

# ANNUAL REPORT

FOR  
THE YEAR 2000-2001



**THE RUBBER BOARD**

(Govt. of India, Ministry of Commerce and Industry)

KEEZHKUNNU, KOTTAYAM-686 002  
KERALA STATE



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***ANNUAL REPORT ON THE WORKING  
OF THE RUBBER BOARD DURING  
2000-2001***

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

Natural rubber often referred to as nature's most versatile raw material, is obtained from the latex produced by "Hevea brasiliensis". This raw material finds its use in about 35,000 products in India and contributes substantially to the industrial and economic development of the country. Considering the strategic importance of this raw material, the Government of India constituted the Rubber Board under the Rubber Act 1947 as a body corporate with the primary objective of developing the rubber plantation industry in the country. Right from its inception, the Board attached thrust to research and development and the Board established the Rubber Research Institute of India (RRII) in 1955 for carrying out research on biological and technological improvement on rubber. Simultaneously, the Board also established a strong development and extension net work and as a result, the rubber plantation sector achieved an impressive all-round growth in terms of expansion of area, increase in production and productivity.

The Rubber Research Institute of India has made significant contributions by breeding and releasing the popular clone RRII 105, one of the highest yielding clone in the world. The RRII also evolved agro-technologies on various cultural practices on 'Hevea'. The Institute made substantial contribution to improving the processing of rubber and evolving speciality rubbers which can effectively substitute the synthetic rubbers. Research on special environment protection systems to check pollution in processing factories, energy saving mechanisms for processing, processing of rubber wood, ancillary income generation activities and rubber based cropping system has yielded useful results.

The Board has been encouraging scientific planting of rubber right from its inception and since the sixth plan period, an integrated scheme for development of rubber plantations namely the Rubber Plantation Development Scheme for promoting

both new planting and replanting has been in operation and this is rated as one of the highly successful schemes. Besides, development and extension support is given to growers for increasing productivity, improving the quality through individual as well as community efforts, facilitating formation of grassroot level organisations of growers and empowering them to ensure sustainable development through rubber cultivation. The development of rubber plantation in non-traditional region especially in north-eastern states has also achieved a significant growth rate where rubber development is taken up adopting an integrated approach. Special mention needs to be made about the rubber based settlement programmes for tribal shifting cultivators in the north-east and in other states such as Orissa, Andhra Pradesh, Karnataka and Kerala ensuring overall socio-economic development/eco restoration.

The Board has also been adopting several measures to promote diversified uses of natural rubber by supporting rubber products manufacturing sector, extending assistance in skill upgradation and infrastructure development.

### **Performance during 2000-01**

The production of NR during 2000-01 was 630,405 tonnes as against 622,265 tonnes during 1999-2000. While production during 1999-2000 registered a growth rate of 2.8% over the production of 1998-99, it declined to 1.3% during 2000-01. Neglect of timely cultural practices in the dominant small holdings due to low prices in the last four years coupled with adverse climatic conditions is the main cause for the decline in production.

The consumption growth of NR also showed a declining trend. The total consumption of NR during 2000-01 was 631,475 tonnes, registering only 0.5% growth, compared to the consumption of 628,110 tonnes during 1999-2000 at 6.2% growth. During 2000-01 NR consumption in the tyre sector recorded a negative growth of -1.7% as against 5% anticipated and 10.6% achieved during 1999-2000.

### **Price**

During the year under report, the yearly average price of RSS 4 grade NR was Rs.3036/- per quintal as against Rs.3,099/- per quintal in the previous year.

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## **PART - II CONSTITUTION AND FUNCTIONS**

### **CONSTITUTION OF THE BOARD**

As per Section 4 (3) of the Rubber Act 1947 the Board shall consist of -

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

The position of Executive Director has not been filled up so far.

List of members of the Board as on 31.3.2001 is given at the end of this report.

### **Functions of the Board**

The functions of the Board as laid down in Section 8 of the Rubber Act 1947 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/growers in improved methods of planting, cultivation, manuring and spraying;

- c) the supply of technical advice to rubber growers;
- d) improving the marketing of rubber;
- e) the 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 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.

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.

Shri KG Ravi, representing the small rubber growers in the Board was elected as Vice- Chairman on 30.9.2000, for the period upto 29/9/2001.

Shri SM Desalpine IAS, took over charge as Chairman of the Board on 6<sup>th</sup> August 2000 from Shri KJ Mathew IAS.

### **MEETINGS OF THE BOARD AND ITS COMMITTEES**

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

- a) Board meetings
- 139<sup>th</sup> meeting on 07.04.2000  
140<sup>th</sup> meeting on 30.09.2000  
141<sup>st</sup> meeting on 21.12.2000
- b) Committee meetings
- Combined meeting of Executive /Market Development Committee on 18.11.2000, 18.12.2000 and 23.2.2001.
- Planting Committee on 11.12.2000.
- Labour Welfare Committee on 25.11.2000

## **ORGANISATIONAL SET UP**

The activities of the Rubber Board are 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. The Department of Research, Department of P&PD and the Department of Training & Technical Consultancy are located at the Rubber Research Institute of India campus at Kottayam – 686 009.

There are nine 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, 41 Regional Offices, 1 ADO's Office, 189 Field Offices, 12 Regional Nurseries and 23 Tappers' Training Schools located at different rubber growing regions.

