribal Development Rubber Plantation Schemes.

The Board is implementing Tribal Development Rubber Plantation Projects in Thiruvananthapuram, Kollam and Idukki Districts sponsored by the Government of Kerala. The project is funded by the State Government and managed by the Rubber Board. Planting of 201 ha. has been completed in Thiruvananthapuram District, 100 ha. in Kollam District and 200 ha. in Idukki District. In addition, two such schemes were directly funded by the Board under Tribal Sub Plan and Special Component Plan. Planting rubber in 137 ha. under the scheme was completed in Idukki District and in 44.58 ha. in Kottayam District upto 1995-96.

Another project ie. all Kerala Tribal Development Rubber Project was approved by the Government of Kerala to raise rubber in 1200 ha. of tribal lands in various districts of Kerala in a period of 5 years from 1995-96 at the rate of 240 ha. per year.

Owing to late approval of scheme only 25 ha. was planted during 1995 at Urukunnu Malavedar Colony as against the target of 240 ha. During 1996, 130 ha. has been planted in Nedumangad and 31 ha. in Kothamangalam.

During the current financial year an area of 100 ha. has been identified in Nedumangad and 35 ha. in Kothamangalam, 22 ha in Thalassery, 60 ha. in Erattupetta, 15 ha. in Kanhangad and 75 ha. in Idukki for planting during 1997. Identification of more areas was in progress.

The areas newplanted and replanted during 1994, 1995 and 1996 statewide are given below.

Statewise Rubber Plantings during 1994, 1995 & 1996
(in hectares)

STATE	1994		1995		1996	
	New planting	Re- planting	New planting	Re- planting	New planting	Re- planting
1	2	3	4	5	6	7
Kerala	4057.85	4959.33	3616.82	5087.44	4530.46	4260.94
Tamilnadu	120.79	262.72	136.30	253.97	136.12	111.70
Karnataka	139.49	61.87	114.10	201.67	302.07	199.05
Goa	1.22	-	9.74	-	-	-
Tripura	1071.00	-	1644.00	-	1127.24	-
Assam	96.21	-	192.97	-	316.75	-
Meghalaya	75.60	-	46.03	-	84.10	-
Manipur	33.90	-	17.86	-	55.04	-
Mizoram	9.46	-	17.67	-	20.66	-
West Bengal	-	-	1.54	-	31.43	-
Nagaland	64.32	-	48.29	-	148.18	-
Arunachal Pradesh	12.36	-	-	-	20.17	-
Orissa	0.97	-	-	-	-	-
Andhra Pradesh	4.62	-	-	-	-	-
Port Blair	24.22	-	-	-	-	-
Total:	5712.01	5283.92	5845.32	5543.08	6772.22	4571.69

7) Production and distribution of planting materials

It is customary for the Board to publish every year a list of approved planting materials based on yield potential and secondary characters. During the year 1996-97 also the list was published.

To ensure the easy availability of budgrafted plants of the recommended clones at reasonable price, the Board continued to maintain rubber nurseries in all important rubber growing areas. The details of the nurseries are given below.

<u>Sl. No.</u>	<u>Kerala</u>	<u>Total extent in ha.</u>	<u>Region</u>
1	CN Karikkattoor	20.23	Kottayam
2	RN Kadackamon	4.04	Punalur
3	RN Perumpulickal	4.00	Adoor
4	RN Kanhikulam	4.88	Palakkad
5	RN Ulickal	5.20	Thalassery
6	RN Manjeri	2.00	Nilambur
7	RN Peruvannamoozhy	3.70	Kozhikode
8	RN Alakode	3.41	Taliparamba
Total		47.46	
=====			
<u>Non-traditional areas</u>			
1	RN Devarappally	2.00	Andhra Pradesh
2	RN Darrangiri	7.05	Guwahati, Assam
3	RN Mijundisha	14.00	Diphu, Assam
4	RN Hillara	14.32	Silchar, Assam
5	RN Jengitchikgre	6.50	Tura, Meghalaya
6	RN Tulakona (NRETC)	14.32	Agartala, Tripura
7	RN Mindipathar	2.81	(started on 13.8.1996)
Total		61.00	
=====			

Based on the cost study made, the planting materials raised in the nurseries were priced at Rs.4.80 per green budded stump (GBS), Rs.5.30 per brown budded stump (BBS) and Rs.9.60 per metre of budwood (BW). Small growers were allowed a concession on Re.1.80, ps.0.80 & Rs.3.60 respectively for GBS, BBS & BW.

During 1996-97, 4,05,121 Nos. of Green Budded Stumps, 6,45,553 Brown Budded Stumps and 23,214.50 metres of Budwood were sold from nurseries in the traditional area of Kerala. Majority of the materials were sold to the small holders at concessional rate. The concession allowed amounted to Rs.13,18,388/-. Cost of the polythene bags and of planting materials supplied to growers was adjusted from the grants payable under the RPD Scheme. In the non-traditional region, 3,65,861 Brown Budded Stumps were supplied to the growers free of cost.

8) Distribution of Mucuna seedlings

The Board raised Mucuna seedlings in polythene bags in the nurseries during the year and distributed to growers for multiplication and planting. A total of 28,423 polybagged seedlings were supplied to growers in traditional area @ Re.1/50 per seedling and an amount of Rs.43,007.50 was collected.

The Board had procured 1,170 kg of Mucuna seeds from Agartala, Tripura costing Rs.58,500/- and distributed in polythene packs to the growers through Regional Offices @ Rs.6/- per 100 gm. and realised Rs.70,200/-. Seeds were widely distributed to the growers but only 28,423 seedlings could be distributed @Re.1.50 per seedling realising Rs.43,007.50, as demand for mucuna seedlings raised in polythene bags was limited.

9) Advisory and extension services

The field extension officers visited 159,672 rubber holdings to advise growers on scientific methods of rubber cultivation, production, exploitation and processing. In order to disseminate knowledge on the correct techniques of planting, maintenance and crop harvesting, 24 radio talks were recorded and broadcast.

In addition to the monthly Malayalam Publication 'Rubber' in Kerala, monthly publication in local languages of other important rubber growing regions such as 'Tamilmalar' for Tamilnadu, 'Rubber Sangbad' for Assam, 'Rubber Sangbad' for Tripura and 'Rubber Vartha' for Karnataka was continued.

10) Demonstration of scientific tapping in small holdings

Tapping Demonstrators attached to the various Regional Offices visited 4,816 holdings and demonstrated scientific methods of tapping and processing. Thrust was given to popularise the modern trends in exploitation such as Controlled Upward Tapping (CUT), application of yield stimulants and rainguarding. This would help the planters to extract maximum output from the plantations due for replanting within a reasonable span of time.

Regular training to growers/tappers in scientific tapping and processing was imparted through various Tappers Training Schools opened at major rubber growing areas. At present, 20 TT Schools are functioning in the traditional region and 6 in non-traditional region as detailed below. The duration of the course was reduced to 30 working days from 60 days during 1996-97. A total of 1967 growers/tappers were trained in 126 batches and an amount of Rs.22,22,562.70 was spent for maintaining the 26 schools and for payment of stipend to the trainees. An amount of Rs.2,20,868/- was deducted from the stipend of trainees as tuition fee.

	<u>Name of Region</u>	<u>Name of TT School</u>
01	Nagercoil	Kaliyil
02	Nedumangad	Vinobanikethan
03	Kottarakkara	Nellikunnam
04	Punalur	Nedumuruppu
05	Adoor	Chunakkara
06	Pathanamthitta	Nariyapuram
07	Changanacherry	Manthuruthy
08	Kottayam	Kuruppamthara
09	Thodupuzha	Mrala
10	Muvattupuzha	Palakuzha
11	Ernakulam	Puthencruz
12	Palakkad	Erimayoor
13	Nilambur	Kalikavu
14	Kozhikode	Sathianagar
15	Thalassery	Kenichira
16	Thalassery	Karapparamba
17	Sreekandapuram	Payyavoor
18	Taliparamba	Vayattuparamba
19	Kanhangad	Panathady
20	Mangalore	Padangady
21	Agartala	Pathaliya
22	Dharmanagar	Juri
23	Udaipur	Sachirambari
24	Udaipur	Pathicherry
25	Guwahati	Ouguri
26	Silchar	Gamaria

11) Annual Schemes on productivity/quality improvement

- a) Financial assistance to small growers for purchase of sheeting rollers.

In order to improve the quality of the sheet rubber produced in small holdings, the Board has implemented a scheme to extend financial assistance at the rate of Rs.1000/- per set of sheeting rollers to benefit the small and marginal growers. The scheme evoked great response and 2000 growers availed of the assistance fully utilising the sanctioned budget of Rs.20 lakh.

- b) Financial assistance for construction of small smoke house.

With a view to encouraging the small growers to adopt better processing techniques the Board implemented a scheme by offering financial assistance to the tune of Rs.3000/- for construction of smoke houses with a minimum capacity of 85 kg rubber sheets. This scheme was popular among the small growers and during the period 1996-97, an amount of Rs.19,98,250/- was disbursed against the budget provision of Rs.20 lakh. In non-traditional areas, subsidy was paid at Rs.5000/- or 50% of the actual cost of construction to 72 growers amounting to Rs.3,19,000/-.

- c) Scheme for supply of low volume power operated sprayer/duster.

This scheme was introduced to popularise the use of low volume power operated sprayers/dusters among small growers for control of leaf diseases. During the period 1996-97, 54 low volume sprayers/dusters were supplied to Rubber Producers' Societies (RPSs), individuals, Cooperative Societies and Rubber Marketing Societies. The scheme provides grant of 50% subsidy limited to a maximum of Rs.10,000/- for sprayer-cum-duster and Rs.8,000/- for sprayer without duster attachment for RPSs, Cooperative Societies & Rubber Marketing Societies. For individual growers the subsidy rate was 25% limited to Rs.5,000/- for sprayer-cum-duster and Rs.4,000/- for sprayer without duster attachment. For small sprayer-cum-duster the subsidy element was Rs.1,700/- per RPS/Cooperative Society and Rs.850/- per grower. A total amount of Rs.3,26,200/- was disbursed as subsidy under the scheme.

- d) Financial assistance for irrigation in immature rubber plantation of NT area.

Irrigation has been found to be beneficial to ensure proper growth of the rubber plants and to reduce the immaturity period in non-traditional areas. In order to motivate the rubber growers to take up irrigation in the immature rubber holdings, the Board implemented the scheme for giving financial assistance against capital investment at Rs.5,000/- per ha. with a ceiling of Rs.50,000/- per grower for promotion of irrigation in the non-traditional rubber growing areas. An amount of Rs.56,023/- has been disbursed to eligible rubber growers under this scheme.

- e) Procurement and distribution of cover crop seeds

Leguminous cover crops are established and maintained in rubber plantations for ensuring soil moisture conservation, checking soil erosion, suppressing weed growth, improving soil fertility etc. For encouraging the small rubber growers to establish leguminous ground cover, Board is distributing leguminous cover crop seeds at concessional price. During the year, a total quantity of 16,953.800 kg of cover crop seeds was procured for distribution among the growers at Rs.75/- per kg (50% subsidy).

- f) Assistance for fencing in non-traditional area

In non-traditional areas, one of the major constraints in expansion of rubber cultivation is cattle menace and damage caused by the trespassers during the early years. In order to protect the plants from stray cattle and trespassers,

boundary protection to the planted area is essential. Due to heavy expenditure, the small growers are not able to erect proper fencing and protect their young plants. Hence to encourage the growers to put up fencing around their plantation, a scheme was implemented with enhanced subsidy for SC/ST growers.

An amount of Rs.5,05,370/- was disbursed as subsidy among general category growers and Rs.8,65,517/- was disbursed to SC/ST category growers.

- g) Scheme for supply of plantation requisites in non-traditional areas.

Most of the essential plantation requisites are not readily available in the non-traditional areas. In order to help the small growers in these areas to procure plantation requisites for increasing production and productivity and also to adopt improved processing methods, a scheme was implemented for supply of selected items. Materials such as rubber sheeting rollers, plastic cups, tapping knives, sieves, coagulating dishes, cup hangers, spouts and panel protection materials were purchased from available sources and transported to non-traditional areas for supply to eligible growers at cost price. The entire transporting charge was subsidised.

Plantation requisites worth Rs.15,35,165/- were purchased and distributed and the subsidy element for 1996-97 came to Rs.2,35,517/-.

h) Free supply of rollers in NT areas

The scheme was formulated to help the non-governmental organisations, voluntary organisations etc. in non-traditional areas to improve the processing facilities of natural rubber. During 1996-97, 10 sets of rollers were distributed to these organisations. An amount of Rs.1,34,000/- was spent against the target of Rs.3 lakh.

12) Seminars and Campaigns

As part of the mass education and technology transfer programme, a series of seminars and campaigns were conducted. During April/May 1996, a campaign 'Replant 1996' was conducted by which growers were explained the necessity of replanting the old and uneconomic holdings. Various productivity enhancement measures were also explained. The meetings were organised with the active participation of the Rubber Producers' Societies. Altogether 3924 Seminars/Campaigns were organised, including 2757 meetings for 'Replant 1996', which were attended by 60397 growers/plantation workers.

13) Planting material

A quantum of 85.50 lakh of assorted rubber seeds were procured and distributed to non-traditional areas, in addition to 40 lakh of assorted seeds procured in NRETC Agartala on germination basis. Moreover, 3.12 lakh of polyclonal seeds and 85,700 budded stumps were procured and despatched to non-traditional areas.

For the Board's nurseries in Kerala, 27.50 lakh of seeds were procured on germination basis.

14) Sponsored nursery

To meet the growing demand of good quality planting materials at reasonable rates sponsored nurseries were established in 277 centres under the RPSs. The Board arranged supply of 80.34 lakh seeds for establishment of seedling nurseries and 14,190 budded stumps for establishment of budwood nursery.

15) Schemes for free supply of barbed wire and 'U' nails

This new scheme was implemented during 1996-97 to assist individual SC/ST growers in non-traditional areas to protect their plantations with proper boundary fencing. Out of the financial outlay of Rs.20 lakh, an amount of Rs.14,57,140/- was spent during the year 1996-97.

Another scheme to protect the SC/ST growers' group planting of rubber with proper fencing was also implemented with financial outlay of Rs.20 lakh, of which Rs.10,11,690/- was spent during the financial year 1996-97.

16) Popularisation of leguminous ground cover

A new scheme with a financial outlay of Rs.20 lakh was implemented during 1996-97, to encourage small rubber growers to establish leguminous ground cover in their rubber plantations, which was taken advantage of by 1299 growers for whom an amount of Rs.7,50,821/- was disbursed as subsidy.

17) Short term Intensive Training in Tapping

This scheme was implemented to impart intensive training to small growers and tappers in tapping and processing to meet the increased demand of trained tappers. The duration of the course was 8 days. During 1996-97, 4,285 persons were trained, spending Rs.11,15,650/- against the financial outlay of Rs.15 lakh. The shortfall in expenditure was due to late introduction and implementation in 1996.

18) Development of rubber plantations in NT areas

For attaining self-sufficiency in the production of natural rubber in India, continued to promote development of rubber cultivation in non-traditional areas where the agro-climatic conditions are more or less suitable for rubber cultivation. The non-traditional regions include the States of Goa, Maharashtra, Andhra Pradesh, Orissa, West Bengal and North-eastern States. As a result of the sustained efforts, a large number of new entrepreneurs have taken up rubber cultivation.

a) Goa and Maharashtra

An area of 1,111.34 ha. has been planted by 345 growers in the States of Goa and Maharashtra. In Maharashtra, rubber plantation is of recent origin and till date 35 persons have planted rubber. Some of the plantations have come into tapping and the yield is comparable to what is obtained in the traditional area. For promoting faster development, the Board has taken on lease an area of 7 ha. at Wakoli from the Konkan Krishi Vidhyapit, Dapoli and a nursery of high yielding polyclonal seedlings has been established to make available planting material to the prospective growers.

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b) Andhra Pradesh

The Board is maintaining a nursery at Devarappally in an area of 2 ha. for raising and distribution of high yielding planting materials. This nursery can cater to the needs of the rubber growers in Andhra Pradesh as well as in Ganjam District of Orissa. A Block Planting Project to plant 50 ha. is under implementation in Andhra Pradesh. Planting has already been completed in 35.40 ha. and the balance area will be planted during 1997-98. The expenditure for the same is shared between the Board and the Girijan Cooperative Plantation Development Corporation, Andhra Pradesh.

c) Orissa

The Board had taken up development of rubber plantation in the State of Orissa in 1988. A Zonal Office was opened in Bhubaneswar followed by 3 Regional Offices at Baripada (Mayurbhanj district), Bhubaneswar (Puri district) and Paralakhemundi (Gajapathy district). An area of 455.97 ha. has been brought under cultivation as given below.

Orissa	275.10
Andhra Pradesh	178.87
Madhya Pradesh	2.00

d) West Bengal

A survey of suitable areas in West Bengal has revealed that selected areas in Jalpaiguri district, Siliguri and Naxalbari Sub-division of Darjeeling district and certain portions of Islampur, Bhalurghat and Raiganj sub-divisions of North Dinajpur district are more or less suitable for rubber cultivation. To take up rubber cultivation in these areas, the Board had opened

a field office in Siliguri in Darjeeling district. Polybags and plants were supplied to interested growers from this office for raising polybagged plants for field planting. In 1995-96, 1.54 ha. was planted by 2 growers.

e) North-eastern States

The Board continued to promote development of rubber plantations in North-eastern States. The Zonal office in Guwahati is coordinating the activities in all the States in the North-east excepting for Tripura, through Regional Offices stationed at Guwahati, Silchar, Diphu and Jorhat (in Assam) and Tura (Meghalaya). The Zonal Office opened at Agartala, is monitoring the development activities in the State of Tripura through the Regional Offices at Agartala, Udaipur and Dharmanagar. An area of 1127.24 ha. was brought under rubber cultivation in Tripura and 766 ha. in the other States during 1996-97. The estimated planted area at the close of 1996 is given below.

Tripura	20,761 ha.
Assam	10,179
Meghalaya	4,105
Mizoram	913
Manipur	1,400
Nagaland	1,523
Arunachal Pradesh	101

Total:-	38,982
=====	

Taking into consideration the needs of this backward non-traditional region, the Board is offering special incentives to encourage new entrepreneurs besides grant of financial and technical assistance. Schemes for supply of budded stumps and polybags for raising polybag nurseries and grant of cash assistance for maintenance of polybagged plants are in operation.

Block Plantation Programme

The Board in collaboration with the Tribal Welfare Department of the Govt. of Tripura has started a rubber plantation project, through which integrated rehabilitation of SC and tribal people is attempted. Already about 1041 ha. has been planted covering 364 beneficiaries. During the year 1996-97 an area of 145.91 ha. was planted.

f) Andaman & Nicobar Islands

The Regional Office started at Port Blair in 1985 is looking after the development of rubber plantation in Andaman & Nicobar Islands. In addition to the two public sector plantations raised in the Islands, the Regional Office was instrumental to bringing under cultivation 75.61 ha. under rubber.

g) NRETC Andaman

The Rubber Board continued to maintain the Nucleus Rubber Estate and Training Centre comprising of a 202.50 ha. of rubber raised progressively from 1965 to 1968 in South Andamans. All the civil construction works had been entrusted to the National Building Construction Corporation (NBCC) which were completed by August, 1993. The NRETC

has recorded production of 78,488.19 kg of rubber during the year. The Board had incurred an expenditure of Rs.49.85 lakh towards the running expenses of NRETC including capital expenditure for infrastructural development during 1996-97.

A rubber nursery in 1.85 ha is also maintained for production of high yielding planting materials for own use as well as supply to interested growers in the A&N Islands.

h) NRETC Agartala

The Rubber Board has been maintaining at Agartala a Nucleus Rubber Estate-cum-Training Centre since 1985. The 100 ha. plantation at Surendranagar (raised in a phased manner during 1987-88 and 1989) has entered the tapping stage. Tapping commenced in December 1993 in the plantation raised during 1987. The work connected with building up of infrastructure such as processing factory, residential buildings, internal roads etc. is nearing completion.

Periodic training programmes were organised for growers on various aspects of relevance to rubber cultivation. Demonstration plots also were maintained. For generation of planting materials, seedling nurseries were raised with the participation of beneficiaries in all the block plantation projects.

19) Rubber Producers Societies

All items of work connected with the approval of Rubber Producers' Societies were undertaken. Approval was granted to 95 RPSs, during the year 1996-97. The total number of RPSs approved by the Board at the end of the reporting

year stood at 1601. Regionwise distribution is furnished below.

Regionwise distribution of RPSs approved by the Board

<u>Region</u>	<u>No. of RPSs</u>
Kanhangad	73
Taliparamba Sreekandapuram	124
Thalassery	63
Kozhikode	56
Nilambur, Manjeri	69
Palakkad, Mannarkkad	80
Thrissur	56
Ernakulam	72
Muvattupuzha	69
Kothamangalam	54
Thodupuzha	85
Pala	107
Erattupetta	45
Kanjirappally	83
Kottayam	95
Changanacherry	85
Pathanamthitta	85
Punalur, Kottarakkara	112
Adoor	67
Thiruvananthapuram & Nedumangad	85
Nagercoil	11
Goa	1
Mangalore	23
Port Blair	1

TOTAL:-	1601
	=====

Estate inputs such as fertilizers, fungicides, rainguarding materials etc. were procured and distributed under the Productivity Enhancement Component of the Rubber Project funded by the World Bank among the small growers from the Regional Offices of the Board through the Rubber Producers Societies. International Competitive Bidding procedures, as laid down by the World Bank were followed in procurement of inputs. The items and quantumm of the inputs distributed are shown below.

<u>Items</u>	<u>Quantity</u>
Urea	3395 MT
Muriate of Potash	2685 ,,
Rock Phosphate	8077 ,,
Copper Sulphate	283 ,,
Copper Oxychloride	118 ,,
Spray Oil	590 KL
Polythene Sheet	371 MT
Rainguarding Adhesive	1112 MT
Rubber Cot	27 KL
Indofil M-45	310 kg.

20) World Bank Assisted Rubber Project

The Project aims to expand and strengthen rubber plantation sector to increase production and productivity, improve processing facilities and increase on-farm and off-farm employment. The project is effective from 7.1.1994. The total investment envisaged was around Rs.445 crore with the IDA credit to the extent of SDR 66.4 million equivalent to US\$ 92 million (around Rs.290*crore). The main component of the project are -

- a) Replanting of old and uneconomic rubber areas in traditional region.

*Based on the exchange rate that prevailed at that time.

- b) Newplanting in traditional and non-traditional region.
- c) Productivity enhancement in small holdings through adoption of improved agro-management and exploitation practices.
- d) Establishment of expanded and improved processing facilities.
- e) Institutional support for research, extension, training and technical assistance and project co-ordination.
- f) Development of Women and Tribal people among participating population, particularly in Tripura.

Productivity enhancement

Estate inputs such as fertilisers, fungicides and tapping aids were procured in bulk adopting international bids and distributed to small holders owning upto 5 ha. The inputs were made available at marginal price concessions through the self help groups of small holders called Rubber Producers Societies (RPSs). There were 1601 RPSs as on 31.3.1997. The target was to distribute the inputs to 50,000 ha. and the achievement exceeded the level marginally. Steps were taken to procure various inputs for distribution for March/April 1997 season. The target fixed is to cater to 75,000 ha. of rubber during the season.