The Research Department runs two Regional Research Stations in Kerala and a Regional Station each in Tamilnadu, Karnataka, Maharashtra, Orissa, West Bengal, Assam, Mizoram, Meghalaya and Tripura. The Pilot Block Rubber Factory located at Kottayam, the Pilot Latex Processing Factory located at the Central Experiment Station at Chethackal and the Pilot Plant for Radiation Vulcanisation of Natural Rubber latex at Kottayam are run by the Department of Processing and Product Development.

The Chairman exercises administrative control over all the Departments and Offices of the Board. The total number of Officers and staff under the Board as on 31.3.2001 was 2280 consisting of 220 Group 'A' Officers, 611 Group 'B' Officers, 1231 Group 'C' staff and 218 Group 'D' staff. 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.

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## **PART III RUBBER PRODUCTION**

Planning and implementation of various schemes aimed at increasing natural rubber production in the country, based on the strategies adopted by the Board, is the main function of the Rubber Production Department. Major programmes formulated and implemented by the department are :

- 1) Encouraging replanting of old and uneconomic Rubber plantations with high yielding varieties.
- 2) Assisting newplanting, by providing technical support as well as financial incentives to the new entrepreneurs, which would result in expansion of rubber planted area .
- 3) Assisting the rubber planters by providing technical and financial assistance to increase productivity of the existing plantations through adoption of scientific agromanagement practices , upgrading the quality of produce by better post harvest handling and processing.
- 4) Empowerment of the small holding sector by forming farmer groups namely, Rubber Producers Societies (RPSs) and equipping them to function as self help groups of small growers . These RPSs are helped to undertake extension services and other development activities of the Board as part of devolution of extension functions; and
- 5) Empowerment of women in the rubber plantation sector by providing training on various vocational activities and income generating programmes.

The Department also conducts various training programmes for farmers , tappers and workers in the field.

In order to achieve these objectives, the Department is implementing various schemes which provide for technical as well as financial assistance to the growers. A series of educational training and visit programmes for needy rubber growers are being arranged by the Dept. The print media, audiovisual equipments, films on technical subjects etc. are being extensively used in the technology dissemination process. Demonstration of scientific plantation practices in farmers' fields is another programme of the Dept. Specialized schemes for pollution control in rubber plantations by

generation of bio gas from rubber effluents, the gas being used for drying rubber sheets resulting in saving of fuel wood, bee keeping in rubber plantations for additional income generation etc., are also being formulated and implemented by the Dept. Certain identified women development activities aimed at empowerment of the women engaged in rubber plantation and allied areas are also being undertaken by the Dept. The department has also implemented a programme for identification and supporting selected well functioning Rubber Producers' Societies (RPSs) as technology transfer centres also known as model RPSs. These RPSs are financially and technically assisted to develop infrastructure required for functioning as model RPSs for the neighbouring societies to emulate. These efforts help in achieving a sustainable development in the rubber plantation sector. As a recognition and encouragement to rubber growers and Rubber Producers Societies, the Board has instituted one award each for the best rubber grower and the best RPS.

Based on the specific requirements of the growers in the non-traditional rubber growing areas, separate schemes were formulated exclusively for operation in the non-traditional region. Similarly, certain specific projects such as Block Rubber Plantation Project and Tribal rubber plantation project and schemes to provide assistance for boundary protection, additional incentive for planting materials etc. are also being implemented exclusively for the benefit of S.C \ S.T. category of growers. Upto September 2000 when the World Bank Assisted Rubber Project was closed, funds for most of the schemes were derived from the project. Thereafter, all the activities of the Dept. are funded by the Govt. of India as budgetary support to the Board.

A gist of the various projects \ schemes operated through the Dept. and the progress achieved during the financial year 2000 - 01, are given below.

- **Rubber Plantation Development Scheme** – This is the most important scheme of the Board and was mostly funded from World Bank project until the project was closed. Details regarding number of applications received, area to be planted, number of permits issued, amount of subsidy disbursed etc. during 1999-2000 and 2000-01, are as follows.

DETAILS	1999-00	2000-01
NO. OF APPLICATIONS	18229	11921
AREA AS PER APPLNS. (HA.)	13392	9427
NO. OF PERMITS ISSUED	13485	8944
PERMITTED AREA (HA.)	8482	6303
AMOUNT DISBURSED AS SUBSIDY	Rs. 19.99 crore	Rs. 14.45 crore

Field inspection and processing of applications are continuing and permits will be issued in all eligible cases within the next few months as soon as the farmers complete the stipulated items of work in their fields. Due to low price of rubber, there was a decline in the planting tempo during this year.

- **Tribal Rubber Plantation Project** – This project is aimed at rehabilitation of selected tribal families of Kerala and is funded out of the sanctioned budget of the Board and contribution from Govt. of Kerala. Progress of implementation of the project is indicated below.

Area planted under the project during 2000-01 - 216 ha.

Cumulative area planted under the project upto 2000-01 - 1899 ha.

- **Block Rubber Plantation Project** – This is formulated for the economic settlement of SC \ ST category of people in non - traditional areas who practice shifting cultivation. This project is currently in operation in Tripura, Orissa, Andhra Pradesh and Karnataka, with financial support from the concerned State Governments. Details of planting under this project are as follows.

STATE	PLANTING IN 2000-01 (Area in hectares)	CUMULATIVE TOTAL UPTO 2000-01 (Area in hectares)
TRIPURA	145	2198
ORISSA	59	135
ANDHRA PRADESH	4	76
KARNATAKA	102	159
<b>TOTAL</b>	<b>310</b>	<b>2568</b>

Implementation of the proposed Block Rubber Plantation Project in Karbi Anglong district of Assam is still pending because the Karbi Anglong District Council could not yet identify and hand over the required land.

- **Insurance of Rubber Plantations** – Rubber plantations are insured against natural calamities. Small plantations coming under rubber plantation development scheme are compulsorily insured. Insurance of mature plantations and also immature plantations coming outside the Rubber Plantation Development Scheme, is optional to the growers. This scheme is operated with the support of nationalised insurance companies. Details of plantations insured and compensation paid are given below.

ITEM	2000-01	CUMULATIVE TOTAL UPTO 2000-01
IMMATURE AREA INSURED (HA.)	4584	83593
MATURE AREA INSURED. (HA.)	685	10637
COMPENSATION PAID ( Rs. LAKHS.)	33.83	166.22

- **Schemes operated through Extension wing** – These are schemes formulated and implemented on a need basis for providing financial and technical assistance for construction of smoke houses, purchase of rollers, bee keeping in rubber plantations etc. The physical & financial targets and achievements of various schemes for the year are given below.

SCHEME	TARGET		ACHIEVEMENT	
	PHYSICAL	FINAN- CIAL (Rs.in lakh)	PHYSICAL	FINAN- CIAL (Rs.in lakh)
ROLLER SUBSIDY	1800 No.	18.00	1800 No.	18.00
SMOKE HOUSE SUBSIDY	600 No.	18.00	600 No.	18.00
ASSISTANCE FOR BEE KEEPING	----	6.00	240 No.	5.5
DISTRIBUTION OF LEGUMINOUS COVER SEEDS	7.65 MT	4.00	2.65MT	1.92
SPRAYER /DUSTER SUBSIDY	----	3.00	28 No.	1.72
BIO GAS SUBSIDY	----	20.00	791No.	20.05

In addition to the above schemes, certain other schemes as detailed below have been formulated for operation in the non traditional areas (NT) alone. The targets and achievements for 2000-01 are as follows.

SCHEME	TARGET	ACHIEVEMENT
ROLLER SUBSIDY FOR INDIVIDUALS	100 Nos.	99 Nos.
FREE SUPPLY OF ROLLERS FOR N.G.Os	18 Nos.	Nil – Kept for retender
BOUNDARY PROTECTION(SC/ ST)	Rs. 20.00 Lakh	Rs.18.88 Lakh (1075 nos.)
BOUNDARY PROTECTION ( GENERAL CATEGORY)	Rs. 4.00 Lakh	Rs.4.25 Lakh (539 nos.)
IRRIGATION	Rs. 2.00 Lakh	Rs.0.72 Lakh (15 nos)
TRANSPORTATION SUBSIDY (ESTATE INPUTS TO NT AREA)	Rs. 5.00 Lakh	Rs.3.74 Lakh
SMOKE HOUSE SUBSIDY	Rs. 3.00 Lakh	Rs.2.44 Lakh (56 Nos)

There is another scheme for setting up demonstration plantations in farmer's fields, under operation in non traditional areas alone. As per this scheme , the Board meets the entire expenditure for planting and upkeep of such plantations. During 2000-01, 6 such plots have been developed.

- **Planting material generation** - In order to generate good quality planting materials for distribution to growers at reasonable price and also to control unfair trade practices, the Board is maintaining its own nurseries and promoting nurseries sponsored by Rubber Producers Societies. The details are given below.

NO. OF NURSERIES OWNED BY THE BOARD	15
AREA OF NURSERIES	72.17 ha.

#### **TARGET OF PRODUCTION AND ACHIEVEMENT DURING 2000**

	TARGET	ACHIEVEMENT
GREEN BUDDED STUMPS	2.35 Lakh	2.34 Lakh
BROWN BUDDED STUMPS	14.24 Lakh	13.88 Lakh
<b>TOTAL</b>	<b>16.59 Lakh</b>	<b>16.22 Lakh</b>

The planting materials produced were distributed to the needy growers for raising plantations as well as for raising source bush nurseries .

### **TAPPERS' TRAINING**

- **Regular course** – Board is running its own tappers' training schools where owners/ workers of rubber plantations are given training in rubber tapping on a regular basis for 30 days. 1814 persons were trained in 122 batches in the Board's 23 Tappers' Training Schools.
- **Short term course** - Short term training for 5 days for rubber tappers is arranged by the Board in selected plantations for improving the skill of tappers now working in rubber plantations. The number of tappers who completed training during 2000-01 was 3963 (in 269 batches)

### **RUBBER DEVELOPMENT IN THE NORTH EAST**

Outside the traditional rubber growing belt in the country, the north eastern region comprising the 7 States namely Tripura, Assam, Meghalaya, Manipur, Mizoram Nagaland and Arunachal Pradesh is found most suited for planting rubber . So the department's development and extension activities have been more concentrated in this region. As a result, out of the total potential area of 4.5 lakh hectares in the NE region, about 47,000 ha. could be planted with rubber, despite constraints such as unfamiliarity of the farmers with the crop, insufficient communication facilities, insecure law and order situation etc. The block plantation project implemented with the financial support of the state govt. in Tripura and also the group plantation projects implemented in different states are yielding good results in terms of increasing the area of rubber plantation as well as improving the quality of plantations.