Increased emphasis was given to technology transfer among the small holders to enhance the productivity on a wider scale. The action plan envisaged included establishment of a number of demonstration plots for popularising controlled upward tapping, soil moisture conservation, discriminatory fertiliser use and disease control measure. Steps were also taken to train and appoint extension agents and tapping agents for popularising the modern methods of cultivation and production of rubber.

Processing

The project envisages making available a line of bank credit for establishing/upgrading rubber and rubber wood processing facilities in the private sector. Provision is also made for creating facilities for research/training/demonstration of processing facilities. So far the private sector has not availed of any credit under the project. However, noticeable investments have taken place outside the project. Conditionalities applicable to the project for processing loans, stringent procurement procedures and unattractive interest rates are some of the weakness which account for this situation. The Mid-term Review Mission of the World Bank during its March/April 1996 visit, has scaled down the physical targets for rubber and rubber wood in private sector with IDA participation from 106 units to 9 units as follows.

New Crumb rubber factory	1
Expansion of Crumb rubber factory	2
RSS processing factory	3
New rubber wood treatment factory	1
Expansion of rubber wood treatment factories	2

Efforts were made during the year 1996-97 to identify the entrepreneurs and to get the processing units established.

The following activities were taken up to strengthen the facilities for research/training/demonstration under the Rubber Board.

- 1) Establishment of a pilot crumb rubber processing unit
(Existing unit was established in 1976 based on the technology and equipment available at that time. In order to prevent obsolescence in crumb rubber processing sector establishment of a modern unit is proposed).

- 2) Strengthening of existing Radiation Vulcanised Natural Rubber Latex (RVNRL) unit.
- 3) Setting up of a Wood Processing Laboratory for testing processed rubber wood items and certification of standards of processed rubber wood items.
- 4) Establishment of model rubber wood processing unit with private participation for demonstration and training purposes.

Action plan for the schemes has been prepared and steps have been taken to implement the Plan. An international expert on Radio Isotope was identified to advise the Rubber Board on the modification of RVNRL Project. He visited Rubber Board and on the basis of his recommendation steps have been taken to increase the source strength of the existing unit. M/s.General Wood and Veneers, Canada was selected as consultant for rubber wood processing and negotiations for finalising the contract are in progress.

Institutional Support

i) Research

Research activities were progressing satisfactorily as per the schedule of programme. Studies on exploitation, clone evaluation, bio-technology/tissue culture, germplasm/genome analysis, natural rubber processing and rubber based sustainable farming systems and soil and leaf analysis for fertiliser recommendation were the main activities in progress.

ii) Extension

An intensive field campaign was held among the small holders of Kerala, Kanyakumari District of Tamilnadu and Dakshina Kannada Dist. of Karnataka during April/May,1996 for

the promotion of replanting/newplanting and productivity enhancement. The campaign title 'Replant 1996' had given thrust to replanting of old and uneconomic rubber holdings. Group meetings were organised in 2,757 places in which over 43,000 rubber growers and 9,054 plantation workers/tappers participated.

The availability of planting materials was one of the constraints limiting the tempo of planting during 1995. In order to solve it, a scheme was introduced to sponsor nurseries in the private sector. Seeds were procured and distributed to nurseries at marginal price concessions. Budgrafted stumps were distributed for the generation of nucleus source mother plants. The scheme has helped to improve the availability of planting significantly.

Growers were imparted advice on various aspects of rubber cultivation and small growers were organised into self-help groups. During the year, 93 new RPSs were organised, raising the total number to 1601 and 233 RPSs which are not functioning effectively were revitalised. Increased thrust was given to dissemination of technology for enhancing productivity. A detailed scheme to strengthen the RPSs, to make them effective extension agents was evolved and detailed action plan was prepared. Steps have also been taken for selection of experienced small rubber holders as extension agents and to train them with a view to appoint them as extension/tapping agents.

The extension activities included running of 20 tappers training schools in various parts of the rubber growing regions and organising short-term training courses. During the year, the training schools imparted training to 1967 tappers. Under the short-term tappers' training courses, 4,285 tappers/small holders were also trained.

iii) Training and technical assistance

The revised training plan envisages - construction of training centres (including training hall, laboratories and lecture rooms) in Kottayam and Agartala, procurement of training equipments, recruitment of additional training personnel, inland and overseas training of Rubber Board staff and small holders, improvement of training courses and preparation of long term training plans. Action has been initiated for the construction of training facilities in Kottayam and Agartala. Land for establishing the training centre in Kottayam was purchased. Design and supervision work of the centre at Kottayam is entrusted to Dr.Laurie Baker. Steps were taken to appoint a contractor for the construction work.

During the year, 49 scientists/technical officers of the Board were sent abroad for short-term training, study tour etc. One Officer from the Economics Research Division, RRII was deputed to Netherlands for a period of 3 months. Dr.Collin Barlow of Australian National University was attached to the Division for a period of 14 days in January, 1997. He had detailed inter-action with the Division head and other personnel and helped them in formulating new projects as well as revising the ongoing research projects. A group of 15 rubber small holders were deputed to Malaysia and another 16 to Thailand on study tour.

M/s.Ashok Leyland Information Technology Ltd, Bangalore who were appointed as consultant for computerisation of the Rubber Board visited the Board and conducted detailed studies. Steps have been taken to procure the hardwares recommended by the consultant. Action has also been taken for appointing a consultant for establishing a data base on rubber in the RRII. The Rubber Board staff members comprising scientists, technical and administrative personnel were deputed for short-term computer training course in local centres.

The National Bureau of Soil Survey and Land Use Planning, Nagpur which was entrusted the study of soil mapping has started the work by collecting soil samples from Kerala and Tamilnadu. The Kerala Agriculture University, Department of Agriculture and Soil Science started study on copper residue analysis in rubber plantations. Sample collection and analysis were started. Steps were taken to appoint a consultant for developing a suitable pollution control system. One entrepreneur has been identified and negotiation was in progress.

Project Management

The Mid-term Review of the Rubber Project was carried out during March/April, 1996. The World Bank team included Mr. Ashok K Seth, World Bank Project Task Manager and FAO/CP team comprising M/s.NDA Hameed (Mission Leader), B.Godbole (Credit Specialist), E Pushparajah (Agronomist), KP Jayabhanu (Rubber Wood Processing Expert), P Morissey (Financial Analyst) and S Satish (WB Sociologist). The wrap up meeting was held on April 23rd, 1996 to discuss the findings of the Mission. The World Bank Mission comprising M/s.Ashok Seth & M Balasubramanian reviewed the progress of the project during January, 1997 and submitted their findings. A meeting of the Steering Committee was held on 19th October, 1996.

The expenditure under the Project during 1996-97 was follows.

		<u>Expenditure - 1996-97</u>	<u>Cumulative total</u>
		(Rs./million)	<u>upto 31.3.1997</u>
A)	Replanting	39.16	116.57
B)	Newplanting	49.84	142.17
C)	Productivity enhancement	92.04	281.39

<u>Expenditure - 1996-97</u>		<u>Cumulative total</u>
		<u>upto 31.3.1997</u>
	(Rs./million)	
D) Processing	1.00	5.12
E) <u>Institutional Support</u>		
Research	12.14	22.43
Extension	2.31	8.16
Training & technical assistance	20.08	30.86
RB Organisation	10.88	17.97
Project Co-ordination	1.50	3.31
F) Women and Tribal Development	6.13	8.31
	-----	-----
TOTAL:-	235.08	636.29
	=====	=====

Bills for a total amount of Rs.348.22 million were presented to Department of Economic Affairs upto 31.3.1997 for reimbursement from IDA. The cumulative release was Rs.337.41 million.

The Action Plan, Financial Plan and Procurement Plan for the remaining 2½ year period of the Project were prepared and furnished to the concerned organisations.

PART - IVA D M I N I S T R A T I O N

Important functions in Administration consists of constitution/reconstitution of the Board and its Committees, recruitment of personnel for different departments, proper maintenance of the establishment through house keeping operations, collection of cess, licensing of rubber dealers, rubber manufacturers and rubber processors, market intelligence, price collection and marketing, collection of statistics, publicise Board's schemes and activities, carry out labour welfare measures, attend to vigilance and legal functions, official language implementation and disbursement of employees entitlements including retirement benefits.

The functions were carried out through the following sections/divisions/offices.

- 01 Establishment (General Administration, Personnel Administration & Entitlement)
- 02 Excise Duty
- 03 Market Intelligence & Licensing
- 04 Marketing
- 05 Publication & Publicity
- 06 Labour Welfare
- 07 Internal Audit
- 08 Legal
- 09 Vigilance
- 10 Official Language Implementation &
- 11 Sub Offices & Liaison Offices.

1.1 General Administration

The activities of the Board for the year 1995-96 were documented through the Annual Report which was presented to the Government as required under Clause 8 (3)(c) of the Rubber Act, along with the Annual Accounts.

Completed construction of vehicle garages at the Headquarters building premises and six Type III staff quarters at the RRII Campus. The services of the post, telegraph, telephone and telex were harnessed to provide good communication facilities between the Board and its clientele.

1.2 Entitlement

During the period 42 employees were given financial assistance for construction of own houses by advancing Rs.31,33,975/- and 33 employees were given vehicle advance amounting to Rs.4,82,000/- (Rs.3,41,800/- as car advance to 6, Rs.1,30,000/- as two wheeler advance to 10 and Rs.10,200/- as cycle advance to 17). In addition to the above, an amount of Rs.12,49,466/- has been advanced to 40 officials under the World Bank Scheme.

Service books, leave accounts and personal files of employees were properly maintained. Retirement benefits were newly given to 27 employees including three who left on voluntary retirement and two on invalid pension. In addition there were seven cases of pension to the widows of employees who died in harness. As on 31.3.1997, there were 288 pensioners on the Board's rolls, the addition during the reporting period being 34.

1.3 Personnel administration

Selection of suitable personnel to vacant positions for smooth functioning of the Board was ensured following recognised recruitment rules and statutory provisions relating to reservation of posts for candidates from the SC/ST/OBC communities. There were properly constituted Selection Committee/DPCs for selection of personnel befitting job requirements. Periodical returns on the personnel recruited reservation points filled up also were sent to the Government.

The total number of officers and staff under the Board as on 31.3.1997 was 2214 as detailed below.

Name of Dept.	Group A	Group B	Group C	Group D	Consoli- dated pay	TOTAL
Administration	32	81	160	23	-	296
Rubber Production	85	338	763	92	2	1280
Research	75	107	212	32	-	426
P&PD	16	18	30	4	-	68
Finance & Accounts	11	17	55	5	-	88
Statistics & Planning	4	2	8	2	-	16
Training	4	4	2	1	-	11
Technical Consultancy	4	7	12	1	-	24
Project Co- ordination Unit	2	-	3	-	-	5
	233	574	1245	160	2	2214
	=====					

2 Excise Duty/Licensing

The Rubber Board has been entrusted with the responsibility of assessing and collecting the duty of excise (cess) on all rubber produced in India under Section 12 of the Rubber Act, 1947. The cess is collected on the quantity of rubber purchased or otherwise acquired by the manufacturers who consume it. Every manufacturer has to obtain a licence to acquire natural rubber and is bound to give monthly and half yearly returns showing the quantity of rubber acquired and consumed. It is on the basis of the purchases reported in their half yearly returns that the assessment of cess is normally made.

2.1 Issuance of licence

a) Issuance of licence for the year 1996-97.

Issue of licences includes the work of issue of new licences to prospective manufacturing units and renewal of the existing licences for the subsequent years. Licences issued during 1995-96 are -

Fresh licences	462 Nos.
Renewal of licences	<u>5130</u> .:----
	5592 Nos.
	=====

During the period, licence in respect of 2 manufacturers were suspended on account of serious irregularities and malpractices in their business. Besides, licences in respect of 2 units were cancelled on the basis of their request. Thus, the total number of licensed manufacturers at the end of 31.3.1997 was 5588. The statewide distribution of licensed manufacturers as at the end of 31st March, 1997 are detailed hereunder.

Sl.No.	Name of State/Union Territory	Number of units
01	Kerala	994
02	Maharashtra	627
03	Punjab	586
04	Tamilnadu	533
05	West Bengal	531
06	Uttar Pradesh	465
07	Gujarat	427
08	Delhi	333
09	Haryana	298
10	Karnataka	252
11	Andhra Pradesh	173
12	Rajasthan	105
13	Madhya Pradesh	92
14	Bihar	38
15	Pondicherry	34
16	Chandigarh	22
17	Goa	20
18	Orissa	17
19	Himachal Pradesh	12
20	Daman, Diue	8
21	Jammu & Kashmir	9
22	Assam	4
23	Tripura	4
24	Dadra & Nagerhaveli	2
25	Sikkim	1
26	Manipur	1
TOTAL:-		5588

A list of licensed manufacturers was prepared and supplied for reference to various offices, rubber dealers and other public.

b) Issuance of licence for the year 1997-98

Renewed the licence of 3709 existing manufacturers and issued 41 licences to new manufacturing units for the year 1997-98.

2.2 Letters of authorisation

Registered 1776 letters of authorisation from manufacturers in favour of dealers to purchase and despatch rubber on their behalf.

Special authorisations to 9 Organisations/Institutions to acquire rubber for experimental purpose were issued, after collecting the cess amount in advance.

2.3 Registration of Branch/Purchase Depot

On the basis of the applications from the manufacturers 2 new branches/purchase depots were registered.

2.4 Assessment of duty of excise (cess)

The assessment of cess on rubber for the year was Rs.46.60 crore as against Rs.43.61 crore of the previous year, registering an increase of 6.85% over the previous year.

During the year, 11,102 Nos. half yearly returns (in Form M) received from various manufacturers and sole crepe producers were assessed. Of them 379 were nil returns. Liaison Offices located in major rubber consuming centres furnished 2342 inspections reports, with the assistance of which additional assessments were made on a quantity of 3033 tonnes of rubber involving cess of Rs.30.33 lakh.

2.5 Collection of the duty of excise (cess)

The total amount of cess on rubber collected during the year was ~~Rs.~~ 46.99 crore over the last year's collection of Rs.43.58 crore registering an increase of 7.8%. Out of this, an amount of Rs.45.94 crore was remitted to the Consolidated Fund of India after deducting the cost of collection.

A sum of Rs.16.10 lakh was also collected towards interest on belated payment of cess. Licence fee and service charge collected from manufacturers amounted to Rs.11.77 lakh.

2.6 Licensing of dealers and processors

Licensing of dealers and processors is done under Rule 39 and 39A of the Rubber Rules, 1955. During the year under report, 1621 new licences to deal in rubber were granted. The period of validity of 3456 licences was renewed.

The number of dealers who were holding licences to deal in rubber was 9533 at the beginning of the year under report. Their strength rose to 10,117 at the end of the year.

The licensed Processors numbered 149 during 1995-96. This went up to 153 on 31.3.1997, inclusive of 11 fresh licences and 16 renewals.

2.7 An amount of Rs.29.24 lakh was collected from dealers towards cess on rubber involved in irregular sales of rubber.

Rs.1.3 lakh was also received from banks towards forfeiture of bank guarantees furnished by the dealers, for violation of the conditions of the licences.

2.8 For interstate transport of rubber by estate owners, dealers, processors and manufacturers, 4352 N Form books were issued. Persons who utilised the facility numbered 5548.

2.9 Distribution of dealers and processors

Statewise distribution of licensed dealers and processors as on 31.3.1997 is given below.

Sl. No.	Name of State	No. of dealers	No. of processors
01	Kerala	8866	132
02	Tamilnadu	212	11
03	Delhi	171	
04	Punjab	211	
05	West Bengal	103	
06	Uttar Pradesh	83	
07	Maharashtra	97	
08	Karnataka	113	4
09	Haryana	45	
10	Tripura	107	1
11	Gujarat	28	
12	Madhya Pradesh	15	
13	Rajasthan	15	
14	Assam	15	
15	Chandigarh	7	
16	Andaman & Nicobar	8	
17	Meghalaya	5	
18	Bihar	6	
19	Andhra Pradesh	2	1
20	Orissa	3	
21	Goa, Daman & Diu	1	
22	Jammu & Kashmir	1	
23	Pondicherry	2	
24	Himachal Pradesh	1	
TOTAL:-		10,117	149

2.11 Districtwise distribution of dealers licensed in Kerala

01	Alappuzha	122
02	Ernakulam	1222
03	Idukki	457
04	Kannur	392
05	Kasaragode	110
06	Kollam	1014
07	Kottayam	2466
08	Kozhikode	214
09	Malappuram	369
10	Palakkad	280
11	Pathanamthitta	1233
12	Thiruvananthapuram	786
13	Thrissur	147
14	Wynad	54
TOTAL :-		8866

3 Market Intelligence

Detection of bogus/unlicensed dealing in rubber, arranging surprise inspection/squad inspection of the business premises of the dealers for verification of their books of accounts and correctness of physical stock, cross verification of the statutory returns of dealers/manufacturers and processors for ascertaining the correctness of the quantity of rubber acquired, road checking and surprise visit to Checkposts and Railway Parcel Office to prevent evasion of cess on rubber and thereby improve cess collection formed the important functions in market intelligence. Inspections were also conducted for ascertaining suitability of the applicants and their business premises to issue licence to deal in rubber, registration of branches of the dealers and approval of new/additional premises and for issue of special authorisation for field latex collection.

3.1 In order to strengthen surveillance on inter-State movement of rubber, regular checking of documents accompanying consignments were arranged at three Checkposts- Walayar in Palakkad District, Bangra Manjeswaram in Kasaragod District and Kavalkinar in Tirunelveli District of Tamilnadu.

3.2 During the year 1996-97, three inspection squads of three Inspectors (MI) each to function from North Zone (Kozhikode), Central Zone (Kottayam) and South Zone (Trivandrum) were organised to arrest illicit trade in rubber effectively and thereby improve the cess collection.

3.3 Surprise inspections at the premises of dealers helped in detecting serious irregularities in 184 cases. This resulted in realisation of Rs.5,76,579/- towards cess on unaccounted quantity of rubber. The road checking and surprise visits to the Checkposts and border areas have helped in the decline of illicit trading and smuggling of rubber across the border. The inspections led to collecting monthly returns from a large number of dealers and unearthing transactions involved in 365 MT of rubber by 9 dealers.

3.4 Due to timely visit of the Inspection Squad to Tuticorin and Tirunelvely, the Board could realise Rs.20,000/- towards cess involved in two consignments of rubber which were detained by the Salestax Authorities, Tamilnadu under suspicious circumstances. Attempts of two bogus dealers in Tamilnadu to surreptitiously transport three truck loads of rubber could be prevented at Virudhunagar. A case under Crime No.84/97 was registered and the rubber in question (20 MT) was seized and kept at the Central Warehouse, Virudhunagar as per Court Order. Two cases were registered with Sultan Bathery Police Station involving illicit transport of 18 MT of rubber under Crime Nos.119/97 and 120/97. The cases are pending for investigation.

3.5 Cross checking of monthly returns/Form N declaration of 50 dealers and 5 manufacturers with those of their suppliers/purchasers resulted in detecting unaccounted/unauthorised transactions to the tune of 668 MT and action was initiated to realise the cess involved. The total amount collected by way of cess on shortage/excess stock of rubber without proper records, unauthorised/unaccounted/irregular transaction and unlicensed purchase amounted to Rs.26,19,779/-.

3.6 Achievements

The surveillance exercised through 3 Checkposts helped a lot in detecting illicit transport of rubber. During the year officials at Walayar and Kavalkinar Checkposts detained 28 consignments of rubber in the absence of valid documents/declarations. Of them, 18 consignments were allowed to cross the border only after production of valid documents and satisfactory explanation. A sum of Rs.3,66,065/- was realised in the case of seven consignments as the explanations were not satisfactory. Three truck loads of latex consigned in the name of a dealer in Kanpur whose licence was under suspension, were detained at Manjeswaram Checkpost.

3.7 Further, 60 MT of rubber transported in 6 lorries were detained by the Salestax Authorities, Palakkad on 18.9.1996 for non-production of valid documents. The Board filed a complaint for investigation and seizure of goods under the provisions of the Rubber Act and Rubber Rules.

3.8 As per daily statements received the Checkpost of Walayar, Manjeswaram and Kavalkinar, 53,093 consignments of rubber had passed through the 3 Checkposts during the period under report. The number of consignments passed through each of the Checkposts is as shown below.

<u>Name of Checkpost</u>	<u>No. of consignments</u>
Walayar, Palakkad Dist.	41,578
Manjeswaram, Kasaragod Dist.	7,300
Kavalkinar, Tirunelveli Dist.	4,215

TOTAL:-	53,093
	=====

4 Marketing

4.1 Price Collection

Collected and compiled price of various grades of natural rubber and reported to the press for publication. Information provided to the press are daily average price of RSS-4 and ungraded rubber in Kochi and Kottayam markets, weekly price of all grades of rubber in Kottayam market, and daily price of various grades of rubber in Malaysia. Average price of scrap rubber was also given for publication twice a week. Compiled monthly average price of various grades of rubber, price of centrifuged latex, ISNR grades, PLC grades etc. The information collected were supplied to the Ministry from time to time and also to other agencies associated with the rubber goods manufacturing industry.

Average prices of various grades of rubber per quintal during 1996-97 are indicated below.

	Rs.
RSS-1	5,381
RSS-2	5,188
RSS-3	5,013
RSS-4	4,901
RSS-5	4,720
Latex (60% drc)	6,255

	Rs.
EBC 2X	4,421
ISNR 5	5,446
ISNR 10	5,013
ISNR 20	4,578
ISNR 50	4,422
PLC IX	6,727
PLC 1	6,529
PLC 2	6,281
PLC 3	5,998
Scrap(80% drc)	3,417
Fresh Scrap	2,412

Collected details of natural rubber imported to the country from four major ports in India as part of the efforts to estimate the NR supply. The fourth edition of the Directory of Rubber Goods Manufacturers in India was brought out.

5 Publication and Publicity

Continued publication of the Malayalam monthly 'Rubber' with average monthly circulation of 22,025 copies. The scheme for enrolling life membership was continued and 350 subscribers were newly enrolled. The total number under the category touched 5,127. Also brought out leaflets on various aspects of rubber cultivation. Rubber Statistical News in 12 issues, each with 600 copies were brought out and sent to subscribers.

5.1 The Rubber Growers Companion 1997 (Delux-299, With text-5000, and without text-3200) was brought out in December, 1996. The book on Rubber and its cultivation was reprinted with 1550 copies for distribution to the prospective rubber growers.

5.2 Press handouts on various topics were released to the national as well as local dailies which secured wide coverage. A total of 55 press releases and 120 advertisements were issued in addition to 15 farm features for 'Karshikarangam' pages of various Malayalam dailies.

5.3 During the period under report 6 exhibitions were arranged at various places. Also organised seminars and conducted growers' meetings.

5.4 Utilised services of the AIR and Doordarshan for dissemination of scientific knowledge on rubber cultivation, crop processing and marketing.

6 Labour Welfare

Section 8 (2)(f) of the Rubber Act empowers the Board to undertake measures for better working condition and improvement of amenities and incentives for rubber plantation workers.