### **NRETC and D.D.Cs**

The Dept. is maintaining a Nucleus Rubber Estate and Training Centre (NRETC) in Tripura State and 3 District Development Centres ( D.D.C) in the States of

Assam (2 nos.) and Meghalaya (1 no.), to cater to the training requirements of the local growers who are not familiar with the plantation practices of rubber. The facilities available in these centres are being utilised for providing training to the growers in raising rubber nurseries and polybagged plants, planting rubber in the field, tapping and post harvest processing operations. During the year 2000-01 a total of 100 people were trained in these centres.

In addition to this, a full fledged residential training centre has been established at Agartala in Tripura State, with financial support under the World Bank Assisted Rubber Project. The centre, meant for training farmers, plantation executives, workers, Govt. officials, representatives of NGOs etc., was formally inaugurated and 2 batches of training were completed.

Under the 'Sasthradarsan' programme of the Dept., 44 selected rubber growers from the non-traditional area were brought to the traditional rubber growing areas in Kerala and Tamil Nadu on study tour to impart first hand information about various economic and social aspects of rubber cultivation.

**Rubber Plantation Training and Research Centre** – A scheme for setting up a rubber plantation training and research centre in Assam state has been drawn up and forwarded to the Ministry for approval. The proposal is to raise demonstration plantation and experimental plantations in 150 ha. of land given by the Govt. of Assam on nominal lease to the Board. Planting is proposed in a phased manner. The centre will serve as a model plantation and meet the training requirements of growers/ plantation workers. Ministry's sanction for creation / deployment of essential staff to operate the scheme is awaited.

### **WORLD BANK ASSISTED RUBBER PROJECT (WBARP)**

The WBARP which was in operation from 1993 came to a close on 30<sup>th</sup> of September 2000. In addition to the new planting and replanting activities, various other components of the project such as demonstration plots, extension and training activities, etc were also being operated through the Dept. The details are given below.

- \* **Demonstration plots in traditional areas** - Scientific methods of tree exploitation (controlled upward Tapping – C.U.T.), need based Discriminatory fertilizer application (D.F.A.), soil and moisture conservation (S.M.C.), disease control and all these practices together, are demonstrated in selected farmers' fields. Financial incentives are provided for adopting the recommended practices in a scientific manner. Targets assigned for the project period and achievement upto the end of the project, are given below.

ITEM	TARGET	ACHMT. AS ON 30-9-2000	
	NO.	NO.	% of achievement
C.U.T.	4000	9211	230
D.F.A.	6000	13205	220
S.M.C.	12000	16519	138
DISEASE CONTROL	3000	6097	203
ALL PRACTICES	275	626	228
<b>TOTAL</b>	<b>25275</b>	<b>45658</b>	<b>193</b>

Achievements in all the 5 items have exceeded the targets. These demonstration plots are being used as training centres for the neighbouring farmers.

### **RUBBER PRODUCERS' SOCIETIES**

The Board has been promoting the culture of self reliance and mutual help among rubber growers by encouraging them to form self help groups, namely, Rubber Producers Societies (RPSs). RPSs help the growers in group procurement of plantation inputs, group processing and sale of rubber avoiding middle men, technology transfer in areas of plantation maintenance, harvesting, processing etc. Efforts are also being made by the Board to revitalise some defunct RPSs. Details of RPSs newly formed are furnished below.

	2000-01	CUMULATIVE UPTO 2000-01
RPSs NEWLY FORMED	120	2097

Of the above RPSs, some RPSs remained non-functional. During the year 2000-01, 195 defunct RPSs were re-vitalised.

- \* **Extension Agents and Tapping Assistants** – Under the World Bank Project, the RPSs were authorised to engage Extension Agents and Tapping Assistants for dissemination of technical information regarding planting, maintenance and harvesting of rubber. Accordingly, the RPSs engaged 300 Extension Agents and 300 Tapping Assistants under the Scheme. However, consequent to the withdrawal of financial support from the Rubber Board to RPSs to engage these functionaries, most of the RPSs stopped engaging them.

### **Model RPSs**

Under the World Bank Assisted Rubber Project (WBARP), 35 RPSs, 30 in traditional region and 5 in non traditional region, were selected as model societies and supported by the Board both financially and technically to set up infrastructure required for functioning as technology transfer centres and community processing centres. The facilities established in these centres are being used by neighbouring RPSs and also individual growers mainly for quality upgradation of sheets produced by them. Training programmes are regularly conducted in these model societies.

- **Communication equipments** – For more effective transfer of technology to the farming community, audio- visual aids and other communication equipments were purchased under the WBARP and these are being effectively utilized in seminars, group meetings etc.
- **Films on rubber** – Under the WBARP, 5 films on the following technical subjects were made.

### **NURSERY MANAGEMENT**

### **PLANTING AND MAINTENANCE**

### **PRODUCTIVITY ENHANCEMENT**

### **TAPPING AND PROCESSING**

### **DISEASES, PESTS AND CONTROL MEASURES**

These films are being used as very effective tools for dissemination of information especially in the non traditional regions.

#### **CORYNESPORA LEAF DISEASE.**

Awareness about the possible damages of the disease and the necessity of prophylactic spraying with copper fungicides could be created among the planters of Kerala- Karnataka border and the spread of the disease could be controlled as a result of the intensive spraying carried out during previous years. All arrangements were made to check the spread of the disease any further and constant vigil was kept in this matter.