The Board has devised many schemes for the welfare of the workers for which an amount of Rs.102.40 lakh was spent during the year under report.

a) Educational Stipend Scheme

The scheme provides for financial assistance for educating the children of rubber plantation workers at the primary, secondary, graduation/postgraduation levels.

The assistance consists of payment of Tuition fee, Hostel/Boarding fee and Lumpsum grant for purchase of books, instruments etc.

An amount of Rs.12,67,069/- was spent under this scheme during 1996-97.

b) Educational Scholarship Scheme

The scheme provides children of rubber plantation workers incentive for high performance in academic courses under educational stipend scheme. Scholarship ranging from Rs.250/- to Rs.2,000/- is paid per student. An amount of Rs.22,350/- was spent under this during the year.

c) Group Insurance-cum-Deposit Scheme (8 Phases)

This is a social security measure for the workers not covered by the Plantation Labour Act against death and injuries caused by accidents.

This scheme also encourages the habit of saving. It has reached the eighth phase in 1996-97. The first phase started in 1986-87.

Each of the individual schemes will be in operation for a period of ten years. The workers enrolled have to renew membership every year by remitting their share of insurance premia. During 1996-97 the Board remitted Rs.7,93,500/- as Board's share favouring 7935 workers after ensuring that they have remitted an equal amount as their share. The insurance company paid compensation to 27 workers amounting to Rs.49,869/- for injuries/death by accident.

d) Housing Subsidy Scheme (unorganised Non-marginal Holdings).

The scheme provides assistance to rubber plantation workers not covered by the Plantation Labour Act, 1951 for construction of own house. The assistance is limited to Rs.7,500/- per worker for house built in brick and mortar.

For house built with mud walls and grass thatch, the assistance would be Rs.4,000/- only. But houses with mud wall and tin or aluminium roof, the assistance would be Rs.5,000/-. An amount of Rs.22,51,000/- was disbursed during 1996-97 in favour of 361 applicants.

e) Housing Subsidy Scheme (unorganised sector marginal holdings).

This scheme provides for assistance in house construction for workers employed in holdings, each with area between 0.75 ha. and 1 ha. All other conditions of the scheme for housing subsidy for rubber plantation workers in the unorganised sector (non-marginal holdings) are applicable to this scheme. Amount disbursed during 1996-97 was Rs.21,99,000/- in favour of 294 applicants.

f) Housing Subsidy Scheme (Organised sector)

This scheme provides financial assistance to workers covered by the Plantation Labour Act, 1951 for the construction of own house. The assistance is limited to Rs.6,000/- per worker. Amount disbursed during 1996-97 was Rs.8,13,000/- in favour of 135 applicants.

g) Scheme for providing sanitary facilities

The scheme provides assistance to build latrines as per prescribed plan and estimate by the rubber plantation workers.

The assistance either cover 75% of the cost of construction or Rs.3,000/- of the latrine whichever is less. Total amount paid under the scheme during 1996-97 was Rs.21,61,800/- in favour of 722 applicants.

h) Medical Attendance Scheme

The scheme assists plantation workers of unorganised sector in reimbursement of medical expenses and also subsistence during the period of their inability to work in consequence of the illness. Workers who undergo sterilization operation for promotion of small family are also given assistance. During 1996-97 an amount of Rs.3,93,902/- was disbursed to 392 workers.

i) Housing and Sanitary Scheme for SC/ST rubber plantation workers.

This scheme was implemented on a pilot basis exclusively for SC/ST workers employed in rubber plantations coming under the Rubber Producers' Societies. Assistance limited to Rs.14,000/- is granted to the worker for construction of house with latrine. The scheme was financed from the SCP/TSP fund. During 1996-97 an amount of Rs.3,38,550/- was disbursed in favour of 39 workers.

7) Internal Audit

Main function of the Internal Audit is inspection/audit of various offices/units of the Board. During the period under report internal audit inspections were conducted in 13 offices/units located all over Kerala, Tamilnadu and Karnataka.

7.1 Replies to AG's Audit objections were sent in time. The total number of outstanding paras on 31.3.1997 was 97.

7.2 Review of Attendance Register as a measure of enforcement of office discipline was undertaken. Expert opinion/advice was given in 106 cases including 46 pension cases, leave encashment, pay fixation, service verification etc.

7.3 Economy in the use and maintenance of vehicles and consumption of fuel was ensured by follow-up procedures and Government Orders strictly.

7.4 Annual physical verification of stock was brought upto date by initiating follow-up action with concerned offices/units and ensured the disposal of unserviceable items.

7.5 Audit of accounts of the Board for the year 1995-96 was taken up by the AG Kerala. The extracts of the report were forwarded to each Department/Division for furnishing replies for onward submission to the Ministry. Detailed action report/comments/replies to the review report of the Controller and Auditor General of India on working of the Rubber Board for the period 1989-1995 were furnished to the Government.

8 Legal matters

The legal functions include rendering advice/opinion on matters referred to, draft legal documents, initiate steps for Prosecution under the Rubber Act, 1947 assist in conciliation proceedings in labour matters and tax cases and monitoring progress of litigations for and against the Board.

During the year under report, timely action was taken and advice was rendered on 701 files. Applications of 98 employees under House Building Advance Scheme were scrutinised for determining eligibility under the Rules. Legal documents to be executed were drafted/prepared. Appropriate steps were taken through lawyers to safeguard the interests of the Board in 130 litigations pending in various courts. Parawise comments and necessary instructions were given to Standing Counsels and the Central Government pleaders in cases pending in High Courts. In 41 consumer disputes filed before Redressal Forums in various districts, prepared and filed replies and defended the interests of the Board during hearings.

Legal assistance was given to RRS Dhenkanal, RRDS Andamans, Central Experiment Station, Chethackal, RRII Farm, HBSS at Nettana and Paraliar, Nurseries/Farms etc. in dealing with labour matters. The papers required for examination by the Parliament Committee on various statutory matters were prepared. Also prepared draft amendments to Rubber Act, Rubber Rules, Rubber Board Employees Conduct Rules and Rubber Board Service (Classification, Control & Appeal) Rules.

9 Vigilance

a) Complaints

During the year under report, took up for enquiry/verification 18 complaints containing allegations against 8 Officers of Groups A & B status and 10 officials of Groups C & D status. The allegations mainly related to malpractices in purchase of furniture/stores, substandard civil construction works, unruly behaviour of office functionaries, habitual

unauthorised absence resulting in disruption to the smooth functioning of the office, engagement in bigamous marriage etc. Enquiries were made and appropriate deterrent action was taken.

b) Cases

Major penalty proceedings against 6 officials and minor penalty action against 4 officials were instituted during the year under report.

c) Property statements and acquisition/disposal of immovable/movable property.

Annual statements of immovable property as on 31.12.1996 were called for from all officers of Group A & B status. The statements received were scrutinised. Also dealt with/processed 80 applications of the employees pertaining to acquisition/disposal of immovable property and 33 applications/intimations relating to transactions in movable properties such as motor cars, two wheelers, refrigerators, televisions, washing machines etc.

10 Official Language Implementation

Two meetings of the Official Language Implementation Committee were held. Annual programme for the year was prepared.

10.1 Hindi workshops were conducted in the Regional Offices at Nagercoil, Nedumangad, Thiruvananthapuram, Adoor, Kottarakkara, Punalur, Pathanamthitta, Changanacherry, Kottayam, Pala, Erattupetta, Kanjirappally, Thodupuzha, Muvattupuzha, Kothamangalam, Ernakulam, Thrissur, Kozhikode, Thalassery, Palakkad, Mannarghat, Manjeri, Nilambur, Mangalore, Kundapura and at CES Chethackal and Licensing Section, Kochi.

10.2 A State level Hindi Week Celebration was organised on 19.9.1996 at Thiruvananthapuram at the initiative of the Rubber Board. Central Govt. employees working in the various offices at Thiruvananthapuram attended the meeting.

10.3 Hindi week was celebrated from 14th September, 1996 in various offices of the Board. Competition in Hindi noting & drafting, elocution & essay writing, recitation in Hindi, Hindi Typewriting and Hindi quiz were conducted. Token prizes and cash awards were given to the I & II place winners. Separate competitions were also conducted for the children of employees of the Board. An Official Language Conference was held in March, 1997.

10.4 Three issues of the Hindi bulletin were published during the year.

10.5 Hindi classes were conducted in which 55 employees were trained during the year. Facilities for training in Hindi through correspondence course were also arranged. Training in Hindi Typewriting was given to 15 employees.

10.6 The Hindi Library was utilised by the employees to improve their knowledge in Hindi.

11) Sub/Liaison Offices

There are 8 Sub Offices in the major consuming centres outside Kerala; at Ahmedabad, Bangalore, Bombay, Calcutta, Jullundur, Kanpur, Madras and New Delhi. These offices assessed suitability of applicants to hold licence to deal in rubber or acquire rubber for rubber goods manufacture. The purchases made by the rubber manufacturers and the stock held by the rubber dealers were verified at random. The books of accounts and records of the licence holders were also verified to ensure that all rubber procured were brought to book for subjecting to assessment of cess. Surprise inspections were also conducted to detect unlicensed dealing in rubber and unlicensed manufacturing of rubber goods in contravention of the provisions of the Rubber Act and Rules in order to prevent possible loss of revenue towards cess.

PART - V**RUBBER RESEARCH**

Research work on rubber is carried out through the Rubber Research Institute of India with its Headquarters at Kottayam. Both crop improvement and improvement of the physical properties of rubber are investigated in detail. There are nine Regional Research Stations and two Hevea Breeding Sub-stations, spread out in different agro-climatic zones. A Central Experiment Station with an area of 254 ha. is functioning at Chethackal about 50 km away from RRII. For the North-eastern Region a Research Complex has been established at Guwahati with four Regional Research Stations in the States of Tripura, Assam, Meghalaya and Mizoram. The four Regional Research Stations in the non-traditional areas are located in Maharashtra, Madhya Pradesh, West Bengal and Orissa. The Hevea Breeding Sub-stations are situated in Karnataka and Tamilnadu and the remaining Regional Research Station is at Iritty in Kerala. Each of the station has plantated area of 20.77 ha. The following are the research highlights of the year under report.

In a field experiment, intercrops such as banana, pineapple, colocasia, yam, black pepper and coffee were planted in wider interrows of rubber at 9 metre, alternated with interrow of 5.1 metre. Pueraria was grown as ground cover. The stand per hectare of rubber was 410. A net profit of Rs.20,000 to ~~Rs~~24,000 per year was obtained from the intercrops. The growth of rubber was slightly better in the intercropped situation compared to monoculture of rubber.

Bowl sludge, a waste product in centrifuge factories is a rich source of phosphorous (30% P_2O_5). This contains 5% Nitrogen and 14% Magnesium. This material was found to be a good phosphatic fertilizer. The estimated availability of bowl sludge is 240 MT per annum and this is equivalent to Rs.40 lakh worth of chemical fertilizers.

Photosynthesis is almost inhibited in fully mature leaves of Hevea experiencing environmental stress such as severe drought and high temperature or chilling winter. This inhibition is maximum at high light intensities. Indirect evidence indicate that the inhibition is related to over-production of free radicals and inefficiency of the system to scavage them.

Screening of germplasm clones and hand pollinated (HP) clones for major diseases was carried out. Fifty Matogrosso Brazil (MT) clones were found to show tolerance to abnormal leaf disease among 500 screened. Corynespora leaf spot disease was recorded in mature rubber in some locations. Investigations on the strain variation is being carried out. Experiments for having a substitute for copper fungicides, using alternate oil based mancozeb and ridomil were continued.

To reduce pollution load in sheet rubber effluent a biogas production unit is under test. Experiments were conducted to reduce Hydrogen Sulphide (H_2S) by passing the biogas through 10% lead acetate solution and calcium hydroxide pellets. Studies on the feasibility of using the biogas for smoke house and its effects on the quality of sheets produced have been initiated.

On the basis of initial yield from the small scale evaluation, 12 clones were identified to yield more than RRII 105. Outstanding 5 clones from these were supplied for experimental planting to progressive planters. Bilateral clone exchange programme was undertaken with Indonesia and Sri Lanka. RRIC 110 and RRIC 130 from Sri Lanka and BPM 24, PR 255 and PR 261 from Indonesia were introduced to India.

Studies on the viability of rubber seeds in under water storage showed that even after 20 days, seeds stored in water recorded 45% germination with good growth and 0% germination under open air storage. Protocols were standardised for the extraction of DNA and RAPD assay in rubber. Adopting this technique genetic distances of 24 clones were estimated. Conservation, evaluation and utilisation of about 3870 wild Brazilian germplasm genotypes are in progress.

In a study on input subsidy scheme and adoption of improved cultural practices, it was found that the member growers of the Rubber Producers' Societies showed better adoption of cultural practices resulting in cost saving or income enhancement. Statistically significant annual average yield difference of 151 kg/ha. was achieved by them. With regard to Timber Latex Clones (TLC) in the Indian context, a study revealed that the timber yield required to offset a 20 per cent loss in NR yield was more than 7 times of the normal. Technological upgradation of rubber wood processing industry was found to be a pre-requisite to maximise recovery rate and value addition.

Gene coding for Superoxide Dismutase (SOD) is considered to be influential in effecting Tapping Panel Dryness (TPD) in rubber. Studies are in progress in adding SOD gene

into rubber by genetic transformation. Similarly action is in progress to transfer IPT gene into rubber, which can produce higher level of Cytokinin. Latex Diagnosis, a diagnostic technique, can be used in monitoring the health of any plantation with respect to the exploitation system followed. The technique is now being standardized for RRII 105.

A new project to systematically evaluate the rubberised bitumen roads in comparison with conventional bitumen roads has been initiated in collaboration with the Cochin Refineries Limited and the Highway Research Station, Madras. Results already collected indicate the superiority of rubberised bitumen over conventional roads. Attempts are made to develop alternative and efficient methods of recycling of rubber by combining chemical as well as mechanical techniques of devulcanisation. A design has been finalised for a solar-cum-smoke dryer of 600 kg capacity suitable for small scale rubber growers and crop processing centres. Field evaluation of this dryer is now being initiated in 3 different locations. Sheets rolled on the same day of coagulation is found to be drying faster compared to next day coagulated sheets.

In North-east India increased dosage of N&K in mature area showed positive influence on yield. However, the effect of P is not consistent. In a study on the influence of rubber plantation on soil physico chemical properties, the available water storage capacity of rubber area for 15 years was found to be higher than other forest plantations. In a clone trial yield data in A panel showed the hierarchy of yield: PB 235, RRIM 600, RRII 105, RRIM 703 and RRII 203. The international project under IRRDB on Tapping Panel Dryness is progressing satisfactorily.

PART - VI

PROCESSING AND PRODUCT DEVELOPMENT

The activities in improving processing of raw rubber and development of rubber products were continued to provide support to Rubber Processing and Rubber goods manufacturing units. They were helped in areas of factory design, product development, quality improvement and in treatment and disposal of effluents from rubber processing factories.

During the period one seminar for the benefit of processors of preserved concentrated latex was organised. A discussion was arranged between Processors of Technically Specified Rubber and representatives of major rubber goods manufacturers to emphasise the importance of using technically specified rubber.

1.1 Engineering Support

Provided engineering and technical assistance to Crumb Rubber Factories established under Kerala Agricultural Development Project. Assistance was also given to entrepreneurs in setting up rubber wood processing factories. Progress of activities is given below.

a) Factories commissioned

- 1) Commissioned the rubber wood processing factory of M/s.Meenachil Treated Rubber Wood (P) Ltd. at Peringalam, Erattupetta. The factory has started commercial production.

2) Commissioned the creaming plant of M/s.Monippally Cooperative Rubber Marketing Society.

1.2 Projects under World Bank

Project reports were prepared for setting up of rubber wood processing factories, sheet washing factory and crumb rubber factory under the World Bank Project.

In order to identify a private sector partner for setting up of the model rubber wood factory discussions were held with M/s.PACT Rubber Wood (P) Ltd. and also with M/s. Andaman Timber Industries. The proposal of M/s.PACT Rubber Wood were not found acceptable. Negotiations were under way with M/s.ATI for finalisation of the terms for establishing a model rubber wood factory.

Procurement plan for setting up of equipments for the rubber wood testing laboratory is under preparation.

Participated in four exhibitions for popularising use of rubber wood among consumers of wood and wood products in the country, respectively at -

- i) Buildex 96 at Bombay
- ii) Build Fair - 97 at Trivandrum
- iii) Exhibition organised by International Book Fair at Kottayam.
- iv) Exhibition at Rub-Tech 97 at Bombay.

Advertisements were given in important magazines and Newspapers for the popularisation of rubber wood products among consumers in India.

Civil works on 49 items were under execution, of which 12 were completed during the period.

Five smoke houses were being financed for construction under Rubber Producers Societies of which work of three were completed during the year.

1.3 Quality Control

The quality Control Laboratory tested rubber and latex samples collected from different sources for 73,000 parameters. Received Rs.14.7 lakh for the different types of services provided to the industry including share of marking fee of Rs.3,70,000/- from Bureau of Indian Standards.

As part of the efforts to enforce standardisation in crop processing, conducted 637 inspections of rubber processing factories, which have helped in improving the quality of rubber processed.

1.4 Work under Factory Management Division

Three pilot factories were functioning for improving the method of processing field scrap and field latex. The processed crop fetched a return of Rs.199.5 lakh during the year.

1) Pilot Crumb Rubber Factory

The Research and development work in the factory has helped in substantially improving the quality of effluent discharged from the factory. By the continuous monitoring of the Effluent Treatment Plant the factory was able to achieve a zero effluent discharge from the factory and practically

all the discharged water is now reused. The quality of discharge from the final treatment tank has improved substantially and has reached a level of quality equivalent to that of fresh water used in the factory. The factory marketed 255 tonnes of crumb rubber during the year.

Steps have been taken for selection of a Consultant for advising the processing factories on effluent treatment systems.

2) Pilot Latex Processing Centre

The Research & Development work in the factory is concentrated on improving the efficiency in latex processing. The work on this is continuing and the results will be available by next year. The factory has processed 143 tonnes of cenex during the year.

3) RVNRL

Production in this factory was temporarily suspended as the source strength of radiation substantially declined. To enhance the source strength orders were placed with the Board of Radiation and Isotope Technology for supply of 100,000 Curie Cobalt 60 source. Procurement of a gama chamber 5000 for doing R&D work has been planned.

The work for establishing a model TSR factory has been initiated. The Govt. of Kerala has been approached for allotment of a suitable plot. Project profile for the factory has already been prepared.

Work in providing assistance to Rubber Marketing Cooperative Societies, Rubber Producers' Societies and Rubber Processing Companies in establishing and modernising their rubber processing facilities was in progress. Support is also given to them for improving marketing of crop from these processing centres. Financial assistance of Rs.20 lakh was given as bridge loan to two processing companies to tide over their operational difficulties. The amount is repayable with interest within a year. Margin money assistance was given to Cooperative Societies and Companies promoted by the Rubber Board for improving marketing of raw rubber produced by small holders.

Prepared sample books of rubber sheets as reference samples for grading of rubber sheets. Provided assistance to the STC in grading rubber procured by them under price support operations.

PART - VIIT R A I N I N G1) Training Coursesa) Rubber culture and estate management

During the period under report two batches of the eighteen-day course were held (26.6.1996 to 19.7.1996 and 3.3.1997 to 27.3.1997) for 43 participants including one SC candidate, from the States of Kerala, Maharashtra, Meghalaya and Tripura.

b) Training for small holders

This five-day course on rubber cultivation and crop processing was organised in three batches for 35 persons during the period (19.8.1996 to 23.8.1996; 28.10.1996 to 1.11.1996 and 24.2.1997 to 28.2.1997). Out of the 35, 21 were deputed from the Government of Kerala under their one lakh youth employment programme.

c) Rubber Processing

Two batches of this five-day course were conducted (24.6.1996 to 28.6.1996 and 9.9.1996 to 13.9.1996) for 32 participants from Karnataka and Kerala.

d) Training for rubber goods manufacturers

Four batches each of five-day course on manufacture of products from latex (20.5.1996 to 24.5.1996; 22.7.1996 to 26.7.1996; 23.9.1996 to 27.9.1996 and 17.2.1997 to 21.2.1997) and eight-day course on manufacture of products from dry

rubber (12.6.1996 to 21.6.1996; 5.8.1996 to 14.8.1996; 11.12.1996 to 20.12.1996 and 12.3.1997 to 21.3.1997) were organised for 131 (61 and 70 respectively) participants from Andhra Pradesh, Assam, Karnataka, Kerala, Maharashtra, Tamilnadu and West Bengal.

e) Nursery establishment and maintenance

This two-day programme was held in three batches for 68 rubber growers.

2) One-day course

a) Beekeeping

Two batches of this one-day course were convened for 42 candidates.

b) Sheet grading

Eleven persons were trained under the programme of grading and quality control of rubber sheets.

3) Specialised courses

Courses on specialised areas were also offered for eight entrepreneurs in the field of production of rubber band (three days), production of dipped goods (three days), production of gloves (three days), production of hawai chappals (three days), production of solvent adhesive (two days) and latex adhesive (one day) during the reported period.

4) Sasthra Darsan and Field Training

During the period under report 1,175 rubber growers, RPS members, University students and other voluntary organisation members took part in the one-day training on familiarisation of cultural operation of natural rubber.

Field training-cum-demonstration on the aspects of controlled upward tapping, soil and leaf testing for 22 tapping students and modern techniques of exploitation, tapping and related aspects for 21 Asst.Managers/Asst.Superintendents of a plantation company were also organised.

5) Achievements

Revised two manuals on manufacture of products from dry rubber and latex for issue to the trainees.

PART - VIII

FINANCE & ACCOUNTS

Introduction

The Finance & Accounts functions are mainly connected with designing and operating the Accounting System, preparing Budget, financial statements and reports, exercising Budgetary control, effective funds management, establishing and maintaining systems and procedures, advising on financial propriety and regularity of transactions, supervising computer applications, overseeing cost control, evaluation of projects/schemes, handling tax matters etc. The following activities were undertaken during the year.

- 1) Preparation of Annual Budget, Performance Budget, Foreign Exchange Budget etc. and exercising budgetary control.
- 2) Maintenance of the accounts of the Board, preparation of Annual Accounts, presentation of the accounts for audit by the Accountant General, Kerala and the audited accounts to the Rubber Board/Ministry/Parliament.
- 3) Placing demands for grant from Government from time to time, receiving funds from Govt. and releasing for rubber promotional functions.
- 4) Advising on financial propriety and regularity of transactions and regulating payments.
- 5) Assisting the Cost Accounts Branch of the Ministry of Finance in ascertaining the cost of production and in fixing price of natural rubber.
- 6) Preparation of financial statements for project reports and schemes.
- 7) Dealing with Central Income Tax, Agricultural Income Tax and Salestax matters relating to the activities of the Board.

- 8) Co-ordinating the activities of the companies jointly promoted by the Rubber Board and the RPSs.
- 9) Computerised Data Processing in the field of financial accounting, payroll etc.
- 10) Preparation of detailed cost tables and other financial statements supporting the proposals presented to the World Bank Mission for Mid-Term Review and restructuring the World Bank Assisted Rubber Project.