- Women Development Project.- Under the WBARP certain activities for the development of women involved in rubber related vocation were started. Activities under this project are being carried out through selected N.G.Os.
- ◆ 13 different income generating activities such as goat rearing, toy making, etc, 4 types of training programmes like tapping , embroidery etc, and 3 types of health and hygiene activities like sanitary latrines, health camps etc. were taken up for women empowerment in the rubber sector.
- ◆ 6 NGOs and 5 model RPSs were implementing these programmes through RPSs. These activities are being continued with the support of RPSs and companies jointly promoted by the Board and RPSs.

- **COMPUTERISATION**

All the 25 Regional Offices in traditional area have started processing applications under RPD Scheme and other schemes on computers. In the 2<sup>nd</sup> phase of computerisation, machines were purchased for 4 more Regional Offices namely Nagarcoil, Mangalore, Kundapura and Baripada. Installation of the

application software in these offices is in progress. Action was also initiated for purchase of computers for Board's offices in the north-eastern region.

- **TRAINING PROGRAMMES**
- **Overseas Training of Officers** - Fifteen officers of the dept. underwent training in Thailand during 2000-01. Prior to this, 56 officers of R.P. Dept. had undergone overseas training in Malaysia / Thailand.
- **Overseas Training of Growers** – Presidents of nine selected Rubber Producers Societies were sent for overseas training in Thailand during 2000-01. Besides, 62 growers visited Malaysia/ Thailand/ Indonesia in 4 batches on study tour.
- **Local training** - A total of 196 officers of the department were provided training in extension methodologies, communication skill, formation and maintenance of farmers' groups etc. in reputed national institutes like I.I.P.M., MANAGE, and I.A.R.I. Base level computer training had also been given to the staff as per requirement.
- **Diploma course in N.R. Production** – One batch of 17 tribal students from Tripura was given the required facilities for completing the diploma course in N.R. production in the Kerala Agrl. University under the WBARP. A second batch of 19 students is now undergoing the course.
- **Supply of estate inputs** - Essential items of estate inputs such as fertilizers, plant protection chemicals and tapping materials were supplied to growers at concessional rates through regional offices during 2000-01 as a measure to increase productivity. During 2000-01, an extent of 28000 ha. was covered under this scheme.
- **Consultancy studies.**- Around 10 consultancy studies on subjects like assessment of the impact of different programmes and activities of the dept., development of computer software, measures to be adopted for strengthening

RPSs, strengthening the extension delivery system of the Board etc. were carried out by the dept. The consultancy work was entrusted with institutes of national recognition. Apart from this, the dept. is directly undertaking impact assessment studies relating to certain schemes implemented through the Dept.

### Group meetings

The Dept. used to conduct small group meetings of rubber growers in interior villages with the assistance of RPSs. These meetings were carried out on a regular basis for technology dissemination and also on a campaign basis to discuss certain special themes. The theme discussed in the campaign meetings was quality upgradation of sheet rubber by small farmers. Details of the meetings conducted during 2000-01 are given below .

Type of meeting	No. of meetings	No.of participants
Full day seminars	48	4928
Half day meetings	1813	45992
Campaign meetings	3954	109646
<b>Total</b>	<b>5815</b>	<b>160566</b>

### RUBBER DEVELOPMENT IN NON- TRADITIONAL AREA

The dept. continued its activities for servicing the existing plantations and also area expansion in non traditional regions such as Orissa, Andhra Pradesh, Goa, Maharsashtra, Andaman & Nicobar islands etc. Apart from the Rubber Plantation Development scheme and other extension support schemes, Block Rubber Plantation Projects and Group Rubber Plantation Projects were also under operation in these regions. Progress of planting in this region is included in the figures furnished elsewhere in this report.

### HUMAN RESOURCE DEVELOPMENT PROGRAMMES.

- A few officers were nominated to attend workshops / training programmes on upgradation of leadership skill, participatory extension management etc. Regional workshops on participatory extension management were conducted in all the regions to benefit all the extension personnel in the dept. The skill acquired through these workshops is being successfully used in their extension work especially for revitalization of defunct RPSs.
- In-service training on technical subjects was given to the Officers in the field.
- Senior officers were deputed to attend seminars on management aspects, impact of WTO agreement on rubber plantation sector, futures trading in rubber etc.

## **World Bank Assisted India Rubber Project**

The World Bank assisted India Rubber Project was formally started in January 1994 after signing an agreement with International Development Association (IDA) in 1993. The project was expected to close on September 30, 1999. However at the request of the Board and Govt.of India, the credit closing date of the Project was extended upto 30<sup>th</sup> September 2000. Though further extension of the date of credit closing was sought, it was not granted and hence the project came to a close on 30<sup>th</sup> September 2000. As per the agreement, the Government of India was eligible for a credit of US\$ 92 million. Since there was under utilisation of IDA credit to NABARD to refinance loans for processing factories and plantation development, US\$ 36.5 million was cancelled during the Mid term evaluation in April 1996 leaving the total IDA credit to US\$ 55.5 million. Out of which US\$ 35.32 million was for Rubber Board and US\$ 20.8 million for the NABARD to refinance. At a variable exchange rate of US\$ against Indian rupee during the Project period, the total investment cost of the project came to Rs.6331 million which was met as under:

Sl. No.	Particulars	Amount in million (Rs)
i)	IDA credit through Rubber Board	1388
ii)	Government of India fund	719
iii)	IDA credit through NABARD	605
IV)	Contribution from beneficiaries and participating banks	3619
	<b>TOTAL</b>	<b>6331</b>

The IDA credit to Rubber Board constituted 21.92% of the total investment cost. The total expenditure incurred by the Rubber Board under the project is Rs.2107.41 million.