Annual Accounts 1995-96

Statutory Annual Accounts for the year 1995-96 were prepared and presented to AG Kerala within the stipulated time. The Audit Report and the Audited Accounts with the certificate received from the AG Kerala were forwarded to the Central Govt.

Revised Estimates 1996-97 and Budget Estimates 1997-98

The Revised Budget for 1996-97 and Budget Estimate for 1997-98 were prepared within the time frame and submitted to the Government. Budget sanctioned for the year 1996-97 both Plan & Non-Plan put together was Rs.62.63 crore. As against this, the actual expenditure for the year was Rs.55.67 crore. The total budget estimate proposed for the year 1997-98 was Rs.93.82 crore against which the sanctioned budget is only Rs.72.82 crore including the internal resources.

Funds Management

(i) General Fund

Funds amounting to Rs.37.88 crore was received from Govt. as budgetary support including Rs.23.67 crore of Foreign Aid during the year 1996-97. The internal resource generation was about Rs.12.5 crore. The total expenditure for the year was Rs.55.67 crore.

(ii) General Provident Fund/Pension Fund

The balance under the General Provident Fund as on 31st March, 1997 was Rs.543.87 lakh and that under Pension Fund Rs.715.18 lakh. The accumulations in the funds were invested to obtain optimum returns. The Board could declare interest on GPF accumulations @ 13.5% for the year 1996-97 and has maintained 2206 GPF accounts. Payments were made to 266 pensioners during the year.

(iii) Cost Accounts

Continued to collect cost data for furnishing to the Government and to ANRPC. Cost of raising rubber plantation in one hectare in different regions has been updated. Detailed study on cost of production of planting materials in own nurseries for fixing the selling price of planting materials was conducted.

Various aspects relating to Sales Tax and Agricultural Income Tax matters were examined in detail and appropriate advice was given. Project reports in respect of large scale plantations in Tripura, in Karnataka and in tribal land in Kerala were prepared and Management Information System was developed and monitored.

(iv) Electronic Data Processing

Processed pay roll of approximately 1200 employees and handled the financial accounting for the year. For the purpose of preparation of Budget, Nominal Rolls were prepared. GPF Account and Bankwise statement of pensioners were also prepared. Financial statements in respect of various Project Reports have also been prepared during the year.

PART - IX**STATISTICS & PLANNING****I General Statistics**

The supply, demand, stock, price etc. of raw rubber was regularly monitored and review reports were presented to the Board and the Government. During the period under report, the Statistics & Import/Export Committee met on 1.6.1996 & 4.11.1996 to review the supply-demand position of rubber. The Rubber Board which met on 8.4.1996, 27.9.1996 and 16.1.1997 also reviewed the subject. Background notes supported by statistical data were prepared for the meetings to aid meaningful discussions. The conclusions at the meeting on the demand and supply of raw rubber were forwarded to the Govt. along with explanatory comments.

The statutory monthly returns received from rubber growers, dealers, processors and manufacturers were collected, compiled and analysed every month. In order to ascertain the monthly variation in production, stock etc. pertaining to small growers, the sample studies in small holding sector were continued. The data collected from various sources were compiled and production, import and stock of rubber were worked out on monthly basis.

The required statistical information for publishing the 'Rubber Statistical News' (monthly) was prepared. This publication covers trend in production, consumption, stock, import/export of natural rubber, synthetic rubber and reclaimed rubber, price of natural rubber and many other details. Continued to sell the publication the 'Indian Rubber Statistics' Vol.21 (1966) which was prepared using in-house

computer facilities. This covers all latest information connected with production and consumption of natural, synthetic and reclaimed rubber, distribution of rubber manufacturing units, dealer network, diverse rubber products, labour employment and world rubber statistics.

Statistical information was furnished to various organisations connected with the rubber industry. Materials were prepared and furnished for answering Parliament questions and Legislative Assembly interpellations pertaining to the import/export, production, price, etc. of natural rubber and the various aspects of rubber industry.

To ascertain the production of various grades of rubber, installed capacity, etc. during 1996-97, annual reports were collected from processors of centrifuged latex, block rubber, PLC and crepe mills.

The census work initiated in 1988 was continued and 88,128 field reports were collected. Steps are under way to process the reports.

II Planning

A very comprehensive ninth plan proposal on rubber was prepared which was discussed by the Executive Committee held on 1.16.1996 and later by the Board which met on 27.9.1996. Later as desired by the Ministry, an abridged report of Ninth Plan proposals was prepared and furnished.

The Annual Plan for 1997-98 was also prepared and furnished to the Government. Monthly/quarterly progress report of annual action plan for 1996-97 was also prepared.

III Supply of information to World Organisations

Continued to supply information about the natural rubber industry in India to world organisations like the Association of Natural Rubber Producing Countries (ANRPC), Kuala Lumpur, Malaysia and the International Rubber Study Group (IRSG), London.

The eighth meeting of the ANRPC Committee on Natural Rubber Statistics was held in Palembang, Indonesia during 6th to 8th August, 1996. Required statistics and country report of India were supplied to the meeting. The first meeting of the Task Force on review of ANRPC and the first meeting of the Expert Group on project on promotion of Natural Rubber as an Environment-friendly Raw Material and a Renewable Resource were held in Udon Thani, Thailand during June, 1996. Shri KJ Mathew, Chairman, Rubber Board and Dr.MR Sethuraj, Director of Research, RRII, Rubber Board attended the meeting. The brief for the delegation was prepared by the Department.

India hosted the 20th Assembly of the ANRPC and connected meetings in Trivandrum during September, 1996. The meeting was attended by delegates from India, Indonesia, Malaysia, Sri Lanka and Thailand. The 20th Assembly of the ANRPC was held on 4th & 5th September, 1996. Prior to the Assembly the ANRPC Committee of Experts met on 2nd and 3rd September, 1996 and the ANRPC Task Force on Review of ANRPC was held on 3rd & 4th September, 1996. A seminar on 'Natural Rubber - An eco-friendly material' was also held in conjunction with the Assembly on 6th September, 1996. Jt.Director (S&P) participated in all these meetings and rendered necessary assistance for conducting the meetings.

PART - X

TECHNICAL CONSULTANCY

Technical Consultancy was provided to rubber goods manufacturing industry for the setting up of new rubber based units, overcoming production problems of the existing units, testing of rubber compounds and products for quality certification and development of new technologies along with allied rubber promotional activities like conducting symposiums and training programmes, preparation of market survey reports and directories for the manufacturing industry.

As part of the activity in promoting products manufacture in the small scale sector, prepared a pre-feasibility report for the Rubber Park Project in order to create the right infrastructure facilities for the development of rubber and rubber wood based units mainly for the export market at an estimated project cost of Rs.36.61 crore. The Expenditure Finance Committee (EFC) of the Govt. of India approved the project. Consultancy was offered to a number of small scale and large scale manufacturing units for solving their production problems. Technical advice was also given to an export-oriented glove manufacturing unit for the implementation of ISO 9000 certification.

Developed suitable compound formulations for a large number of latex and dry rubber product manufacturing units. Tested 260 samples of rubber compounds for various physical parameters. Quality test certificate as per BIS standards were issued on 214 glove samples and 70 latex foam samples.

Protein content of 50 glove samples were estimated. Market survey reports on (1) cycle tyres & tubes (2) Rubber Band (3) Rubber Gloves and play balls were prepared. Published a rubber products importers' directory. Prepared 14 project reports for the setting up new rubber based units. The testing laboratory is being strengthened with the financial support from the World Bank. Revenue earned out of the consultancy service amounted to Rs.5.5 lakh during 1996-97.

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PART - XI
STATISTICAL TABLES

Table - 1

PRODUCTION, IMPORT & CONSUMPTION OF NR
(Tonnes)

Month	Production	Import*	Consumption (indigenous & imported)
April 1996	38,315	1,002	45,030
May ..	44,890	1,405	45,955
June ..	36,140	1,273	46,530
July ..	35,810	2,795	49,360
August ..	40,545	2,015	47,525
September ..	51,360	490	47,350
October ..	55,110	876	45,060
November, ..	63,150	727	46,050
December, ..	64,820	1,927	48,260
January, 1997	60,125	1,573	48,400
February ..	27,590	1,819	45,045
March ..	31,570	2,155	47,200
TOTAL:-	549,425	18,057	561,765
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*Provisional. Complied from monthly returns furnished by manufacturers.

Table-2

STOCK OF NATURAL RUBBER AT THE END OF EACH MONTH
(Tonnes)

Month	Growers, dealers & processors	Manufactu- rers	Total (rounded)
April 1996	51,210	46,130	97,340
May ..	56,470	41,430	97,900
June ..	46,040	43,410	89,450
July ..	40,175	38,540	78,715
August ..	43,900	29,010	72,910
Sept. ..	50,600	27,300	77,900
October ..	59,120	29,100	88,220
November ..	70,750	35,070	1,05,820
December ..	85,860	37,570	1,23,430
January 1997	93,500	43,095	1,36,595
February ..	82,590	38,095	1,20,685
March ..	69,860	37,450	1,07,310

Table-3

PRODUCTION, IMPORT & CONSUMPTION OF SYNTHETIC RUBBER
(Tonnes)

Month	Production*	Import*	Consumption
April, 1996	4,069	6,350	11,480
May ,,	5,635	5,912	11,665
June ,,	4,323	6,325	11,730
July ,,	6,370	6,009	12,855
August ,,	5,872	6,707	12,170
September ,,	4,325	6,550	11,990
October ,,	3,286	7,268	11,500
November ,,	6,123	6,760	11,650
December ,,	5,770	4,961	11,940
January, 1997	7,347	7,291	12,100
February ,,	5,690	7,377	11,880
March ,,	5,753	8,130	11,850
<hr/>			
TOTAL :-	64,563	79,640	142,810
<hr/>			

*Provisional

Table-4

PRODUCTION & CONSUMPTION OF RECLAIMED RUBBER
(Tonnes)

<u>M o n t h</u>	<u>Production*</u>	<u>Consumption</u>
April, 1996	5,275	5,390
May ..	5,280	5,240
June ..	5,475	5,415
July ..	5,845	5,375
August ..	5,805	5,330
September ..	5,900	5,510
October ..	5,350	5,490
November ..	5,370	5,550
December ..	5,470	5,910
January, 1997	5,900	5,975
February ..	5,500	5,600
March ..	5,500	5,800
	-----	-----
TOTAL:-	66,670	66,585
	=====	=====

*Indigenous purchase by manufacturers.

Table-5

MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NATURAL RUBBER IN INDIA
(Rs./Quintal)

Month	RSS-1	RSS-2	RSS-3	RSS-4	RSS-5	Ungraded	ISNR - 5	ISNR-10	ISNR-20	ISNR-50
April, 1996	5566	NT	5250	5005	4970	4897	5885	5230	4925	4917
May "	5583	5350	NT	5252	5066	4964	5755	5337	5020	4932
June "	5935	5650	NT	5385	5243	5051	5887	5535	5285	4954
July "	5675	5450	NT	5125	5004	4783	5920	5350	4940	4708
August "	5549	5200	NT	5033	4920	4653	5685	5094	4695	4482
Sept. "	5472	5350	NT	5060	4814	4617	5770	5228	4700	4495
October "	5467	5380	5200	5112	4773	4529	5428	5231	4570	4417
November "	5358	5200	NT	4898	4624	4338	5312	4980	4262	4155
December "	5203	5125	5000	4752	4456	4272	5060	4515	4128	3941
January, 1997	5219	NT	NT	4699	4424	4224	5133	4860	4300	4225
February "	4840	4520	NT	4286	4202	4057	4633	4469	4078	3903
March "	4703	4650	4600	4199	4135	3991	4880	4321	4038	3935
Yearly Average (1996-97)	5381	5188	5013	4901	4720	4531	5446	5013	4578	4422

NT : No Transaction

Table-6

MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NR IN INTERNATIONAL MARKET
(Rs./Quintal)

M o n t h	RSS-1	RSS-2	RSS-3	RSS-4	RSS-5	SMR-5	SMR-10	SMR-20
April, 1996	4927	4800	4788	4686	4619	4610	4530	4475
May "	5069	4939	4932	4823	4755	4589	4464	4429
June "	5036	4919	4912	4796	4727	4471	4251	4219
July "	4663	4552	4545	4426	4357	4353	4243	4219
August "	4534	4416	4409	4290	4220	4389	4279	4261
Sept. "	4556	4439	4432	4313	4243	4537	4405	4387
October "	4357	4244	4236	4122	4052	4397	4316	4305
November, "	4525	4474	4467	4336	4266	4538	4417	4385
December, "	4491	4413	4406	4261	4190	4524	4390	4362
January, 1997	4400	4334	4327	4176	4105	4481	4369	4341
February, "	4366	4314	4306	4155	4083	4385	4318	4291
March "	4384	4350	4343	4191	4119	4321	4248	4221
Yearly Average (1996-97)	4609	4516	4509	4381	4311	4466	4353	4325

LIST OF MEMBERS OF THE RUBBER BOARDAS ON 31.03.1997

- | | | | |
|----|---|---|--|
| 01 | Shri KJ Mathew IAS | : | Chairman, Rubber Board |
| 02 | Shri V Krishnamoorthy IAS
APC, Kerala | | Nominated by the Govt. of
Kerala to represent that |
| 03 | Vacant | | State. |
| 04 | Vacant | | Nominated by the Govt. of
Tamilnadu to represent them. |
| 05 | Shri George John
Kailash Rubber Company Ltd
Ancheril Bank Building
Kottayam, Kerala. | | Elected by the Large Growers
in the State of Kerala. |
| 06 | Shri MD Joseph
Manniparampil
Kanjirappally
Kottayam, Kerala. | | - do - |
| 07 | Shri KJ Thomas
Akkarakalam
Manager, South Indian
Plantations Ltd.,
Devi Vilas Buildings
Jetty Road
Alappuzha, Kerala. | | - do - |
| 08 | Shri PN Subramanion
Pioneer Nagamony -
Plantations,
Town Junction
Nagercoil
Kanyakumari Dist. | | Elected by the Large Growers
in the State of Tamilnadu. |

- | | | | |
|----|---|--|---|
| 09 | Shri Dwarka Nath Dass, MP
188, South Avenue
New Delhi - 110 011. | Elected
by
Lok
Sabha | They will hold
Office upto 20th
Jan.1997 or till
the date on which
they cease to be
Member of Parlia-
ment whichever
is earlier. |
| 10 | Shri VS Vijayaraghavan, MP
B-101, MS Flats
Baba Kharak Singh Marg
New Delhi - 110 001. | | |
| 11 | Shri Vayalar Ravi, MP
15, Pandit Pant Marg
New Delhi - 110 001. | Elected
by
Rajya
Sabha | He will hold Office
upto 20th Jan.1997 or
till the date on
which he ceases to be
Member of Parliament
whichever is earlier. |
| 12 | Prof.KK Abraham
Kayathinkara, Pala
Kerala. | Nominated by the
Govt. to represent
growers of Kerala. | Central
small |
| 13 | Shri K Joseph Monipally
7/508 A, Mavelipuram
Housing Colony,
Kakkanad,
Cochin - 682 030. | Nominated by the
Govt. to represent
growers of Kerala. | Central
small |
| 14 | Shri Kodumon Gopinathan Nair
President,
National Federation of Rubber
Producers, Kodumon East,
Pathanamthitta Dist.
Kerala. | - do - | |
| 15 | Shri VK Modi
Managing Director
M/s.Modi Rubber Limited
Henkunt Towers
New Friends Colony,
13th Floor
Nehru Place,
New Delhi - 110 019. | Nominated by the
Govt. to represent
goods manufacturers. | Central
rubber |
| 16 | Shri SA Shah
Partner, Kantilal Chotalal &
Company, Subhash Road
Off Caves Road
Jogeshwari (East)
Bombay - 400 060. | - do - | |

17	Shri PV Sankaranarayanan General Secretary INTUC, Kerala Branch Asha Azchavatom Kozhikode, Kerala.	Nominated by the Central Govt. to represent Labour interests.
18	Shri PK Gopalan General Secretary Malabar Estate Workers Union (INTUC), PO Meppadi Wyanad Dist., Kerala.	- do -
19	Shri Tom Thomas Secretary, Hind Mazdoor Sabha Ponkunnam, Kerala.	- do -
20	Shri PD George General Secretary Thirukochi Thottam - Thozhilali Union Mundakayam, Kerala.	- do -
21	Shri Thalekunnil Basheer, Ex.MP Kochar Road, Sasthamangalam PO Thiruvananthapuram, Kerala.	Nominated by the Central Govt. to represent 'other interests'.
22	Shri Jacob Thomas Kalapurackal House Muttambalam, Kottayam Dist. Kerala.	- do -
23	Shri ET Varghese President, Rubber Dealers Association, C/o. United Rubbers, KK Road, Kottayam-1.	- do -
24	Shri Ashok Bhattacharya Jay Nagar (Opp.Agartala Judicial Court) Agartala, Tripura.	- do -
25	Dr.AK Krishnakumar Rubber Production Commissioner Rubber Board, Kottayam.	(Ex-officio)
26	Vacant (Executive Director)	

ANNUAL REPORT

FOR
THE YEAR 1997-98



THE RUBBER BOARD

(GOVT OF INDIA , MINISTRY OF COMMERCE)
KOTTAYAM – 686 002
KERALA STATE



Sl.No.	Particulars	Pg.No.
1	PART I INTRODUCTION	1
2	PART II CONSTITUTION & FUNCTIONS	3
3	PART III RUBBER PRODUCTION	10
4	PART IV ADMINISTRATION	45
	<i>Establishment</i>	46
	<i>Marketing</i>	48
	<i>Publicity & Public Relations</i>	49
	<i>Labour Welfare</i>	50
	<i>Internal Audit</i>	54
	<i>Legal</i>	55
	<i>Vigilance</i>	56
	<i>Official Language Implementation</i>	57
5	PART V RUBBER RESEARCH	59
6	PART VI PROCESSING & PRODUCT DEVELOPMENT	63
7	PART VII TRAINING & TECHNICAL CONSULTANCY	68
8	PART VIII FINANCE & ACCOUNTS	70
9	PART IX STATISTICS & PLANNING	74
10	PART X LICENSING & EXCISE DUTY	78
11	PART XI STATISTICAL TABLES	91
12	ANNEX:1 <i>List of Members of the Board</i>	97

ANNUAL REPORT FOR THE WORKING OF THE RUBBER BOARD FOR 1997-98



PART - I

INTRODUCTION

This is the annual report of the Rubber Board on its working for the year 1997-98, containing a summary of the activities from 1st April, 1997 to 31st March, 1998.

Rubber plays an important role in the industrial and economic development of the country. The Government of India constituted the Rubber Board as a body corporate primarily to promote natural rubber production under the Rubber Act, 1947. In order to undertake scientific, technological and economic research, the Board established the Rubber Research Institute of India in 1955.

The research efforts made significant contributions to the rubber plantation industry. India evolved the high yielding clone RR II 105 with average productivity around 2,000 kg per hectare. Switch-over from seedlings to budding, application of fertilisers after soil and leaf analysis, pest and disease management practices, improved crop exploitation techniques and improved crop processing etc. played a vital role in enhancing rubber production and upgrading quality of the processed rubber. Integrated approach to reduce the cost of production and improve

quality and competitiveness, crop exploitation in association with yield stimulation, processing technically specified rubber and process aid rubbers, developing blends of NR with synthetic rubbers, developing formulations and processes for manufacturing processes, development of solar dryer for curing raw rubber etc. are some of the thrust areas in research and development activities.

The Rubber Plantation Development Scheme implemented from the VI Plan period is by far the largest scheme operated for development and promotion of rubber cultivation in the country. The scheme provides for financial assistance to small growers in the traditional areas and in the non-traditional areas to undertake rubber cultivation. Input subsidy, technical advice and assistance at all stages of planting and maintenance are extended in addition. During 1997-98, 9127 ha. was newly planted with rubber. Terrorist violence in the North-east region where there is scope for large expansion of rubber cultivation continues to adversely affect the planting tempo.

Performance during 1997-98

The overall performance of the rubber plantation industry during 1997-98 has been impressive. Production of natural rubber increased to 583,830 tonnes from 549,425 tonnes recording a growth rate of 6.3%. The consumption of natural rubber during the year increased by 1.8% to 571,820 tonnes as compared to 561,765 tonnes in 1996-97.

Price

During the year, the monthly average price of rubber was Rs.3580/- per quintal for RSS-4 grade as against Rs.4901/- in the previous year. A quantity of 1415 tonnes of different grades of NR was exported during 97-98.

PART – II

CONSTITUTION AND FUNCTIONS

INTRODUCTION

The Indian Rubber Board was constituted under the Rubber (Production & Marketing) Act, 1947 which came into force on 19th April, 1947 'to promote by such measures as it thinks fit, the development of the rubber industry in India'. The Rubber Production & Marketing (Amendment) Act of 1954 made certain changes in the constitution of the Board and its name was changed as Rubber Board. This Act came into force on 1st August, 1955. The Rubber Act was further amended by the Rubber (Amendment) Act, 1960, the Rubber (Amendment) Act, 1982 and by the Rubber (Amendment) Act, 1994. The Amendment in 1982 was to appoint a part time/whole time Chairman for the Board and an Executive Director on whole time basis (if considered necessary). The amendment in 1994 was to enhance the ceiling limit of cess from Re.0.50 to Rs.2/-per kg.

CONSTITUTION

The Rubber Board functions under the Ministry of Commerce of the Government of India. The Board has at present a full time Chairman as principal executive, responsible for discharging the functions as laid down under Section 8 of the Rubber Act. There are 25 other members consisting of -

- a) Two members to represent the State of Tamilnadu of whom one shall be a person representing the rubber producing interests;
- b) Eight members to represent the State of Kerala, six of whom shall represent the rubber producing interests, three of such being persons representing small growers;
- c) Ten members to be nominated by the Central Govt. of whom two shall represent the manufacturers and four labour;
- d) Three members of Parliament of whom two shall be elected by the Lok Sabha and one by the Rajya Sabha;
- e) The Executive Director (ex-officio); and
- f) The Rubber Production Commissioner (ex-officio).

The position of Executive Director has not been filled up.

List of the new members of the Board is given at the end of this report.

Seven Committees have been formed to review the Board's activities vis-à-vis the functions as laid down under Section 8 of the Rubber Act. These are Executive Committee, Research & Development Committee, Market Development Committee, Planting Committee, Statistics & Import/Export Committee, Labour Welfare Committee and Staff Affairs Committee. The Committees examine proposals for development of natural rubber industry and make suitable recommendations to the Board.

Prof. NM Joseph, Member representing small growers was elected as Vice-Chairman for one year from 27.06.1997.

Shri KJ Mathew IAS, continued to be the Chairman of the Board.

FUNCTIONS

The functions of the Board according to Section 8 of the Rubber Act are

-

- (i) Promote by such measures as it thinks fit the development of the rubber industry. The measures may provide for -**
 - a) undertaking, assisting or encouraging scientific, technological and economic research;
 - b) training students in improved methods of planting, cultivation, manuring and spraying;
 - c) supply of technical advice to rubber growers;

- d) improving the marketing of rubber;
- e) collection of statistics from owners of estates, dealers and manufacturers;
- f) securing better working conditions and the provisions and improvement of amenities and incentives for workers; and
- g) carrying out any other duties which may be vested with the Board.

(ii) It shall also be the duty of the Board -

- a) to advise the Central Govt. on all matters relating to the development of the rubber industry, including the import and export of rubber;
- b) to advise the Central Govt. with regard to participation in any international conference or scheme relating to rubber;
- c) to submit to the Central Govt. and such other authorities as may be prescribed half yearly reports on its activities and the working of the Act; and
- d) to prepare and furnish such other reports relating to the rubber industry as may be required by the Central Govt. from time to time.

MEETING OF THE BOARD AND ITS COMMITTEES

The following meetings of the Board and of the Committees were held during the year;

a) **Board meeting**

On 2 occasions; 131st meeting on 27.06.97 & 132nd meeting on 22.12.97.

b) Committee Meetings

Executive Committee	13.08.1997 & 03.12.1997
Market Development Committee	07.10.1997
Planting Committee	07.10.1997
Labour Welfare Committee	20.11.1997
Statistics & Import/Export Committee	26.11.1997
Staff Affairs Committee	30.12.1997

ORGANISATIONAL SET UP

The activities of the Rubber Board were carried out by eight departments viz. Rubber Production, Administration, Rubber Research, Processing & Product Development, Training & Technical Consultancy, Finance & Accounts, Statistics & Planning and Licensing & Excise Duty; headed respectively by the Rubber Production Commissioner, the Secretary, the Director of Research, the Director (P&PD), the Director (T&TC), the Director (Finance), the Jt. Director (S&P) and the Director (L&ED).

The Headquarters of the Board along with the Administration, Rubber Production, Statistics & Planning, Licensing & Excise Duty and Finance & Accounts Departments remained located at own premises in Keezhukunnu, Kottayam-686 002.

There are eight Sub/Liaison Offices under the Licensing & Excise Duty Department. The Rubber Production Department has 3 Zonal Offices, 2 Nucleus Rubber Estate & Training Centres, 6 Supervisory Offices, 40 Regional Offices, 2 ADO's offices, 170 Field Offices, 15 Regional Nurseries and 26 Tappers' Training Schools located at different rubber growing regions.

The Research Department, the Department of Processing & Product Development and the Training & Technical Consultancy Department functioned in the Board's own building at Kottayam-9. The Research Department runs two Regional Research Stations in Kerala, and a Regional Station each in Tamilnadu, Karnataka, Maharashtra (Dapchari), Orissa, West Bengal, Assam, Mizoram, Meghalaya and Tripura. The Pilot Crumb Rubber Factory located at Kottayam and the Pilot Latex Processing Factory located at the Central Experiment Station at Chethackal were run by the Department of Processing and Product Development as also the Pilot Plant for Radiation Vulcanisation of Natural Rubber at Kottayam.

The Chairman exercised administrative control over all the Departments and Offices of the Board. The total of Officers and staff under the Board as on 31.03.1998 was 2237; 215 under Group 'A', 600 under Group 'B', 1248 under Group 'C', and 173 under Group 'D'. Very cordial relations existed between the staff and the executive personnel. Their good work has resulted in the impressive record of achievement during the year.

The activities of the different departments are summarised in the following pages.

PART - III
RUBBER PRODUCTION

FUNCTIONS

The Rubber Production Department performed the following main functions to promote natural rubber production in the country.

- (i) Planning, formulation and implementation of schemes for expansion, development and modernisation of rubber plantations.
- (ii) Rendering advisory and extension services
- (iii) Production, procurement and distribution of high yielding planting materials.
- (iv) Facilitate distribution of agro-inputs requiring popularisation.
- (v) Training of tappers
- (vi) Demonstration and training in scientific planting and production of rubber in non-traditional rubber growing areas.

REVIEW OF ACTIVITIES

1) Rubber Plantation Development Scheme Phase I

This scheme aimed at integrated promotion of newplanting and replanting of rubber, replaced the earlier subsidy schemes separately for newplanting and replanting. The target set was 12,000 ha. per year for 5 years from 1980-81 to 1984-85.

The following incentives were offered for both replanting and newplanting of rubber.

- a) Capital subsidy of Rs.5000/- per ha to growers owning upto 20 ha including any area planted under the scheme and Rs.3000/- per ha to growers owning more than 20 ha.
- b) Input subsidy to the weaker sections of growers possessing not more than 6 ha of rubber for using approved planting materials and approved fertilizer and subsidy of Rs.150/- per ha for undertaking soil conservation work.
- c) The beneficiaries could avail of long terms agricultural bank credit under NABARD's refinancing scheme to supplement the assistance from the Board. The maximum credit per ha was limited to Rs.15,020/- for growers owning upto 6 ha. of rubber, Rs.17,000/- for growers possessing rubber area between 6 and 20 ha. and Rs.18,700/- for those who own above 20 ha. of rubber. The loan advanced in 7 annual instalments was repayable from the 8th year. During the repayment period only simple interest was repayable.
- d) The Board subsidised 3% interest to all categories of growers upto the 10th year of planting subject to limitation on the quantum of loans.
- e) Free advisory and extension support at all stages of planting and maintenance.

The cumulative progress of the scheme as on 31.03.98 is summarised below :-

	Years to which planting related					Total
	1980	1981	1982	1983	1984	
No. of subsidy permits issued	17554	19180	18970	21533	25516	102753
Area covered by permits	12123	13603	13875	15580	17556	72737

During the year under review, an amount of Rs.24,374/- was disbursed as subsidy including interest subsidy. Total amount disbursed towards subsidy since inception of the scheme including interest subsidy comes to Rs.40,17,25,990/-.

2) *Rubber Plantation Development Scheme Phase II*

The Rubber Plantation Development Scheme Phase II was implemented from 1985 onwards for a period of 5 years. The target under the Phase II scheme was only 40,000/- hectares against which the achievement was 75,000 ha.

The assistance offered under Phase II was the following.

- a) Capital subsidy at the rate of Rs.5,000/- per ha. for growers owning upto 5 ha. of rubber in traditional areas and for all categories in the non-traditional areas.
- b) Input subsidy for use of high yielding planting materials of advanced growth (polybag plants) @ Rs.6/- per plant subject to a maximum of 450 plants per ha. Growers in the traditional region having more than 5 ha. of rubber area and carrying out planting under the scheme were also eligible to receive this assistance.

- c) The beneficiaries could avail of the bank loan under the Agricultural Refinancing Scheme of NBARD. The loan was advanced in 7 annual instalments and was repayable in five annual instalments from the 10th year of planting with interest accrued upto the close of the 7th year, payable during the 8th & 9th year.
- d) The Board subsidised 3% interest on credit component from the 1st to the 9th year to growers eligible for the capital subsidy.
- e) Free advisory and extension support at all stages of planting, maintenance, tapping and processing of the crop.

The cumulative progress of the scheme as on 31.03.1998 is summarised below.

	Year to which planting related					TOTAL
	1985	1986	1987	1988	1989	
No.of subsidy permit issued	23537	21247	219987	24002	23522	114315
Area covered by permits	15210	14067	14832	15636	25257	75002

During the year 1997 – 98 a sum of Rs.28,51,512/- had been paid as subsidy including interest subsidy. The total disbursement of subsidy since inception of the scheme including interest subsidy amounted to Rs.45,71,65,319/-.

3) **Rubber Plantation Development Scheme Phase III**

Due to delay in approval of the 8th Five Year plan proposals, the Board was not able to formulate phase III of the Rubber Plantation Development Scheme. However, annual plans within the broad framework of VII Plan proposal were approved and budget provisions were also granted. The Board tentatively implemented the RPD Scheme Phase III for 1990 – 91, 1991 – 92 and 1992 – 93 as annual schemes on the same lines as the phase II Scheme with a physical target of 12,000 ha. for each year.

The cumulative progress of the scheme as on 31.03.1998 is summarised below.

	Years to which planting related			
	1990	1991	1992	TOTAL
No. of subsidy permit issued	24433	28180	25049	7766
Area covered by permits in ha.	14551	16424	14572	45547

During the year 1997 – 98 an amount of Rs.1,58,41,755/- was disbursed as subsidy including interest subsidy. The total amount of subsidy disbursed since inception of the scheme comes to Rs.28,02,91,069/- including interest subsidy.

4) **Rubber Plantation Development Scheme Phase IV**

This is successor to Phase III implemented from 1993 onwards. The physical target for the Plan period is 83,000 ha. of which 70,000 ha. has been earmarked under the World Bank assisted project. The Scheme envisages replanting of uneconomic rubber in 40,000 ha. in traditional areas and newplanting in 30,000 ha. including 7,000 ha. in non-traditional areas. The remaining 13,000 ha. would be planted in non-traditional areas where the World Bank assisted Rubber Project is not in operation.

Assistance offered under the Phase IV Scheme is at the following rates.

- a) **Capital Subsidy** @ Rs.8,000 per ha. limited to 2 ha. for planters whose total rubber area does not exceed 5 ha. in traditional region. All growers in non-traditional region are eligible for subsidy for planting upto 5 ha. of rubber. The rate of subsidy was enhanced from 1997-98. Accordingly each grower in the traditional region owning rubber area not exceeding 5 ha. will be eligible for subsidy of Rs.18,000/- per ha. for a maximum area of 2 ha. Growers in non-traditional area will get a subsidy @ Rs.22,000/- per ha. for areas upto 5 ha. and @ Rs.18,000/- per ha. for areas between 5 ha. and 20 ha.
- b) **Input Subsidy** at a declining rate of Rs.350/- in the 1st year, Rs.250/- in the 2nd year, Rs.170/- in the 3rd year, Rs.90/- in the 4th year and Rs.20/- in the 5th year of implementation of the World Bank Project.

- c) Input Subsidy for the use of high yielding planting materials of advanced growth (Polybag plants) is also granted to a maximum of Rs.3,000/- per ha. for general category growers and Rs.4,000/- per ha. for SC/ST growers. This facility is available to all growers in traditional and non-traditional areas including those not eligible for capital subsidy.
- d) Refinancing Scheme of NABARD, at the existing rate.

Plantation insurance is made obligatory for beneficiaries of the Plantation Development Scheme during the immaturity period. The premium of Rs.500/- per hectare and 5% service tax will be recovered from the 1st instalment of subsidy. Insurance is optional for growers ineligible for planting grant ie, those who own total rubber area in excess of 5 hectare.

Progress of Phase IV of the Scheme so far is as follows.

	<u>Replanting</u>	<u>Newplanting</u>	<u>Total</u>
<u>1993</u>			
No. of applications received	5460	26100	26560
Area (ha)	6323	16429	17752
No. of permits issued	3897	15413	19310
Area covered by permits	4401	7020	11421
<u>1994</u>			
No. of applications received	4965	17316	22281
Area (ha)	6267	9609	15876
No. of permits issued	4765	12768	17533
Area covered by permits	5284	5712	10996

<u>1995</u>	<u>Replanting</u>	<u>Newplanting</u>	<u>Total</u>
No. of applications received	5724	20004	25728
Area (ha)	6216	11078	17294
No. of permits issued	6258	12802	19060
Area covered by permits	5543	5845	11388

1996

No. of applications received	5393	27617	33010
Area (ha)	5664	14862	20526
No. of permits issued	5398	15103	20501
Area covered by permits	4572	6772	11344

1997

No. of applications received	6138	36001	42139
Area (ha)	5995	20129	26124
No. of permits issued	6386	19401	25787
Area covered by permits	4942	9127	14069

During the year 1997-98 an amount of Rs.14,76,95,900/- was disbursed as subsidy including additional assistance under the scheme. Total disbursement of subsidy since inception of the scheme comes to Rs.42,73,83,926/-.

During the year 1997-98, total subsidy disbursed under RPD Scheme Phase I to IV including additional assistance amounts to Rs.16.64 crore in favour of 2,13,477 growers.

5) **Insurance for Rubber Plantations**

The Insurance Scheme drawn up in collaboration with the National Insurance Company Limited and launched during 1988-89 was continued during the year, to compensate damages in the plantations arising out of natural calamities. The Board takes out a master policy and arranges to issue thereunder policy/certificates to individual rubber growers who desire to obtain insurance cover and make remittance of premium amount. Claims are investigated in the field by Board's field personnel and reports are furnished to the insurer. The Insurance Company in turn settles admitted claims through the Board. Thus as the Board undertakes and discharges bulk of the administrative work, the insurer is able to keep down premium rates and to effect claim settlement quickly.

The perils covered are fire, fire resulting from explosion, lightning, bush and forest fire, windstorm, tempest, hurricane, landslide, hailstorm, rockslide and subsidence. The scheme covers all immature plantations under the RPD Scheme, as well as all mature plantations upto 22 years of age.

The rate of premium for immature area is Rs.500 per hectare irrespective of the year of planting to cover immaturity period of 1 to 8 years or part thereof, and Rs.473 per hectare for mature areas to cover a 3 year consecutive period.

The maximum liability of the insurer for plantations in the age group of 1 to 8 years is Rs.45,000 per hectare and Rs.6,000 per hectare for mature trees. No salvage value of trees destroyed is deducted from the amount of compensation. Claims can be admitted after an initial waiting in period of one year for newly planted rubber and 30 days for established plantations. The insured grower has to bear 10% of the loss in the case of immature rubber and 10% or Rs.1,000 whichever is more in the case of mature rubber.

Insurance of rubber plantation has shown a remarkable progress during the year. Insurance policy was obtained for covering immature plantation extending to 52,508.79 ha. at a premium of Rs.2,64,82,500 and mature area extending to 8,680 at a premium of Rs.42,05,680. The immature area insured during 1997-98 was 11,350 ha. at a premium of Rs.59,58,780 and mature area was 225 ha. at a premium of Rs.1,11,746/-.

An amount of Rs.41,80,139/- including current recovery of Rs.3,19,611/- was released against issue of policy certificates to individual growers for mature area of 8838.83 ha. and for immature area the amount recovered was Rs.2,73,86,738.04 including current recovery of Rs.78,46,391.04 to cover 55,754.13 ha.

Compensation paid since inception of the scheme comes to Rs.95,97,528.30 for 2382 insurance certificate holders including payment of Rs.10,33,932 to 298 certificate holders during the reporting period.

6) **Tribal Development Rubber Plantation Project/Schemes.**

The Board is implementing Tribal Development Rubber Plantation Projects in Thiruvananthapuram, Kollam and Idukki Districts sponsored by the Government of Kerala. The Project is funded by the State Government and managed by the Rubber Board. Planting of 501 hectare has been completed till date.

Another Project ie. All Kerala Tribal Development Rubber Plantation Project is in operation to raise rubber in 1200 hectare of tribal lands in various districts of Kerala in a period of 5 years from 1995-96 @ 240 hectare per year. During 1997-98, 330.05 ha. has been planted with rubber, making the cumulative total to 516.84 hectare.

The areas newplanted and replanted during 1995, 1996 & 1997 statewise are given below.

STATEWISE RUBBER PLANTINGS DURING 1995, 1996 & 1997
(in ha.)

State	1995		1996		1997	
	NP	RP	NP	RP	NP	RP
Kerala	3913.47	5238.47	5911.44	4838.25	5727.72	4709.12
Tamilnadu	156.15	259.27	186.63	129.25	118.65	132.62
Karnataka	115.34	201.67	356.07	201.28	747.18	100.21
Goa	10.48	-	11.45	-	12.42	-
Tripura	1644.00	-	1264.71	-	1366.86	-
Assam	193.44	-	316.75	-	481.09	-
Meghalaya	47.26	-	95.97	-	143.52	-
Manipur	17.86	-	55.04	-	83.37	-
Mizoram	17.67	-	20.66	-	24.01	-
West Bengal	1.54	-	31.43	-	53.47	-
Nagaland	48.29	-	148.18	-	306.70	-
Arunachal Pradesh	-	-	20.17	-	58.60	-
Orissa	-	-	-	-	3.47	-
Andhra Pradesh	5.62	-	4.91	-	-	-
Port Blair	-	-	-	-	-	-
Total	6171.12	5699.41	8423.41	5168.78	9127.06	4942.05

7) Production and distribution of planting materials

It is customary for the Board to publish every year a list of approved planting materials based on yield potential and secondary characters. During the year 1997-98 also the list was published.

To ensure easy availability of budgrafted plants of recommended clones at reasonable price, the Board continued to maintain rubber nurseries in all important rubber growing areas. The details of the nurseries are given below.

SLNo.	Kerala	Total extent in ha.	Region
1.	CN Karikkattoor	20.23	Kottayam
2.	RN Kadackamon	04.04	Punalur
3.	RN Perumpulickal	04.00	Adoor
4.	RN Kanhikulam	04.88	Palakkad
5.	RN Ulickal	05.20	Thalassery
6.	RN Manjeri	02.00	Nilambur
7.	RN Peruvannamoozhy	03.70	Kozhikode
8.	RN Alakode	3.41	Taliparamba
	TOTAL	47.46	
<u>Non – traditional areas</u>			
1	RN Devarappally	2.00	Andhra Pradesh
2.	RN Darrangiri	07.05	Guwahati, Assam
3.	RN Mijumdisha	14.00	Diphu, Assam
4.	RN Hillara	14.32	Silchar, Assam
5.	RN Jengitchikgre	05.50	Tura, Meghalaya
6.	RN Tulakona (NRETC)	05.66	Agartala, Tripura
7.	RN Mindipathar	05.54	
	Total	54.07	

Based on the cost study made, the planting materials raised in the nurseries were priced at Rs.5/- per green budded stumps(GBS), Rs.5.75 per brown budded stump (BBS) and Rs.10/- per metre of budwood (BW). Small growers were allowed a concession of Re.1.50, ps.0.75 and Rs.3.50 respectively for GBS, BBS & BW.

During 1997-98, 4,02,377 green budded stumps, 9,00,489 brown budded stumps and 15,216 metres of budwood were sold from nurseries in the traditional area of Kerala. Majority of the materials were sold to the small holders at concessional rate. The concession allowed amounted to Rs.13,05,038/-. Cost of the polythene bags and of planting materials supplied to growers was adjusted from the grants payable under the RPD Scheme. In the non-traditional region, 3,66,820 brown budded stumps were produced and 1,83,425 were supplied to the growers free of cost.

8) Distribution of Mucuna seedlings

The Board procured 3,960 kg of Mucuna seeds from Tripura and distributed to small growers in non-traditional areas incurring an expenditure of Rs.2,65,617/-.

9) Advisory and Extension services

The field extension officers visited 178,286 rubber holdings to advise growers on scientific methods of rubber cultivation, production, exploitation and processing. In order to disseminate knowledge on the

current techniques of planting, maintenance and crop harvesting, radio talks were also broadcast.

In addition to the monthly Malayalam publication 'Rubber' in Kerala, monthly publication in local languages of other important rubber growing regions such as 'Tamilmalar' for Tamilnadu, 'Rubber Sangbad' in Assam, 'Rubber Sangbad' in Tripura and 'Rubber Vartha' in Karnataka was continued.

10) Demonstration of scientific tapping in small holdings

Tapping Demonstrators attached to the various Regional Offices visited 4,922 holdings and demonstrated scientific methods of tapping and processing. Thrust was given to popularise the modern trends in exploitation such as Controlled Upward Tapping (CUT), application of yield stimulants and rainguarding. This would help the planters to extract maximum output from the plantations due for replanting within a reasonable span of time.

Regular training to growers/tappers in scientific tapping and processing was imparted to through various Tappers Training Schools opened at major rubber growing areas. At present 20 TT Schools are functioning in the traditional region and 6 in non-traditional region as detailed below. The duration of the course was reduced to 30 working days from 60 days. A total of 2598 growers/tappers were trained in 159 batches and an amount of Rs.19,66,177.55 was spent for maintaining the

26 Schools and for payment of stipend to the trainees. An amount of Rs.26,787.50 was deducted from the stipend of trainees as tuition fee.

Sl.No.	Name of Region	Name of TT School
01	Nagercoil	Kaliyil
02	Nedumangad	Vinobanikethan
03	Kottarakkara	Nellikunnam
04	Punalur	Nedumuruppu
05	Adoor	Chunakkara
06	Pathanamthitta	Nariapuram
07	Changanacherry	Manthuruthy
08	Kottayam	Kuruppamthara
09	Thodupuzha	Mrala
10	Muvattupuzha	Palakkuzha
11	Ernakulam	Puthencruz
12	Palakkad	Erimayoor
13	Nilambur	Kalikavu
14	Kozhikode	Sathianagar
15	Thalassery	Kenichira, Karapparamba
16	Sreekandapuram	Payyavoor
17	Taliparamba	Vayattuparamba
18	Kanhangad	Panathady
19	Mangalore	Padangady
20	Agartala	Pathaliya
21	Dharmanagar	Juri
22	Udaipur	Sachirambari, Pathicherry
23	Guwahati	Ouguri
24	Silchar	Gamaria

11) **Annual Schemes on productivity/quality improvement**

a) Financial assistance to small growers for purchase of sheeting rollers.

In order to improve the quality of the sheet rubber produced in small holdings, the Board has implemented a scheme to extend financial assistance @ Rs.1,000/- per set of sheeting rollers to benefit the small and marginal growers. An amount of Rs.19 lakh was spent against the budget provision of Rs.20 lakh.

b) Financial assistance for construction of small smoke house.

With a view to encouraging the small growers to adopt better processing techniques, the Board implemented a scheme to offer financial assistance @ Rs.3,000/- per smoke house with a minimum capacity of 85 kg. rubber sheets. This scheme was popular among the small growers and an amount of Rs.19.53 lakh was disbursed against the budget provision of Rs. 20 lakh during 1997-98. In traditional areas, subsidy was paid to 58 growers at Rs.5,000/- or 50% of the actual cost of construction, amounting to Rs.2,73,825/- against the budget provision of Rs.3 lakh.

c) Scheme for supply of low volume power operated sprayer/duster.

This scheme was introduced to popularise the use of low volume power operated sprayers/dusters among small growers for control of leaf diseases. During the period 1997-98, 40 low volume sprayers/dusters were supplied to Rubber Producers' Societies (RPSs), individuals, Co-

operative Societies and Rubber Marketing Societies. The scheme provides grant of 50% subsidy limited to a maximum of Rs.15,000/- for sprayer-cum-duster and Rs.12,000/- for sprayer without duster attachment for RPSs, Co-operative Societies and Rubber Marketing Societies. For individual growers the subsidy rate was 25% limited to Rs.7,500/- for sprayer-cum-duster and Rs.6,000/- for sprayer without duster attachment. For small sprayer-cum-duster the subsidy element was Rs.2,000/- per RPS/Co-operative Society and Rs.1,000/- per grower. A total amount of Rs.3,46,063/- was disbursed as subsidy under the scheme.

d) Financial assistance for irrigation in immature rubber plantations of NT area.

Irrigation has been found to be beneficial to ensure proper growth of the rubber plants and to reduce the immaturity period in non-traditional areas. In order to motivate the rubber growers to take up irrigation in the immature rubber holdings in non-traditional areas the scheme for giving financial assistance against capital investment at Rs.5000/- per grower was implemented for promotion of irrigation. An amount of Rs.1,97,975/- has been disbursed to eligible rubber growers under this scheme.

e) Procurement and distribution of cover crop seeds.