The Project consisted of 6 major components viz. Replanting, New planting, Processing, Productivity enhancement, Institutional development and Women & Tribal development in Tripura and the percentage of the Investment cost are 31, 41, 4, 9, 14 & 1 respectively. The Institutional development had 5 sub components. These are Research, Extension, Training and Technical Consultancy, Rubber Board Organisation and Project Co-ordination Unit. Project area for replanting consisted of traditional areas, - Kerala and Tamil Nadu and for newplanting also included Tripura and other non-traditional areas. Good progress has been achieved in all the 6 components.

**(A) Replanting and New planting**

Creditable achievement was made in these two components. 111.78 per cent of the total area originally targeted for replanting and 112.67 per cent of new planting have been achieved. 34392 ha. was replanted and 51128 ha. was newly planted against the target of 30,500 and 45,000 respectively. The Rubber Board disbursed cumulatively Rs.251.88 million for replanting and Rs.370.11 million for new planting.

**(B) Productivity Enhancement**

11 agricultural inputs were procured in bulk and distributed from the year 1994 to tiny growers through Rubber Producers Societies. Physical achievement in area exceeded the target for 1994-95 to 1996-97. But with the decline in the price of natural rubber from November 1996, there was a little decline in the off-take of estate inputs.

As a result, the physical achievement and the financial achievement were 82.59% and 89.56% respectively. Inputs worth Rs.538.01 million was distributed in 305601 ha. during the World Bank Project period.

### (C) Institutional Development

#### (i) Research

All the seven research schemes initiated under the World Bank Scheme progressed well. Under exploitation studies one year results from the experiment on evaluation of mini-cuts and reduced spiral cuts gave promising results and the yield from stimulated mini-cuts were comparable to that of 1/2S d/3 (tapping system). A survey in small holdings in collaborative with RP Department on Tapping Panel Dryness (TPD) was initiated. Studies on intra-clonal variations and associations in RRII 105 were initiated. Several parameters were evaluated to enhance the frequency of somatic embryogenesis and plant regeneration using immature anther and immature flower buds as the initial explants. The "Hot spot trial" laid out at RRS, Sukma, (Chattisgarh State) a drought prone area, was maintained well and regular recording of growth parameters continued. The trial laid out at RES, Nagrakatta (WB) for screening of germplasm for cold tolerance was maintained. Genomic characterisation wild Hevea germplasm using random amplified polymorphic DNA technique was continued. The expenditure under the sub-component was Rs.53.38 million against the target of Rs.60.70 million.

#### (ii) Extension

41438 Demonstration plots were established cumulatively against the target of 25275. 2022 Rubber Producers Societies (RPS) were formed against the target of 2500.

**Model RPS:** Civil construction works of latex processing facilities in the selected 35 Model Rubber Producers' Societies were completed and processing started. These model RPSs also functioned as training centres in processing and RPS management.

**Women Development Programme in Traditional area:** 8 NGOs were identified and 14 activities were undertaken under the Women Development Programme in traditional area under the first phase. In the second phase, 6 NGOs and 5 Model RPSs were identified which undertook eleven activities. 16015 women were benefited under this programme.

Under the scheme for spraying against *Corynespora* Leaf disease occurring in the Kerala-Karnataka border about 12,000 ha were sprayed.

The expenditure under the sub component Extension is Rs.174.28 million against the target of Rs.163.48 million.

**(iii) Training and Technical Consultancy**

Civil construction work of the Training Centre at Kottayam and that of Agartala had been completed. Equipment and furniture for both these Institutes were procured. These Centres are functioning regularly with enlarged activities. The expenditure for training component was Rs.152.66 million.

**(iv) Rubber Board Organisation**

**(a) Computer Facility:** In the first phase of computerisation, 26 Regional Offices were computerised with connectivity to Head Office and data on plantation development schemes are processed and transferred to Head Office. For the second phase of computerisation, hardware and software were supplied and installed. Rs.69.92 million had been incurred in total.

**(b) Model TSR Factory:** Commercial production in the factory was carried out from January 2001.

**(c) RVNRL facility:** The facility and the laboratory were fully equipped. Marketing development of the product is being carried out. The technology for the production of Styrene grafted natural rubber, a substitute for synthetic rubber, was perfected.

- (d) **Rubber Wood Testing Laboratory:** The Lab was in operation.
- (e) **Promotion campaign for rubber wood:** A TV documentary and commercial spots for popularising rubber wood was produced.
- (f) **Model Rubber wood factory:** The construction of the model Rubber Wood Factory with an outlay of Rs.60.88 million is almost completed and the operation of the factory will be commenced soon.
- (g) **Green belt and control of sound pollution at RRDTTC:** Action was taken to provide a green belt to reduce sound pollution at Rubber and Rubber Wood Development and Training Centre consisting of TSR factory and Model Rubber Wood factory and associated laboratories and facilities. Technical advice for green belt was obtained from Kerala Agricultural University and for sound pollution from Indian Institute of Science, Bangalore.

The expenditure committed for the sub component Rubber Board Organisation was Rs.386.45 million against the target of 457.67 million.

#### **Women and Tribal Development**

4009 families were included under the scheme against the target of 4,000 families. Financial aid for rubber supported income generating economic activities was distributed to 4009 families. The Project impact study concluded by a consultant indicated that the Project had benefited the tribals by weaning them away from jhuming cultivation, indulging them in income generation activities, inculcating banking and saving habits and realisation of infrastructure developments. The financial achievement was Rs.52.97 million.

#### **Tripura Component**

9506 ha. of rubber were planted in Tripura against the target of 10,000 ha. Institutional credit as per the Alternate Credit Financing Scheme of Tripura was

delivered to 3249 rubber farmers and a total amount of Rs.57.76 million was refinanced by NABARD. The farmers in Tripura were considered as not credit worthy. But for the Alternate credit financing scheme Rs.68.15 million credit would not have been disbursed in Tripura to the rubber growers.

### **Transitional Arrangements, Sustainability of the Project and Implementation Completion Report**

The transitional arrangement for regular operation was made at the close of the project to ensure the sustainability of the project activities. With the completion of the study by the Staff Inspection Unit of Ministry of Finance, adequate staff for the sustainability of project activities was provided. Funds for this purpose was provided through budgetary allocation of Govt.of India. Necessary assistance was given to the World Bank for the preparation of Implementation Completion Report and the Board received it from the World Bank in May 2001.

### **PROJECT FINANCE**

The final cost table of the Project had been prepared. From the World Bank, the final reimbursement details were obtained. Out of the credit of US\$ 35.32 million for Rubber Board, the total reimbursement allowed was US\$ 34.03 million indicating the credit utilisation of 96.35%. Out of the credit of US\$ 20.08 million for NABARD refinance for loans for planting and processing, the reimbursement allowed was US\$ 14.28 million, indicating the utilisation of 71.12%. In rupee terms, out of the total budgetary allocation to Rubber Board for the Project Rs.2,253.36 million, the cumulative expenditure upto the close of the Project was Rs.2,107.41 million.

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## **PART – IV ADMINISTRATION**

The Administration Dept. consists of the following Sections/ Divisions/ Offices.

- 01 **Establishment (General Administration, Personnel Administration & Entitlement)**
- 02 **Marketing**
- 03 **Publicity & Public Relations**
- 04 **Labour Welfare**
- 05 **Internal Audit**
- 06 **Legal**
- 07 **Vigilance**
- 08 **Official Language Implementation**

### **General Administration**

The important functions of the General Administration includes constitution/reconstitution of the Board and its Sub Committees, convening the meetings of the Board and its Committees, monitoring implementation of the decisions of the Board, managing the house keeping activities etc.

### **Entitlement**

During the period 51 employees were given financial assistance for construction of own house by advancing Rs.1,26,69,196/-. Two wheeler advance was granted to 15 employees by advancing Rs.4,39,100/-, Car advance to two employees by advancing Rs.2,80,775/- and Cycle advance to 20 persons advancing Rs.30,000/- and Computer advance to two eligible persons advancing Rs.1,00,000/-. Besides two wheeler advance was granted to 17 employees by advancing Rs.5,82,270/- under the World Bank assisted India Rubber Project.

Service books, leave accounts and personal files of employees were properly maintained. Retirement benefits were given to 43 employees on superannuation, 16 on voluntary retirement cases and one on compulsory retirement. Family pension was also granted in six eligible cases.

## 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 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 31.3.2001 was 2280 as detailed below.

Sl. No	Name of Department	Group A	Group B	Group C	Group D	TOTAL
1.	Rubber Production	81	348	748	129	1306
2.	Research	65	130	233	48	476
3.	Administration	26	50	62	21	159
4.	Licensing & Excise Duty	16	31	86	9	142
5.	Processing & Product Dev.	15	25	41	5	86
6.	Finance & Accounts	6	9	26	2	43
7.	Training & Technical Consultancy	6	11	21	3	41
8.	Statistics & Planning	5	7	14	1	27
<b>TOTAL</b>		<b>220</b>	<b>611</b>	<b>1231</b>	<b>218</b>	<b>2280</b>

## Marketing

Collection, compilation and dissemination of natural rubber prices was an important item of work performed by the Division. During the year also, daily prices of RSS-4 and ungraded sheet rubber at Kottayam and Kochi were collected, compiled and reported to the press for publication and also furnished to the Commerce Ministry, STC and other agencies on daily basis. The prices of ISNR-20 and 60% centrifuged latex were also collected daily and published in the newspaper. The price of scrap rubber was collected and published twice a week. Weekly prices of all grades of sheet rubber, block rubber, pale latex crepe and estate brown crepe were also collected, compiled and published. The Division also collected, compiled and published the daily price of various grades of sheet rubber and centrifuged latex in the Kuala Lumpur market.

### Directory of Rubber Goods Manufacturers in India

During the year 595 copies of the 5<sup>th</sup> edition of the Directory of Rubber Goods Manufacturers were sold/distributed. The Division also monitored the procurement and release of rubber by STC in the IV phase procurement.

## **Publicity and Public Relations**

The activities of the Division mainly consists of publishing journals and other publications on various aspects of rubber cultivation.

### 1. Rubber Magazine

12 issues of the magazine were brought out during the year. The circulation position is:

Annual	:	9861
Life	:	5839

### 2. Rubber Statistical News

12 issues of the 'RS News' were brought out.

### 3. Press Release

51 Press Releases were issued from the Division.

### 4. Advertisements

100 advertisements (including display and classified) were issued.

### 5. All India Radio

5 talks were recorded and broadcast through the AIR by the Officers of the Division.