Leguminous cover crops are established to maintain rubber plantations ensuring soil moisture conservation, checking soil erosion, suppressing weed growth, improving soil fertility etc. For encouraging

the small rubber growers to establish leguminous cover crop during the year, a total quantity of 7.5 MT of cover crop seeds was procured and distributed among the growers at concessional price of Rs.150/- per kg.

f) Assistance for fencing in non-traditional area.

In non-traditional areas, one of the major constraints in expansion of rubber cultivation is cattle menace and damage caused by the trespassers during the early years. In order to protect the plants from stray cattle and trespassers, boundary protection to the planted area is essential. Due to heavy expenditure, the small growers are not able to erect proper fencing to protect their young plants. Hence a scheme was implemented for all categories of small growers to encourage fencing around their plantation. The SC/ST growers were granted financial assistance at an enhanced rate.

An amount of Rs.6,88,211/- was disbursed as subsidy among general category growers and Rs.17,83,477/- to SC/ST category growers.

g) Scheme for supply of plantation requisites in non-traditional areas.

Most of the essential plantation requisites are not readily available in the non-traditional areas. A scheme was implemented for supply of selected items to help the small growers procure plantation requisites for increasing production and productivity and also to adopt improved processing methods. Materials such as rubber sheeting rollers, plastic cups, tapping knives, sieves, coagulating dishes, cup hangers, spouts and

panel protection materials were purchased from available sources and transported to non-traditional areas for supply to eligible growers at cost price. The entire transporting charge was subsidised.

Plantation requisites worth Rs.14,73,042/- were purchased and distributed.

h) Free supply of rollers in NT areas

A scheme was implemented to help the non-governmental organisation etc. in non-traditional areas to improve the processing of natural rubber. During 1997-98, 18 sets of rollers were distributed to these organisations. An amount of Rs.2,66,400/- was spent against the target of Rs.3 lakh.

12) Seminars and Campaigns

As part of the mass education and technology transfer programme, a series of seminars and campaigns were conducted. During April/May 1997, a campaign 'CUT 98' was conducted and growers were briefed of the merits of controlled upward tapping. Various productivity enhancement measures including replanting of uneconomic holdings were also explained. These were organised with the active participation of the Rubber Producers' Societies. Altogether 1526 Seminars/Campaigns were organised, which were attended by 51166 growers/plantation workers. The extension officers attended meetings of

RPSs to give advice on adopting improved technology in enhancing production.

13) Planting material

A quantum of 96.72 lakh assorted rubber seeds were procured and distributed to non-traditional areas, in addition to 30 lakh of assorted seeds procured in NRETC Agartala on germination basis. Moreover 4.44 lakh of polyclonal seeds and 2,58,065 budded stumps were procured and despatched to non-traditional areas.

For the Board's nurseries in Kerala 29.65 lakh seeds were procured on germination basis.

14) Sponsored nursery

To meet the growing demand of good quality planting materials at reasonable rates sponsored nurseries were promoted in 277 centres under the RPSs. The Board arranged supply of 58.80 lakh seeds for establishment of seedling nurseries.

15) Scheme for free supply of barbed wire and 'U' nails

This scheme was implemented during 1996-97 to assist individual SC/ST growers in non-traditional areas to protect their plantations with proper boundary fencing. This was continued during 1997-98 spending an amount of Rs.9,46,904/- against the financial outlay of Rs.15 lakh.

Another scheme to protect the SC/ST growers' group planting with proper fencing was also implemented spending an amount of Rs.1,97,831/-.

16) Popularisation of leguminous ground cover

A new scheme with a financial outlay of Rs.20 lakh was implemented during 1997-98, to encourage small rubber growers to establish leguminous ground cover in their rubber plantations. Rs.20,53,988/- was disbursed as assistance against the target of Rs.20 lakh.

17) Short term intensive training in tapping

This scheme was implemented to impart intensive training to small growers and tappers in tapping and processing to meet the increased demand of trained tappers. The duration of the course was 8 days. During 1997-98, 4,573 persons were trained, spending Rs.11,54,397/- against the financial outlay of Rs.15 lakh.

18) Development of rubber plantations in NT areas

For attaining self-sufficiency in the production of natural rubber in India, continued to promote development of rubber cultivation in non-traditional areas where the agro-climatic conditions are more or less suitable for rubber cultivation. The non-traditional regions include the States of Goa, Maharashtra, Andhra Pradesh, Orissa, West Bengal

and North-eastern States. As a result of the sustained efforts, a large number of new entrepreneurs have taken up rubber cultivation.

a) *Goa & Maharashtra*

In Goa, commercial rubber cultivation was pioneered by the State Forest Department from the 1960s. Of late, a number of growers have started rubber cultivation. The extent of rubber is 922 ha. in Goa.

In Maharashtra, rubber plantation is of recent origin and some of the plantations have come into tapping. The yield performance is more or less comparable to what is obtained in the traditional area. The Board has established a Demonstration-cum-Nursery Project (DCNP) in an extent of 7 ha. at the Konkan Krishi Vidhya Peet at Wakoli, Dapoli. Raising of rubber nurseries and planting in the demonstration plot have been completed during 1997. Development of infrastructure including establishment of irrigation system has been undertaken for better demonstration value. During the year an amount of Rs.4,08,656.75 was spent for the DCNP at Dapoli. For the development of rubber cultivation in the States of Goa and Maharashtra, the Board has opened one Regional Office at Goa and an ADOs Office at Khed.

b) *Andhra Pradesh*

The Board is maintaining a nursery at Devarappally in an area of 2 ha. for raising and distribution of high yielding planting materials. This nursery can cater to the needs of the rubber growers in Andhra

Pradesh as well as in Ganjam district of Orissa. A Block Planting Project to plant 50 ha. is under implementation in Andhra Pradesh. The total extent under rubber is 52.30 ha. For the successful implementation of various schemes in Andhra Pradesh, the Board has opened one ADO's office at Maradumilli.

e) Orissa

The Board had taken up development of rubber plantation in the State of Orissa in 1998. A Zonal Office was opened in Bhubaneswar followed by 3 Regional Offices at Baripada (Mayurbhanj district), Bhubaneswar (Puri district) and Paralakhemundi (Gajapathy district). An area of 300 ha. has been brought under rubber cultivation in Orissa.

d) West Bengal

A survey of suitable areas in West Bengal has revealed that selected areas in Jalpaiguri district, Silliguri and Naxalbari sub division of Darjeeling district and certain portions of Islampur, Bhalurghat and Raiganj sub divisions of North Dinajpur district are more or less suitable for rubber cultivation. To encourage rubber cultivation in these areas, the Board had opened a Field Office in Silliguri in Darjeeling district. Polybags and plants were supplied to interested growers from this office for raising polybagged plants for field planting. At present, West Bengal has 62 ha. under rubber .

e) North-eastern States

The Board continued to promote development of rubber plantations in North-eastern States. The Zonal Office in Guwahati is coordinating the activities in all the States in the North-east excepting for Tripura, through Regional Offices stationed at Guwahati, Silchar, Diphu and Jorhat (in Assam) and Tura (Meghalaya). The Zonal Office opened at Agartala is monitoring the development activities in the State of Tripura. Regional Offices also function at Agartala, Udaipur and Dharmanagar. An area of 1967 ha. was brought under rubber cultivation in Tripura and 1098 ha. in the other States during 1997-98. The estimated planted area at the close of 1997 is given below.

Tripura	23,000 ha.
Assam	10,500 ha.
Meghalaya	4,400 ha.
Mizoram	950 ha.
Manipur	1,225 ha.
Nagaland	1,200 ha.
Arunachal Pradesh	110 ha.
TOTAL:-	<u>41,385 ha.</u>

Taking into consideration the needs of this backward non-traditional region the Board is offering special incentives to encourage new entrepreneurs besides grant of financial and technical assistance. Schemes for supply of budded stumps and polybags for raising polybag

nurseries and grant of cash assistance for maintenance of polybagged plants are in operation.

Block Plantation Programme

The Board in collaboration with the Tribal Welfare Department of the Government of Tripura has started a Block Rubber Plantation Project, through which integrated rehabilitation of SC and Tribal people is attempted. Already 1455 ha. has been planted till 1997. During the year 1997-98 an area of 268 ha. was planted.

f) Andaman & Nicobar Islands

The Regional Office started at Port Blair in 1985 is looking after the development of rubber plantations in Andaman & Nicobar islands. In addition to the two public sector plantations raised in the Islands, the Regional Office was instrumental to bringing under cultivation 75.61 ha. under rubber.

g) NRETC Andaman

The Rubber Board continued to maintain the Nucleus Rubber Estate and Training Centre comprising of a 202.50 ha. of rubber raised progressively from 1965 to 1968 in South Andamans. The NRETC has recorded production of 78,464 kg of rubber during the year. The Board had incurred an expenditure of Rs.43 lakh towards the running expenses of NRETC during 1997-98.

A rubber nursery in 1.85 ha. is maintained for production of high yielding planting materials for own use as well as for supply to interested growers in the A & N Islands.

h) NRETC Agartala

The Rubber Board has been maintaining at Agartala a Nucleus Rubber Estate-cum-Training Centre since 1985. The 100 ha. plantation at Surendranagar (raised in a phased manner during 1987-88 and 1989) has entered the tapping stage. Tapping commenced in December 1993.

Periodic training programmes were organised for growers on various aspects of relevance to rubber cultivation. Demonstration plots also were maintained. For generation of planting materials, seedling nurseries were raised with the participation of beneficiaries in all the block plantation projects.

19) Rubber Producers Societies

All items of work connected with the approval of Rubber Producers' Societies were undertaken. Approval was granted to 104 RPSs, during the year 1997-98. The total number of RPSs approved by the Board at the end of the reporting year stood at 1704. Region wise distribution is furnished below.

Region wise distribution of RPSs approved by the Board

<u>Region</u>	<u>No. of RPSs</u>
Kanhangad	77
Taliparamba	71
Sreekandapuram	64
Thalassery	65
Kozhikkode	58
Nilambur	35
Manjeri	38
Palakkad	43
Mannarkad	48
Thrissur	56
Ernakulam	74
Muvattupuzha	71
Kothamangalam	56
Thodupuzha	88
Pala	110
Erattupetta	57
Kanjirappally	86
Kottayam	100
Changanacherry	89
Pathanamthitta	90
Punalur	55
Kottarakkar	68
Àdoor	71
Trivandrum	37
Nedumangadu	58
Nagercoil	12
Mangalore	25
Goa	1
Port Blair	1
TOTAL	1704 Nos

Estate inputs such as fertilisers, fungicides, rainguarding materials etc. were procured and distributed under the Productivity Enhancement Component of the Rubber Project funded by the World Bank among the small growers from the Regional Offices and through the Rubber Producers Societies. International competitive bidding procedures, as laid down by the World Bank were followed in procurement of inputs. The items and quantum of the inputs distributed are shown below.

<u>Items</u>	<u>Quantity</u>
Urea	3897 MT
Muriate of Potash	3019 MT
Rock Phosphate	8896 MT
Copper Sulphate	338 MT
Copper Oxychloride	119 MT
Spray Oil	592 KL
Polythene Sheet	399 MT
Rainguarding Adhesive	1020 MT
Rubber Cot	26 KL
Indofil M – 45	478 Kg
Ethephon	208 Lit

20) World Bank Aided Rubber Project

Notable achievements during the year under the World Bank aided project are indicated below.

Replanting and newplanting of rubber are the two major components which account for 29% and 41% respectively, of the total estimated project outlay. During 1997 planting season 6110 applications covering an area of 5842 ha. were received for replanting. The target for the year was 5000 ha. against which permits were issued for 4812 ha.

For newplanting a record number of 35,673 applications were received during 1997 for financial assistance covering 19,665 ha.. This was against a physical target of 7,350 ha.. Permits were issued for 8891 ha. till 31st March, 1998.

The achievements under the productivity enhancement component was only 63,000 ha. against a target of 75,000 ha.. The shortfall is mainly on account of the unattractive price of raw rubber. Action for procurement and distribution of inputs for the year 1998 was completed based on the demand from RPS. The demand will cover only 70,000 ha. against the mid term review target of 1,00,000 ha.. Purchase of inputs to cover 63,000 ha. was completed.

Under the Processing Component NABARD had sanctioned and released refinance loan of Rs.7.02 lakh to M/s. J K Rubbers, Manjapra, for setting up of a Sheet Reprocessing factory; the first of its kind under the project.

Other activities are briefly stated below.

- (a) For the setting up of the Rubber Wood Processing Pilot Plant with private sector participation a joint sector company under name 'Rubber Wood India (Pvt) Ltd' was registered.
- (b) A series of steps were taken for promoting and popularising the use of rubber wood and rubber wood products through media projections, advertisements and participation in exhibitions in India and abroad.
- (c) Action was taken to fix up M/s.TRADA Technology Ltd, UK for a comprehensive study on the rubber wood industry and to make recommendations to modernise the rubber wood processing sector in India. They were also assigned the task of advising the Board on product and product mix, technology, manufacturing techniques, selection of machinery and equipment, plant lay out, maximum utilisation of rubber wood etc. in the setting up of the Model Rubber Wood Factory for demonstration and training.
- (d) Technical assistance for setting up the wood testing laboratory was finalised fixing up M/s.Indian Plywood Industries Research and Training Institute (IPIRTI) Bangalore as Consultants. The work is progressing as per schedule.
- (e) Action plan for implementation of the second phase of computerisation was drawn up and approval sought for from World Bank. Training in computer applications was imparted to 183 staff in the RP Department and 59 staff in the Research Department during the year.

As suggested by the Supervisory Mission the following survey works were initiated.

- a) Sample survey to assess the technical performance of the rubber plantations in Tripura.
- b) Sample survey to assess the impact of productivity enhancement scheme.
- c) Evaluation of Tribal Development Plan implemented by the Development Unit with World Bank assistance by the external agency.
- d) During the year 12 Officers of the Board comprising of Scientists/Engineers and technical persons were deputed abroad for training/study tour. In addition, 31 prospective small rubber planters were sent to Thailand and Indonesia on study tour.

The training department imparted training to 1030 rubber growers, processors and small scale manufacturers of rubber goods. In addition 2478 growers visited RRII under Sastradarsan programme. The refinance sanctioned by NABARD for rubber cultivation during the just concluded year was Rs.1097 lakh which is more than double the corresponding figure of Rs.450 lakh for the previous year. A comprehensive brochure highlighting the salient features of the various loan schemes was got printed and distributed.

The Project expenditure during 1997-98 was Rs.2891.5 lakh (provisional) and Rs.9184.7 lakh cumulatively. The Rubber Board forwarded claim bills for a total amount of Rs.5343.3 lakh to DEA till 31.3.1998 for reimbursement from IDA. The cumulative release was Rs.5343.3 lakh.

NEW SCHEMES UNDER THE WORLD BANK AIDED RUBBER
PROEJCT

a) PRODUCTIVITY ENHANCEMENT SCHEMES

Productivity enhancement is one of the main components of the World Bank Aided Rubber Project. Intensive extension service support is essential for transfer of technology. Method demonstration is one of the strategies. Following five programmes were in operation during 1997-98 through setting up of demonstration plots under the productivity enhancement scheme.

i) *Controlled Upward Tapping (CUT)*

Selected 1303 demonstration plots under the programme during 1997-98 and Rs.6.71 lakh was disbursed to the growers.

ii) *Soil Moisture Conservation (SMC)*

Under this scheme, 5309 demonstration plots were set up and Rs.80.65 lakh was disbursed.

iii) *Discriminatory Fertiliser Application*

Established 1249 demonstration plots incurring Rs.6.69 lakh.

iv) *Disease control*

Under this scheme, 1450 demonstration plots were set up and Rs.8.25 lakh was spent.

v) *Common plots*

Under the scheme, 158 demonstration plots were set up and Rs.3.35 lakh was disbursed to the demonstration plot owners.

vi) *Procurement of audio visual equipments*

Audio visual equipments like, TV, VCR, Slide Projector, Public Addressing System etc. worth Rs.6.23 lakh were purchased for the extension activities and distributed to Supervisory Offices/Regional Offices for the effective transfer of technology.

vii) *Film on rubber*

Two films on nursery management practices and planting & upkeep of rubber were produced during 1997-98 incurring an expenditure of Rs.5.85 lakh.

b) SCHEME TO SUPPORT RPSs

Under the scheme, 294 Extension Agents were selected by the RPSs and they were engaged for dissemination of new technology among the rubber growers. An amount of Rs.55.4 lakh was spent under the scheme during 1997-98. For giving technical advice on the correct method of tapping and processing, 241 Tapping Assistants were engaged

by the RPSs. Assistance disbursed to them towards honorarium amounted to Rs.12.60 lakh.

c) **GROWERS VISIT TO KERALA**

During the year, 109 growers from the Non-traditional areas visited Kerala under Sastradarsan Programme, for which an amount of Rs.2.65 lakh was spent.

d) **DIPLOMA COURSE FOR TRIBAL STUDENTS FROM TRIPURA**

In collaboration with the Kerala Agricultural University, a Diploma Course in Natural Rubber Production was started for the tribal students from Tripura. The University admitted 17 tribal students to the Diploma Course. Expenditure for the course was Rs.4.75 lakh during 1997-98.

e) **TRAINING OF TECHNICAL OFFICERS**

The Board deputed 20 Technical Officers for training in Extension Methodology and Communication for effective transfer of technology at the Indian Agricultural Institute, New Delhi during 1997-98.



PART - IV
ADMINISTRATION

Important functions in Administration consists of Constitution/Reconstitution of the Board and its Committees, recruitment of personnel for different Departments, proper maintenance of the establishment through house keeping operations, disbursement of employees entitlements including retirement benefits, price collection and marketing, collection of statistics, publicise Board's schemes and activities, carryout labour welfare measures, attend to vigilance and legal functions and official language implementation.

The functions were carried out through the following Sections/Divisions/Offices.

- | | |
|----|--|
| 01 | <i>Establishment</i> (General Administration, Personnel Administration & Establishment) |
| 02 | <i>Marketing</i> |
| 03 | <i>Publicity & Public Relation</i> |
| 04 | <i>Labour Welfare</i> |
| 05 | <i>Internal Audit</i> |
| 06 | <i>Legal</i> |
| 07 | <i>Vilgilance</i> |
| 08 | <i>Official Language Implementation</i> |

General Administration

The activities of the Board for the year 1996-97 were documented through the Annual Report which was presented to the Government as required under Clause 8 (3) (c) of the Rubber Act, along with the Annual Accounts. Construction of 12 Nos. Type III Quarters is in progress.

Entitlement

During the period, 25 employees were given financial assistance for construction of own house by advancing Rs.34,15,225/- and 57 employees were given vehicle advance amounting to Rs.15,82, 068/-, (Rs.4,19,375 as Car Advance to 4, Rs.11,41,693/- as two wheeler advance to 39, and Rs.21,000/- as cycle advance to 14). In addition an amount of Rs.10,84,829/- was advanced to 34 officials as two wheeler advance under the World Bank Scheme.

Service Books, leave accounts and personal files of employees were properly maintained. Retirement benefits were newly given to 47 employees including two who left on voluntary retirement and one on invalid pension. In addition there were 5 cases of pension to the widows of employees who died in harness. As on 31.3.1998, there were 309 pensioners on the Board's rolls, the addition during the reporting period being 21.

Personnel Administration

Selection of suitable personnel to vacant positions for smooth functioning of the Board was ensured following recognised recruitment rules and statutory provisions relating to reservation of posts for candidates from the SC/ST/OBC Communities. There were properly constituted Selection Committee/DPCs for selection of personnel befitting job recruitments. Periodical returns on the personnel recruited at reservation points were sent to the Government.

The total number of Officers and Staff under the Board as on 31.3.1998 was 2239 as detailed below.

Name of Department	Group A	Group B	Group C	Group D	TOTAL
Administration	13	24	65	16	118
Rubber Production	94	371	804	101	1370
Excise Duty	16	26	85	8	135
Research	62	124	208	38	432
Processing & Product Development	16	25	37	4	82
Finance & Accounts	8	8	20	1	37
Statistics & Planning	6	7	12	2	27
Training & Technical Consultancy	8	10	18	2	38
TOTAL	223	595	1249	172	2239

Marketing

During the reporting period, collected and compiled price of various grades of natural rubber and reported to the press for publication, like daily average price of RSS-4 and Ungraded rubber in Kochi and Kottayam markets, average price of all grades of rubber in Kottayam market, average price of scrap rubber and daily price of various grades of sheet rubber in Kuala Lumpur, Malaysia. The price of RSS-4 and Ungraded rubber at Kottayam on 1.4.1997 was Rs.4100 and Rs.3925 respectively which declined to Rs.2775 and Rs.2550 respectively at the close of the financial year ie. 31.3.1998.

The price information was intimated on a regular basis to the Ministry of Commerce, Ministry of Industry, Public Sector Plantation Companies etc. The price of centrifuged latex, technically specified rubber, PLC etc. were also collected and circulated to the various offices of the Board, Plantation Companies etc. regularly.

Average prices of various grades of rubber per quintal during 1997-98 are indicated below.

	<u>1997-98</u>
RSS-1	4,115
RSS-2	3,927
RSS-3	3,734
RSS-4	3,580
RSS-5	3,445
Latex (60% drc)	5,384

Collected details of imports of natural rubber coming to the country through the 4 major ports of India (Kochi, Madras, Calcutta, Bombay) and data on natural rubber exported. During the period, 24,488 MT of natural rubber was imported and 1,415 MT of natural rubber was exported. Arranged payment of Rs.12 lakh against the claims of primary Co-operative Societies towards reimbursement of part of the incidental expenses in supply of rubber to STC through the Rubber Marketing Federation @ Rs.150 per MT, as part of price support operation.

Publicity and Public Relation

Continued publication of the Malayalam monthly 'Rubber' with average monthly circulation of 20,566 copies. The scheme for enrolling life membership was continued and 285 subscribers were newly enrolled. The total number under the category touched 5,381. Also brought out leaflets on various aspects of rubber cultivation. Rubber Statistical News in 12 issues, each with 600 copies were brought out and sent to subscribers.

The Rubber Growers companion 1998 (Delux 300, with text – 5000, and without text – 3200) was brought out in December, 1997. The book on Rubber and its cultivation was reprinted with 1045 copies for distribution to the prospective rubber growers.

Press handouts on various topics were released to the national as well as local dailies which secured wide coverage. A total of 58 press releases and 85 advertisement were issued. Farm features on subjects of seasonal importance were published in the 'Karshikarangam' pages of various Malayalam dailies.

During the period under report 6 exhibitions were arranged at various places. Also organised seminars and conducted growers' meetings.

Utilised services of the AIR and Doordarshan for dissemination of scientific knowledge on rubber cultivation, crop processing and marketing.

Labour Welfare

Section 8 (2) (f) of the Rubber Act empowers the Board to undertake measures for better working condition and improvement of amenities and incentives for rubber plantation workers.

The Board had devised many schemes for the welfare of the workers for which an amount of Rs.1,12,32,146 lakh was spent during the year under report.

a) Educational Stipend Scheme

The scheme provides for financial assistance for educating the children of rubber plantation workers at the primary, secondary, graduation/postgraduation levels.

The assistance consists of payment of tuition fee, hostel/boarding fee and lumpsum grant for purchase of books, instruments etc.

An amount of Rs.13,23,872/- was spent under this scheme during 1997-98.

b) Educational Scholarship Scheme

The scheme provides children of rubber plantation workers incentive for high performance in academic courses under educational stipend scheme. Scholarship ranging from Rs.250/- to Rs.2,000/- is paid per student. An amount of Rs.24,700/- was spent under this during the year.

c) Group Insurance-cum-Deposit Scheme (9 Phases)

This is a social security measure for the workers not covered by the Plantation Labour Act against death and injuries caused by accidents. This scheme also encourages the habit of saving. It has reached 4 phases in 1997-98. The first phase was started in 1986-87.

Each phase continues to be in operation for a period of ten years. The workers enrolled have to renew membership every year by remitting their share of insurance premia. During 1997-98 the Board remitted Rs.8,45,000/- as Board's share favouring 8450 workers after ensuring that they have remitted an equal amount as their share. The insurance company paid compensation to 66 workers amounting to Rs.1,14,211/- for injuries/death by accident.

d) **Housing Subsidy Scheme (Unorganised Non-marginal Holdings).**

The scheme provides assistance to rubber plantation workers not covered by the Plantation Labour Act, 1951 for construction of own house. The assistance is limited to Rs.7,500/- per worker for house built in brick and mortar. For house built with mud walls and grass thatch, the assistance would be Rs.4,000/- only. But houses with mud wall and tin or aluminium roof, the assistance would be Rs.5,000/-. An amount of Rs.22,09,500/- was disbursed during 1997-98 in favour of 296 applicants.

e) **Housing Subsidy Scheme (Unorganised Sector Marginal holdings)**

This scheme provides for assistance in house construction for workers employed in holdings, each with area between 0.75 ha. and 1 ha. All other conditions of the scheme for housing subsidy for rubber plantation workers in the unorganised sector (non-marginal holdings) are applicable to this scheme. Amount disbursed during 1997-98 was Rs.21,81,250/- in favour of 291 applicants.

f) Housing Subsidy Scheme (Organised Sector)

This scheme provides financial assistance to workers covered by the Plantation Labour Act, 1951 for the construction of own house. The assistance is limited to Rs.7500/- per worker. Amount disbursed during 1997-98 was Rs.12,13,500/- in favour of 194 applicants.

g) Scheme for Providing Sanitary Facilities

The scheme provides assistance to build latrines as per prescribed plan and estimate by the rubber plantation workers. The assistance either cover 75% of the cost of construction or Rs.3000/- of the latrine whichever is less. Total amount paid under the scheme during 1997-98 was Rs.21,75,538/- in favour of 726 applicants.

h) Medical Attendance Scheme

The schemes assists plantation workers of unorganised sector in reimbursement of medical expenses and also subsistence during the period of their inability to work in consequence of the illness. Workers who undergo sterilisation operation for promotion of small family are also given assistance. During 1997-98 an amount of Rs.4,69,686/- was disbursed to 432 workers.

i) **Housing and Sanitary Scheme for SC/ST Rubber Plantation Workers.**

This scheme was implemented on a pilot basis exclusively for SC/ST workers employed in rubber plantations coming under the Rubber Producers' Societies. Assistance limited to Rs.14,000/- is granted to the worker for construction of house with latrine. The scheme was financed from the SCP/TSP fund. During 1997-98 an amount of Rs.7,89,100/- was disbursed in favour of 109 workers.

Internal Audit

Main function of the Internal Audit is inspection/audit of various offices/units of the Board. During the period under report internal audit inspections were conducted in 27 offices/units located all over Kerala, Goa, Maharashtra and Gujarat.

Replies to AG's audit objection were sent in time. The total number of outstanding paras on 31.03.98 was 80. Review of Attendance Register as a measure of enforcement of office discipline was undertaken. Expert opinion/advice was given in 210 cases including 81 pension cases, leave encashment, pay fixation, service verification etc.

Economy in the use and maintenance of vehicles and consumption of fuel was ensured by follow-up of procedures and Government Orders strictly. Annual physical verification of stock was brought upto date by

initiating follow-up action with concerned offices/units and ensured the disposal of unserviceable items.

Legal Matter

The legal functions include rendering advice/opinion on matters referred to, draft legal documents, initiate steps for prosecution under the Rubber Act, 1947 assist in conciliation proceedings in labour matters and tax cases and monitoring progress of litigations for and against the Board.

During the year under report, timely action was taken and advice was rendered on 600 files. Applications of 66 employees under House Building Advance Scheme were scrutinised for determining eligibility under the Rules. Legal documents to be executed were drafted/prepared. Appropriate steps were taken through lawyers to safeguard the interests of the Board in 10 litigations pending in various courts. Parawise comments and necessary instructions were given to Standing Counsels and the Central Government pleaders in cases pending in High Courts. In 25 consumer disputes filed before redressal Forums in various districts, prepared and filed replies and defended the interests of the Board during hearings.

Vigilance

a) Complaints

During the year under report, took up for enquiry/verification 18 complaints containing allegations against 8 Officers of Groups A & B status and 14 officials of Groups C & D status. The allegations mainly related to malpractices in purchase of furniture/stores, substandard civil construction works, unruly behaviour of office functionaries, habitual unauthorised absence in disruption to the smooth functioning of the office etc. Enquiries were made and appropriate deterrent action was taken.

b) Cases

Major penalty proceedings against 6 officials and minor penalty action against 8 officials were instituted during the year under report.

c) Property statements and acquisition/disposal of immovable/movable property.

Annual statements of immovable property as on 31.12.1997 were called for from all officers of Group A & B status. The statements received were scrutinised. Also dealt with/processed 71 applications of the employees pertaining to acquisition/disposal of immovable property and 44 applications/intimations relating to transactions in movable properties such as motor cars, two wheelers, refrigerators, televisions, washing machines etc.

Official Language Implementation.

A meeting of the Official Language Implementation Committee were held during the year. Annual programme for the year was prepared.

Hindi workshops were conducted in the Regional Offices at Nagercoil, Nedumangad, Thiruvananthapuram, Adoor, Kottarakkara, Punalur, Pathanamthitta, Changanacherry, Kottayam, Pala, Erattupetta, Kanjirappally, Thodupuzha, Muvatupuzha, Kothamangalam, Ernakulam, Thrissur, Kozhikode, Thalassery, Palakkad, Mannarghat, Manjeri, Nilambur, Mangalore, Kundapura, CES Chethackal, Licensing Section Kochi, NRETC Agartala and Guwahati.

Hindi week was celebrated in September, 1997 in various offices of the Board. Competition in Hindi noting & drafting, elocution & essay writing, recitation in Hindi, Hindi Typewriting and Hindi quiz were conducted. Token prizes and cash awards were given to the I & II place winners. Separate competitions were also conducted for the children of employees of the Board. An Official Language Conference was held in March, 1998.

Four issues of the Hindi bulletin were published during the year. Hindi classes were conducted in which 24 employees were trained during the year. Facilities for training in Hindi through correspondence

course were arranged. Training in Hindi Typewriting was also given to Board's employees.

The Hindi Library was utilised by the employees to improve their knowledge in Hindi.



PART – V
RUBBER RESEARCH

The Rubber Research Institute of India, the research wing of the Rubber Board has a Central Experiment Station, nine Regional Research Stations and two Hevea Breeding Sub-Stations. For the North Eastern region a Research Complex has been established at Guwahati with four Regional Research Stations in Tripura, Assam, Meghalaya and Mizoram. At other non traditional areas four Regional Research Stations have been established in Maharashtra, Madhya Pradesh, West Bengal and Orissa. The following are the research highlights of the year under report.

After extensive optimisation, the frequency of somatic embryogenesis has been considerably enhanced. Auxiliary bud growth and proliferation was obtained with *Hevea* nodal cultures. The cell lines transformed with Superoxide dismutase and the cell lines and embryos transformed with sorbitol-6-phosphate dehydrogenase developed at the University of California in the collaborative research programme and brought to RRII were cultured for further development. The transgenic embryos with the gene, sorbitol-6-phosphate dehydrogenase were multiplied to large numbers and work is in progress to develop these embryos to plantlets. Two proteins were identified which are linked to tolerance to *phytophthora* infection. Attempts are on to characterise these proteins and clone the gene.

Dust formulation of a new systemic fungicide, Contaf was being tested against oidium and its efficacy is being evaluated. A detailed survey on the incidence of *Corynespora* disease in Karnataka State was undertaken and demonstration spraying was carried out in 25 ha. area. Based on the results of model biogas plant, recommendation was given to popularise the biogas production from rubber factory effluent. Suitable technique to remove hydrogen sulphide in biogas was developed. Daily weather data of RRII and other associate observatories were computerised.

In a cropping system model experiment where tuber crops such as Dioscorea, Amorphophallus and colocasea were planted as intercrops, a net profit of Rs.12,000 per hectare was obtained during the third year of planting of rubber. Logic was developed and calculations were made for a computer program for the Regional Research Station in Agartala to give fertiliser recommendation based on soil and leaf analysis to the North Eastern region. Discriminatory fertiliser recommendations were offered in respect of 970 fields in 30 large estates on the basis of analysis of 1125 soil and 970 leaf samples.

During the 4th year of tapping, 13 hybrid clones in a small scale trial exhibited superiority in yield over RRII 105; the standard heterosis estimates ranging from 4 to 52%. Mean yield over 8 years of tapping in the small scale trial laid out in 1977 showed that RRII 51 (64.10 g/t/t) recorded more yield than RRII 105 (58.10 g/t/t). Two clones developed by ortet selection from Tjirl seedling population showed more than 50%

improvement in yield over RR II 105 on test tapping in a small scale trial during the 6th year after planting.

Performance evaluation of the rubberised stretches of highways at Chennai and Kodaikkanal is continued in association with the Highway Research Institute. The rubberised strips at two locations in Chennai is observed to be superior to the control section. Observations are periodically made on the condition of rubberised roads at CES Chethackal. As part of the service to the rubber products sector 895 samples of unvulcanised and vulcanised rubber were tested for different parameters and the results were communicated to the industrial units. A training programme (theory & practical) was arranged for the M.Tech and B.Tech students of the Cochin University.

The already constructed data base on commercial yield of planting materials has been updated. A study focussing the emerging issues in the natural rubber sector in Kerala in the specific context of the ongoing liberalisation process has been finalised. The monitoring of the by-products sector has been continued. The production of rubberwood was estimated to be 1.27 million cu.m. The production of rubber seed soil and cake reached 2890 and 4710 tonnes respectively recording an increase of 10%.

Whether it is cold or drought stress, rubber plants are responding at the molecular level, in similar ways. Excess light becomes injurious to leaves exposed to these environmental stresses. Leaves under severe stress suffer from oxidative stress due to over production of active

species of oxygen resulting from excess light and photochemical reactions in the chloroplast.

Monthly cup lump yield and annual girth are being recorded from two Germe gardens and basic data to monitor growth and vigour are collected from the rest of the gardens. An experiment on screening for drought tolerance in the wild *Hevea* germplasm was initiated during the year. Nine wild genotypes selected for superior traits on the basis of studies carried out so far were used as male parents in a hybridisation programme initiated.

The research at 11 Regional Research Stations are continued on the region specific requirement. In the South Canara District of Karnataka incidence of leaf fall disease caused by *Corynespora* was observed. RRII 105 was severely affected. In the clone trial conducted in North Eastern region, RRIM 600 and PB 235 perform better than RRII 105 in growth and yield. Tapping of experimental trees in Mizoram and Orissa was started. At Dapchari silt pit were found to increase soil moisture. Under the World Bank Aided project 12 field experiments on low frequency tapping systems are in progress. The four experiments were continued in large estates for fixing values of latex diagnosis parameter for the clone RRII 105. In the 9 Regional Soil Testing Laboratories drc testing was introduced in addition to soil testing. A total of 10919 soil samples, 1631 leaf samples and 1512 latex samples were analysed. In the clone evaluation study at Keeripparai IRCA 111 continued to show highest girth.

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PART – VI
PROCESSING AND PRODUCT DEVELOPMENT

The Department of Processing and Product Development continued to provide support to Rubber Processing and Rubber Goods Manufacturing industries in factory design, product development, quality improvement and treatment and disposal of effluent from the processing factories. The activities were carried out through the following Divisions.

1. Engineering Division

The Division continued to provide engineering and technical assistance to Crumb Rubber factories established under Kerala Agricultural Development Project.

a) Projects Under Consultancy

Commissioned and formally inaugurated the Meenachil Rubber Wood Factory and commercial production of treated rubber wood and furniture started in full-swing. Engineering consultancy was given for setting up Malankara Rubber Wood Factory, MRM & PCS Crumb Factory Koodalloor. Consultancy was also given to M/s. Tellicherry Society for precured Tread Rubber Factory, Expansion of Cenex factory of M/s. Kasargod Society and for expansion of Intermix factory of the Kerala State Co-operative Rubber Marketing Federation.

b) Project Reports

Prepared project reports for 10 tons per day crumb rubber factory for M/s. Punalur Crumb factory and for the Ranni Marketing Society. Prepared project report for the creaming unit for M/s. Kozhencherry Society.

c) Smoke Houses

Inspected smoke houses built by M/s. Low Heat Driers, Kizhakkambalam, M/s. Dhoomitha, M/s. Emcees, Koothattukulam and M/s. Asok Engineers, Kothamangalam and recommended their approval.

A 200 kg smoke house was designed and is being built at RRIL.

d) RVNRL

Expansion of radiation source and addition of two more product vessels and allied works were completed. Scheme, schedule and tender documents were prepared for electrification of first floor of RVNRL building. Installed 10 KVA genset.

e) Rubber Wood Promotion

(i) Finalised MOU and articles of association with M/s. M/s. Andamans Timber Industries for The Model Rubber Wood Factory (Rubber Wood India Pvt. Ltd.)

(ii) Prepared colour photo posters and exhibition kit on rubber wood for display at exhibitions. Multi colour brochure on rubber wood was prepared. Participated in AIM – 97, New Delhi, Buildex 97, Bombay, India International Trade Fair, New Delhi, Impact 97 Calicut. Took a video advertisement film on rubber wood for telecast. Supplied rubber wood furniture to Kendriya Vidyalaya, Govt. Hospital, Thottakad, to CE unit and P & PD office.

2 Processing and Quality Control

Details of analytical work done by the quality control lab during the period are noted below.

The Laboratory has tested rubber & latex samples collected from different sources for 42,985 parameters. Out of these 8,123 parameters were tested on samples collected during inspections of specification officers. Received Rs.11.05 lakh for the different types of services provided to the industry.

Inspection

Conducted 650 inspections in rubber processing factories during the year to check specifications of the processed rubber and for advisory work.

3 Factory Management Division.

Three factories are functioning under Factory Management Division.

a) P.C.R.F

The factory procured 133 tonnes of latex/RSS and 166 tonnes of field coagulum during 1997-98 from different sources and produced 318 tonnes of different grades of ISNR. Processed rubber of 268 tonnes valued at about Rs.10 million was marketed. The value of raw material procured during the period is about Rs.8.99 million.

b) P.L.P.C

The PLPC processes speciality latex like low ammonia and specially preserved latex for the processing of RVNRL. The factory procured 161 tonnes of field latex from different sources. Processed 144 tonnes of centrifuge latex. Total sale of centrifuged latex and skim during the year was 184 tonnes for a value of Rs.8.51 million.

c) RVNRL

During the year the pilot plant was expanded with the assistance of World Bank. The total estimated investment was Rs.12.5 million and the expenditure incurred during the year was about Rs.8.4 million. 100 Kci Cobalt – 60 source was installed in October 1997 replacing the spent

source. Universal testing and UV visible spectrophotometer were imported and installed. The Gamma Chamber 5000 was also procured and installed. Experiments using the new facility are being conducted at the plant for standardisation of the raw material quality parameters for producing good quality RVNRL having properties comparable to those of conventional pre-vulcanised latex. During the year under report 2425 kgs. of RVNRL was processed at the facility of which 597 kgs. was sold earning a revenue of Rs.36,086/-

d) RP & MD Division

Provided assistance to Rubber Marketing Co-operative Societies, Rubber Producers' Societies and Rubber Processing Companies in establishing and modernising rubber processing facilities. Support was provided for improving marketing of their processed rubber. Rendered grading support to STC and RUBCO for the procurement of natural rubber at various purchase centres .

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PART – VII
TRAINING AND TECHNICAL CONSULTANCY

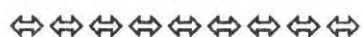
The Department of Training and Technical Consultancy continued to provide training support on various aspects related to rubber plantation, processing and products development and technical advice to rubber goods manufacturers in improving quality of the products and in reducing cost of production.

Training was organised for 168 batches of one to eighteen days' duration in which 3291 beneficiaries of growers and products manufacturers were involved. Seven batches of refresher training were also conducted for 167 inservice personnel to keep them posted with current developments in rubber production and processing technology. Under the World Bank assisted Rubber Development Scheme, a full-fledged Training Centre is being established and the construction work is going on.

The Consultancy Division developed 20 rubber products as requested by the clients. Quality certification of gloves and latex foam samples as per BIS specifications were issued. Rubber compounds and products from 300 units were tested for various technological parameters.

Prepared 14 project reports. Market survey reports were made on automobile rubber components, rubber play ball, SBP solvent and cycle tyres and tubes. Export assistance was provided to 289 exporters of various goods.

The Government of Kerala transferred to the Rubber Park India Pvt. Ltd, for the Rubber Park Project, 59 acres of land at Irapuram near Ernakulam. Equity to the tune of Rs.2 crore has been contributed for the project by the Rubber Board and the Kerala Industrial Infrastructure Development (KINFRA). Negotiations for financial support from financial institutions are at the final stage.



PART - VIII
FINANCE & ACCOUNTS

INTRODUCTION

The Finance & Accounts functions are mainly connected with designing and operating the Accounting System, preparing Budget, financial statements and reports, exercising budgetary control, effective funds management, establishing and maintaining systems and procedures, advising on financial propriety and regularity of transactions, supervising computer applications, overseeing cost control, evaluation of projects/schemes, handling tax matters etc. The following activities were undertaken during the year.

- 1) Preparation of Annual Budget, Performance Budget, Foreign Exchange Budget etc. and exercising budgetary control.
- 2) Maintenance of the accounts of the Board, preparation of Annual Accounts, presentation of the accounts for audit by the Accountant General, Kerala and the audited accounts to the Rubber Board/Ministry/Parliament.
- 3) Placing demands for grant from Government from time to time, receiving funds from Govt. and releasing for rubber promotional functions.
- 4) Advising on financial propriety and regularity of transactions and regulating payments.
- 5) Assisting the Cost Accounts Branch of the Ministry of Finance in ascertaining the cost of production and in fixing price of natural rubber.

- 6) Preparation of financial statements for project reports and schemes.
- 7) Dealing with Central Income Tax, Agricultural Income Tax and Sales Tax matters relating to the activities of the Board.
- 8) Coordinating the activities of the companies jointly promoted by the Rubber Board and the RPSs.
- 9) Computerised Data Processing in the field of financial accounting, payroll etc.
- 10) Preparation of detailed cost tables and other financial statements supporting the proposals presented to the World Bank Mission for Mid-Term Review and restructuring the World Bank Assisted Rubber Project.

Annual Accounts 1996-97

Statutory Annual Accounts for the year 1996-97 were prepared and presented to AG, Kerala within the stipulated time. The Audit Report and the Audited Accounts with the certificate received from the AG Kerala were forwarded to the Central Government.

Revised estimates 1997-98 and Budget Estimates 1998-99

The Revised Budget for 1997-98 and Budget Estimate for 1998-99 were prepared within the time frame and submitted to the Government. Budget sanctioned for the year 1997-98 both Plan & Non-Plan

put together was Rs.72.92 crore. As against this, the actual expenditure for the year was Rs.67.33 crore. The total budget estimate proposed for the year 1998-99 was Rs.102.58 crore against which the sanctioned budget is Rs.95.54 crore including the internal resources.

Funds Management

i) General Fund

Funds amounting to Rs.52.46 crore was received from Government as budgetary support including Rs.28.77 crore of Foreign Aid during the year 1997-98. The internal resource generation was about Rs.15 crore. The total expenditure for the year was Rs.67.33 crore (P).

ii) General Provident Fund/Pension Fund

The balance under the General Provident Fund as on 31st March, 1998 was Rs.705.27 lakh and that under Pension Fund Rs.623.93 lakh. The accumulations in the funds were invested to obtain optimum returns. The Board could declare interest on GPF accumulations @ 13.5% for the year 1997-98 and has maintained 2280 GPF accounts.

iii) Cost Accounts

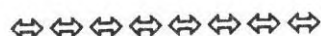
Continued to collect cost data for furnishing to the Government and to ANRPC. Cost tables for raising rubber plantations per hectare in different regions have been updated. Assisted the Cost Accounts Branch

of the Ministry of Finance in conducting a Cost Survey for revising the benchmark price of natural rubber. Detailed study on cost of production of planting materials in own nurseries for fixing the selling price of planting materials was conducted. Monitored the progress of rubber processing companies and the rubber trading companies in the organised sector of small rubber growers.

Various aspects relating to Sales Tax and Agricultural Income Tax were examined in detail and appropriate advice was given.

iv) ***Electronic Data Processing***

Processed pay roll of approximately 1200 employees and handled the financial accounting for the year. For the purpose of preparation of Budget, Nominal Rolls were prepared. GPF Account and Bankwise statement of pensioners were also prepared. Financial statements in respect of various Project Reports have also been prepared during the year.



The required statistical information for publishing the 'Rubber Statistical News' (monthly) was prepared. This publication covers trend in production, consumption, stock, import/export of natural rubber, synthetic rubber and reclaimed rubber, price of natural rubber and many other details. Continued to sell the publication the 'Indian Rubber Statistics' Vol.22 (1997) which was prepared using in-house computer facilities. This covers all latest information connected with production and consumption of natural, synthetic and reclaimed rubber, distribution of rubber manufacturing units, dealer network, diverse rubber products, labour employment and world rubber statistics.

Statistical information was furnished to various organisations connected with the rubber industry. Materials were prepared and furnished for answering Parliament questions and Legislative Assembly interpellations pertaining to the import/export, production, price, etc. of natural rubber and the various aspects of rubber industry.

To ascertain the production of various grades of rubber, installed capacity etc. during 1997-98, annual reports were collected from processors of centrifuged latex, block rubber, PLC and crepe mills.

The census work initiated in 1988 was continued in the reporting period also for which 180 Enumerators were temporarily engaged for carrying out the field work.

2) *Planning*

Annual Plan proposal on rubber for 1998-99 was prepared and forwarded. Progress of review of Plan Schemes under action Plan 1997-98 for quarter ending June 1997, September 1997 and December 1997 and for the year 1997-98 were prepared and submitted for forwarding to the Ministry. A comprehensive note on achievements of the Board and review of rubber plantation industry was also prepared and submitted to the Additional Secretary of the Ministry.

3) *Supply of information to World Organisation*

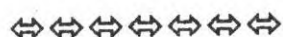
Continued to supply information about the NR industry in India to world organisations like the Association of Natural Rubber Producing Countries (ANRPC), Kuala Lumpur, Malaysia and International Rubber Study Group (IRSG), London.

India hosted the second meeting of the Expert Group on 'Project on Promotion of NR as an Environment-friendly Raw Material and Renewable Resource' at Kochi (Kerala) from 8th to 10th April 1997. Delegates from India, Malaysia, Sri Lanka and Thailand attended the meeting. A seminar on 'Modernising of Rubber Small holding Sector' organised by the ANRPC was held in Indonesia from 8th to 10th July 1997. Dr. AK Krishnakumar, Rubber Production Commissioner and M.J Licy, Scientist from RRII participated in the seminar on behalf of the Rubber Board. The Ninth meeting of the "ANRPC Committee on NR Statistics" was held in Vietnam from 22nd to 24th July 1997. Shri. G. Subbrarayalu, Joint Director (S&P) represented India at the meeting.

The sixth meeting of “ANRPC Co-ordination Committee on Production and Marketing Strategies” was held in Thailand from 5th to 7th August, 1997.

The twenty first assembly of ANRPC and Twentieth meeting of Executive Committee were held in Colombo, Sri Lanka from 9th to 11th November 1997. Shri. K.J. Mathew, Chairman, Rubber Board and Shri. Prabhat Singh, Under Secretary, Ministry of Commerce attended the meetings. The 101st Group meeting of Member Governments of the IRSG were held in Liverpool, UK from 9th to 13th June 1997. Shri. K.J. Mathew, Chairman, Rubber Board was the leader of the Indian delegation.

The brief for the delegation for all the above meetings and country reports on India were prepared for presentation by the delegation. The 3rd meeting of the Expert group on “Project on promotion of natural rubber as an environment-friendly raw material and a renewable resource” was held in Thailand on 8th & 9th August 1997. The Third workshop on SALB and Twelfth meeting of ANRPC Technical Committee on Pests and Diseases of Hevea were held in Brazil from 26th to 29th August 1997. These two meetings were attended by Scientists from the Rubber Research Institute of India.



PART – X
LICENSING AND EXCISE DUTY DEPARTMENT

The Rubber Board has been entrusted with the responsibility of assessing and collecting the duty of excise (cess) on all rubber produced in India under Section 12 of the Rubber Act 1947. The cess is collected on the quantity of rubber purchased or otherwise acquired by the manufacturers who consume it. Every manufacturer has to obtain a licence from the Board to acquire natural rubber and furnish to the Board monthly and half yearly returns showing the quantity of rubber acquired and consumed. It is on the basis of the purchases reported in their half yearly returns that the assessment of cess is normally made.

I) Issuance of Licence

a) Issuance of licence for the year 1997 – 98

The function of issue of licence includes the work of issue of new licences to prospective manufacturing units and renewal of the existing licences for the subsequent years. The details of licences issued during 1997-98 are furnished below.

Fresh licence	: 480 Nos
Renewal of licences	: 5127 Nos
TOTAL	5607 Nos.

During the period, licences in respect of two manufacturers were suspended on account of serious irregularities and malpractices detected in their business. At the request of the concerned units, ten manufacturers licences were cancelled. Thus, the total number of licensed manufacturers as at the end of 31.03.98 was 5595. The state-wise distribution of licensed manufacturers as at the end of 31st March 1998 is detailed hereunder.

<i>SLNo</i>	<i>Name of State/Union Territory</i>	<i>No. of Units</i>
01	Kerala	1021
02	Maharashtra	629
03	Punjab	591
04	Tamilnadu	545
05	West Bengal	508
06	Uttar Pradesh	475
07	Gujarat	432
08	Delhi	309
09	Haryanan	313
10	Karnataka	258
11	Andhra Pradesh	161
12	Rajasthan	98
13	Madya Pradesh	91
14	Pondicherry	36
15	Bihar	34
16	Goa, Dadra, Nagarhaveli & Daman	31
17	Chandigarh	20
18	Orissa	16
19	Himachal Pradesh	08
20	Jammu & Kashmir	06
21	Assam	06
22	Tripura	06
23	Manipur	01
Total		5595

List of the licensed manufacturers was prepared and supplied.

b) Issuance of licence for the year 1998 - 99

Licence in respect of 3,600 existing manufacturers was renewed and 35 new manufacturing units were given licences for the year 1998-99.

2) Registration of letters of authorisation to purchase rubber by dealers on behalf of manufacturers as agents.

Rubber manufacturers issued 1410 letters of authorisation in favour of their agents and dealers to purchase and despatch rubber on their behalf. These were registered.

3) Registration of Branch/Purchase Depot

On the basis of the applications received from the manufacturers, 2 new branches/purchase depot were registered.

4) Letter of authorisation to purchase rubber

Special authorisations to 11 Organisations/Institutions to acquire rubber for experimental purposes were issued in lieu of regular licence after collecting the relevant cess in advance.

5) **Assessment of duty of excise (cess) on rubber**

Total assessment of cess on rubber for the year was Rs.4,812.51 lakh as against Rs.4,660.31 lakh during the previous year. Total number of half yearly returns (Form 'M') collected from the manufacturers during the year was 10,613. Additional assessment of cess on a quantity of 3,704 MT of rubber was made on the basis of the reports of the inspecting officers.

6) **Collection of duty of excise (cess) on rubber**

The duty of excise (cess) on rubber collected during the year was Rs.4,818 lakh against last year's collection of Rs.4,699.66 lakh. Out of this, a sum of Rs.4,736 lakh was remitted to the Consolidated Fund of India after deducting the cost of collection.

The aggregate of licence fee and service charge collected during the year was Rs.11.18 lakh. The penal interest collected on belated remittance of cess was to the tune of Rs.11.61 lakh.

II) **Licensing of rubber dealers and processors**

The dealer's licences and processor's licences were issued under Rule 39 and Rule 39 (A) of the Rubber Rules, 1955.

1) **Strength of dealers and processors**

Licensed dealers at the end of the year was 10,756 as against 10,117 dealers at the end of the last year. Among them 1,278 were new

dealers. Licensed processors at the end of the year was 156, including 4 new processors. Consent for setting up 4 new processing units was given during the year.

2) **Distribution of dealers and processors.**

a) *Statewise distribution of licensed dealers and processors is given below.*

Sl.No.	Name of State	No.of dealers	Processors
01	Kerala	9453	136
02	Andhra Pradesh	03	-
03	Assam	17	
04	Andaman & Nicobar	09	-
05	Bihar	06	-
06	Chandigarh	07	-
07	Delhi	168	-
08	Goa	02	-
09	Gujarat	34	-
10	Haryana	43	-
11	Jammu & Kashmir	01	
12	Karnataka	124	7
13	Madhya Pradesh	12	-
14	Maharashtra	102	-
15	Meghalaya	06	-
16	Orissa	02	-
17	Punjab	207	-
18	Rajasthan	13	-
19	Tamilnadu	223	12
20	Tripura	138	1
21	Uttar Pradesh	79	-
22	West Bengal	103	-
23	Pondicherry	02	-
24	Himachal Pradesh	02	-
TOTAL		10756	156

b) Districtwise distribution of dealers in Kerala

Sl.No.	Name of District	No.of dealers
01	Alappuzha	130
02	Ernakulam	1295
03	Idukki	473
04	Kannur	423
05	Kasaragod	127
06	Kollam	1110
07	Kottayam	2583
08	Kozhikode	227
09	Malappuram	415
10	Palakkad	314
11	Pathanamthitta	1256
12	Thiruvananthapuram	870
13	Thrissur	162
14	Wynad	68
TOTAL		9453

3) **Renewal of licences for 1998-99**

Licences in respect of 1868 dealers whose validity expired on 31.03.1998 were renewed. Similarly, 26 licences of processors whose validity expired on 31.03.1998 were also renewed. In addition 227 branches were registered with validity beyond 1.4.1998.

4) **Suspension/Revocation and cancellation of licence of dealers/processors.**

During the year, 191 licences of dealers and 4 licences of processors were cancelled. Besides, 12 licences of dealers and 6 of the processors were suspended for violation of the provisions of the Rubber Act & Rubber Rules. However, licences of 2 dealers and 5 processors were reinstated on furnishing satisfactory explanations for the lapses noticed.

5) **Registration of Branches**

During the year under report, registration was granted to 397 branches of dealers/processors. As on 31.3.1998, 1062 branches of dealers/processors were in operation.

6) **Registration of agency of dealers/processors**

Letters of authorisation issued by 686 dealers to buy and despatch rubber through their agents were registered during the year.

7) **Collection of duty of excise (cess) on rubber from dealers and forfeiture of Bank guarantee.**

A sum of Rs.28 lakh was collected from dealers towards cess on rubber involved in their irregular transactions. An amount of Rs.20,000 was realised on forfeiture of Bank Guarantee for violations of the conditions of the licence.

Besides, an amount of Rs.48.88 lakh was collected towards licence fee and service charge.

8) **Publication of list of rubber dealers**

List of dealers holding valid licences was drawn and supplied to offices and needy persons.

III. Market Intelligence

Detection of bogus/unlicensed dealing in rubber, arranging surprise inspection/squad inspection of the business premises of the dealers for verification of their books of accounts for correctness of physical stock, cross verification of the statutory returns filed by dealers/manufacturers and processors for ascertaining the correctness of the quantity of rubber acquired, road checking and surprise visit to checkpoints and Railway Parcel Office to prevent evasion of cess on rubber and thereby improve cess collection formed the important functions in market intelligence. Inspections were also conducted for ascertaining the suitability of the applicants and their business premises to issue licence to deal in rubber, registration of branches of the dealers

and approval of new/additional premises and for issue of special authorisation for field latex collection.

Three inspection squads which functioned from North Zone (Kozhikode), Central Zone (Kottayam) and South Zone (Thiruvananthapuram) and the Inspectors (Market Intelligence) helped to a great extent in arresting illicit trade in rubber and thereby improve the cess collection. The inspections also helped in collecting monthly returns from a large number of rubber dealers.

The road checking by the squad during night led to detection of unauthorised godowns and unearthing of unauthorised stock of rubber. Since the registration of police cases was not practical and the delinquent dealers agreed to compound the offence by remitting a sum of Rs.70,000/- the matter was not further pursued. The road checking/checkpost inspection further helped in detecting the malpractices of 3 dealers which facilitated in realising a sum of Rs.1,28,000/- towards cess involved in their unaccounted transactions.

The road checking of the vehicles in the National Highway helped in detecting transportation of excess quantity of 2000 kg of rubber each in 3 vehicles which carried rubber consigned by a leading tyre company in India. Action was taken to prosecute the drivers concerned for the unlawful possession of rubber apart from forfeiture of 6,000 kg of rubber under Section 16 (2) of the Rubber Act, 1947. Detection of transportation of RSS rubber in the guise of skim crepe rubber by one

dealer and large scale black marketing in cenex by a processor was another landmark of the inspection squad. On the basis of serious irregularities/malpractices detected by the Inspection Squad, the licence in respect of 5 dealers and 1 processor were suspended.

(i) Court Cases

On the basis of complaint filed before the Hon'ble Judicial Magistrate Court, Ernakulam against a person for illicit despatch of 5,000 kg of rubber by train in CC No.833/95, the accused was sentenced to pay a fine of Rs.2,250/- under Section 26 of the Rubber Act, 1947. The rubber in question was also ordered to be forfeited to the Govt. of India under Section 16 (2) of the Rubber Act.

A complaint was filed before the Hon'ble Judicial Magistrate Court, Nagercoil against transportation of 2 truck loads of rubber in contravention of the provisions of the Rubber Act.

Another complaint was filed before the Superintendent of Police, Kottayam against transportation of 10 tonnes of rubber under forged documents by a dealer.

(ii) Checkposts

In order to strengthen surveillance on inter-state movement of rubber, regular checking of the documents accompanying the rubber consignments were done at the 3 checkposts at Walayar in Palakkad

District, Bengra Manjeswaram in Kasaragod District of Kerala and Kavalkinar in Thirunelveli District of Tamilnadu.

The surveillance exercised through the 3 checkpoints helped in detecting illicit transport of rubber. During the year, the officials at Walayar and Manjeswaram checkpoints detained 15 consignments as they were not accompanied by requisite valid documents/declaration prescribed by the Board/validity of Form 'N' accompanying the consignment expired. Of this, 13 were allowed to cross the border after the production of valid documents and giving satisfactory explanation. A sum of Rs.6,250/- was realised in the case of 2 consignments as the explanations furnished by the concerned consignors were not satisfactory. A sum of Rs.27,000/- was realised from 3 consignors who came forward with the plea that the original copy of the Form 'N' declaration was lost.

As per the daily statement received from the Checkposts Walayar, Manjeswaram and Kavalkinar 51,074 consignments of rubber had passed through the 3 Checkposts during the period under report. The number of consignments passed through each of the checkpoint are as shown below.

<u>Name of Checkpost</u>	<u>No.of consignments</u>
Walayar (Palakkad)	39569
Manjeswaram (Kasaragod)	7437
Kavalkinar (Thirunelveli)	4068
TOTAL	<u>51074</u>

(iii) Achievements

The surprise inspections at the business premises of rubber dealers and road checking helped in detecting serious irregularities in 324 cases. This helped in realising a sum of Rs.9,72,683/- towards cess on unaccounted quantity of rubber. As a result of cross checking, monthly returns Form 'N' declarations of certain dealers and manufacturers, unaccounted/unauthorised transactions in rubber was detected and a sum of Rs.7,66,274/- was collected. Thus, the total amount collected by way of cess on rubber on account of malpractices/unaccounted/irregular transactions in rubber by dealers was Rs.17,38,957/-.

The Licensing and Cess Collection machinery was restructured into a new Department, viz. Licensing & Excise Duty Department and brought under Director (L&ED) from 12th March, 1998.

SUB/LIAISON OFFICES

There are 8 Sub Offices in the major consuming centres outside Kerala; at Ahmedabad, Bangalore, Bombay, Calcutta, Jullundur, Kanpur, Madras and New Delhi. These offices assessed suitability of applicants to hold licence to deal in rubber or acquire rubber for rubber goods manufacture. The purchases made by the rubber manufacturers and the stock held by the rubber dealers were verified at random. The books of accounts and records of the licence holders were also verified to ensure that all rubber procured were brought to book for subjecting to assessment of cess. Surprise inspections were also conducted to detect unlicensed dealing in rubber and unlicensed manufacturing of rubber goods in contravention of the provisions of the Rubber Act & Rules in order to prevent possible loss of revenue towards cess.

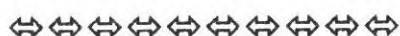


TABLE-1

PART – XI
STATISTICAL TABLES

PRODUCTION, IMPORT, EXPORT & CONSUMPTION OF NR

(Tonnes)

Month	Production	Import*	Export	Consumption (Indigenous & imported)
April 1997	41,080	2,000	149	44,800
May „	47,460	1,479	68	48,600
June „	40,180	3,076	81	46,050
July „	36,990	3,018	162	48,320
August „	43,440	2,607	28	49,810
September „	55,980	2,190	99	48,455
October „	59,320	2,151	194	47,450
November „	65,255	1,059	39	48,150
December „	71,420	3,210	167	49,350
January 1998	64,785	2,494	64	48,310
February „	28,260	2,693	261	45,275
March „	29,660	3,412	103	47,250
Total	583,830	29,389	1415	571,820

*Source: DGCI & S, Calcutta

Table-2

STOCK OF NATURAL RUBBER AT THE END OF EACH MONTH
(Tonnes)

Month	Growers,dealers & processors	Manufacturers	Total (rounded)
April 1997	68,890	36,550	105,440
May „	70,220	35,490	105,710
June „	67,205	35,630	102,835
July „	64,150	30,265	94,415
August „	62,855	27,765	90,620
September „	70,445	29,790	100,235
October „	81,500	32,510	114,010
November „	94,285	37,850	132,135
December „	120,925	36,025	156,950
January 1998	137,295	38,560	175,855
February „	122,320	39,070	161,390
March „	109,225	38,075	147,300

TABLE - 3

PRODUCTION, IMPORT & CONSUMPTION OF SYNTHETIC
RUBBER
(Tonnes)

Month	Production	Import*	Consumption
April 1997	4,208	7,875	12,005
May „	6,121	6,516	13,100
June „	6,157	8,089	12,915
July „	5,693	8,574	13,910
August „	7,342	5,745	14,010
September „	6,097	7,582	14,225
October „	6,174	5,429	14,325
November „	6,287	5,096	13,825
December „	7,199	4,847	14,025
January 1998	5,645	5,231	13,175
February „	5,121	5,890	12,375
March „	5,949	7,229	13,025
Total	71,993	78,103	160,915

*Source: DGCI & S, Calcutta.

TABLE – 4**PRODUCTION & CONSUMPTION OF RECLAIMED RUBBER****(Tonnes)**

Month	Production*	Consumption
April, 1997	5,615	5,525
May „	5,700	5,650
June „	5,760	5,665
July „	5,810	5,725
August „	6,215	5,740
September „	6,005	6,165
October „	5,820	6,015
November „	5,735	5,945
December „	5,905	6,035
January 1998	5,875	5,885
February „	5,650	5,835
March „	5,750	5,900
Total	69,840	70,085

- Indigenous purchase by manufacturers.

TABLE - 5

MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NATURAL RUBBER IN INDIA

(Rs/Quintal)

Month	RSS-1	RSS-2	RSS-3	RSS-4	RSS-5	Ungraded	ISNR-5	ISNR-10	ISNR-20	ISNR-50
April 1997	4609	4528	4319	3980	3935	3842	4260	4245	3880	3760
May "	4977	4758	4699	4483	4246	4110	4795	4450	4130	3945
June "	4825	4600	4475	4224	4104	3973	4625	4405	4185	3965
July "	4613	NT	4020	3937	3785	3621	4269	3955	3778	3495
August "	4812	4668	4496	4298	4075	3903	4558	4409	4093	3933
September "	4541	NT	4102	3892	3758	3549	4216	3965	3705	3531
October "	4100	3811	3637	3495	3410	3264	3849	3618	3250	3120
November "	3925	3750	3473	3389	3290	3103	3560	3506	3146	NT
December "	3410	NT	3088	2970	2790	2575	3213	3066	2640	2592
January 1998	3356	3225	2938	2890	2749	2566	3118	2913	2644	2460
February "	3115	3000	2808	2700	2584	2453	2873	2729	2602	2425
March "	3100	3000	2750	2700	2616	2541	2919	2718	2593	2275
Yearly average (1997 - 98)	4115	3927	3734	3580	3445	3292	3855	3665	3387	3227

TABLE - 6MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NR IN KULA LUMPUR MARKET

(Rs/Quintal)

Month	RSS - 1	RSS - 2	RSS - 3	RSS - 4	RSS - 5	SMR - 5	SMR - 10	SMR - 20
April 1997	4129	4093	4086	3935	3863	4036	3938	3909
May "	3956	3927	3920	3770	3698	3856	3752	3727
June "	3968	3940	3933	3783	3712	3802	3697	3669
July "	3349	3321	3314	3168	3084	3437	3366	3338
August "	3281	3262	3256	3118	3052	3359	3301	3275
September "	3169	3133	3127	3000	2939	3259	3180	3157
October "	3155	3097	3091	2976	2920	3252	3164	3142
November "	3094	3032	3026	2910	2856	3279	3135	3113
December "	2832	2642	2637	2527	2475	3029	2841	2820
January 1998	2630	2431	2426	2332	2287	2843	2630	2612
February "	3191	2968	2963	2856	2805	3514	3285	3264
March "	2937	2873	2867	2755	2703	3119	2997	2976
Yearly Average (1997 - 98)	3308	3227	3221	3094	3033	3399	3274	3250

ANNEXURE I

LIST OF MEMBERS OF THE RUBBER BOARD AS ON 31.03.1998

- | | | |
|-----------|---|--|
| 01 | Shri. KJ Mathew IAS | Chairman, Rubber Board |
| 02 | Shri. V Krishnamoorthy IAS
Agricultural Production
Commissioner, Kerala | Nominated by the Govt. of
Kerala to represent that State. |
| 02 | Shri. PK Chithra Bhanu
Chairman, PCK Ltd
Kottayam. | Nominated by the Govt. of Kerala to
represent that State. |
| 04 | Shri. KS Sripathi
Secretary to the Govt. of
Tamil Nadu,
Environment & Forest Dept.
Chennai | Nominated by the Govt. of
Tamilnadu to represent them. |
| 05 | Shri. George John
Kailash Rubber Company Ltd,
Ancheril Bank Building,
Kottayam. | Elected by the Large Growers in the
State of Kerala. |
| 06 | Shri. K Jacob Thomas
Managing Director
Vaniampara Rubber Ltd,
Kerala. | - do - |
| 07 | Shri. MD Joseph
Manniparambil
Kanjirappally
Kerala. | - do - |

- 08 **Shri. S Ramachandran**
Vaikundom Rubber Company
Pattom Palace (PO)
Trivandrum *Elected by the Large Growers in the State of Tamil Nadu.*
- 09 **Vacant** *(Elected by Lok Sabha)*
Member elected under Section 4(3)
(e). They shall hold Office for a period of 3 years or till they cease to be Member of Parliament whichever is earlier
- 10 **Vacant** - do -
- 11 **Shri. Vayalar Ravi MP**
15, Pandit Pant Marg
New Delhi - 110 001. *(Elected by Rajya Sabha)*
Member, elected under section 4 (3)
(e). He shall hold Office for a period of 8 years or till they cease to be Member of Parliament whichever is earlier.
- 12 **Prof. NM Joseph**
Neendukunnel
Arunapuram (PO)
Pala. *Nominated by the Central Govt. to represent small growers of Kerala.*
- 13 **Shri. KG Ravi**
Indira Bhavan
Vellayambalam
Trivandrum. - do -

- | | | |
|----|---|--|
| 14 | Shri. Kanam Rajendran
Kanam (PO)
Kottayam | - do - |
| 15 | Shri. Suresh Elwadhi
Chairman
All India Rubber Industries
Association
Phelps Building, 2nd Floor,
9 -A. Connaught Place
New Delhi - 110 011 | <i>Nominated by the Central
Govt. to represent rubber goods
manufacturers.</i> |
| 16 | Vacant | - do - |
| 17 | Shri. Pappanamkode Unni
Pappanamkode House,
Industrial Estate,
Trivandrum | <i>Nominated by the Central Govt. to
represent Labour interests.</i> |
| 18 | Shri. C Anantha Krishnan
Tamil manila Congress (M)
Kanayakumari (Dist.)
Kulasekharam (PO)
Tamil Nadu | - do - |
| 19 | Shri. PD George
Raju Bhavan
Kota (PO), Chenganoor
Alleppy (Dist.) | - do - |
| 20 | Shri. P Lalaji Babu
CITU State Committee Office
Deshabhimani Road
Thampanoor, Trivandrum. | - do - |

- | | | |
|----|---|---|
| 21 | Shri. PJ Joseph
6/379, Bank Road, Kainady,
Kozhikkode. | <i>Nominated by the Central
Govt. to represent the
other interest.</i> |
| 22 | Shri. K Joseph Monippally
Advocate, Kakkanadu (PO)
Kochi. | <i>- do -</i> |
| 23 | Shri. K Suresh Ballal
Ballal Bagh. Mangalore,
Karnataka | <i>- do -</i> |
| 24 | Shri. K Pankajakshan
Indu Mahal Pettah (PO)
Trivandrum. | <i>- do -</i> |
| 25 | Dr. AK Krishnakumar
Rubber Production
Commissioner
Rubber Board, Kottayam. | <i>(Ex – Officio)</i> |
| 26 | Vacant (Executive Director) | |