6. Seminar & Meetings

The Officers of the Division participated and spoke in 38 seminars, meetings and other public functions connected with the Board, Companies, Rubber Producers' Societies, Inter Media Publicity Co-ordination Committee and All India Radio etc.

7. Exhibition

The Division participated in 2 exhibitions one at Coonoor (UPASI) and the other at Thodupuzha (Karshikamela).

8. Articles

Officers of the Division published 10 Nos. of technical articles in various dailies, agricultural magazines and the "Rubber Magazine".

9. Inside Rubber Board

2 issues of 'Inside Rubber Board' were published.

10. Rubber Board Bulletin

1 issue of "Rubber Board Bulletin" was published.

11. Rubber Grower's Companion 2001

9495 copies of "Rubber Grower's Companion 2001" and 975 Nos. of "Rubber and its Cultivation" were printed and distributed.

## **Labour Welfare**

One of the important functions of the Board as laid down under section 8, sub section 2, clause "f" of the Rubber Act 1947 is to "secure better working conditions and the provisions and improvement of amenities and incentives for workers". These functions are envisaged as a measure fit for the development and promotions of the rubber plantation industry, and to inculcate and generate an interest in and among the

workers of rubber Plantation industry who are indispensable for the development and promotion of rubber cultivation.

The Board carried out the above functions through different welfare schemes. The total estimated budget for 2000-01 was Rs.121 lakh while the actual expenditure came up to Rs.1,21,13,753/-. The details of the schemes operated are given below: The amount disbursed under each of the schemes is depicted in Table I.

### **A. Non-Plan Schemes**

#### **1. Educational stipend scheme**

The Scheme gives financial assistance for different courses of studies undergone by children of rubber plantation workers both in the colleges and schools.

The stipend consists of (1) Tuition fee  
(2) Hostel/Boarding fee  
(3) Lumpsum grant for purchase of Books, instruments etc.

#### **2) Educational Scholarship Scheme**

The scheme is provided to the category of children who pass out meritoriously. The scholarship amount ranges from Rs.250/- to Rs.2000/-. This is given as an incentive for encouraging better performance in the concerned course of study.

#### **3) Group Insurance cum Deposit scheme**

This is an important social security measure introduced for the security of the workers against death and injuries caused by accidents. The scheme also encourages a habit of saving among the workers. The scheme has reached in the XI phase in 2000-2001 and the first phase started during the financial year 1986-87.

Each of these yearly schemes are individual schemes and will be in operation for a period of ten years. The workers enrolled in the scheme have to renew the policy every year by remitting the prescribed amount. A sum of Rs. 1,02,101/- was paid

towards compensation under the Group Insurance Scheme to 48 workers for injuries and death caused by accident.

## **B. PLAN SCHEMES**

### **1. Housing subsidy scheme (Organised sector)**

This scheme is framed for giving financial assistance to employees in the estates covered by the Plantation Labour Act 1951, for the construction of houses in their own land.

They are given a maximum grant of Rs.7500/- or 25% of the estimated cost of construction, whichever is less.

### **2. Housing Subsidy Scheme (Unorganised - non-marginal holdings)**

The scheme intends to help tappers of holdings not covered by the Plantation Labour Act 1951, to acquire one of the basic minimum necessities in life i.e., shelter. To become a beneficiary under this scheme the area of the estate in which the applicant is employed should not be less than 1.25 ha. Such a tapper constructing a house for his own use in the prescribed manner as stipulated in the provisions of the scheme will be granted a subsidy subject to a maximum of Rs.7500/- or 25% of the estimated cost whichever is less. In north-eastern region, houses built with mud walls and grass would also be eligible for a maximum subsidy of Rs.4000/-. In the case of houses with mud walls and tin or aluminum roof, the maximum subsidy would be Rs.5000/-

### **3. Housing subsidy scheme (Unorganised - marginal holdings)**

Under this scheme, the tappers employed in small rubber holdings, admeasuring an area in between 0.75 ha. and 1.25 ha. are eligible for assistance. All other stipulations and conditions with regard to the scheme for tappers in the small holding sector (non-marginal holdings) are applicable to this scheme also.

#### **4. Scheme for providing sanitary facilities**

The purpose of this scheme is to stimulate an interest in hygienic environment among the rubber tappers of unorganised sector. This scheme assists the tappers to build latrine as per the plan and estimate prescribed by the Board.

The financial assistance is limited to 75% of the cost of construction or Rs.3000/- whichever is less.

#### **5. Medical Attendance Scheme**

This scheme is introduced for tappers in the unorganised sector rubber holdings. The scheme provides for reimbursement of medical expenses incurred for treatment of the tappers suffering from illness, and also compensation to the tappers in lieu of their inability to attend duty in consequence of illness. Workers who undergo sterilization operation for promotion of small family are also given assistance.

#### **6. Housing and sanitary subsidy scheme for SC/ST/OBC**

This scheme is exclusively for SC/ST/OBC tappers who are employed in the unorganised rubber holdings. Assistance under this scheme is granted for construction of house with latrine to the extent of Rs.14,000/- per applicant. The scheme is financed from special component plan/tribal sub plan.

**TABLE - I****(a) Non-plan schemes**

Name of the scheme	Total No. of applns. received	No. of Applns. rejected	No. of appli-cations pending	Total no. of bene-ficiaries during 2000-01	Total Amount disbursed (Rs)	Budget alloca-tion for 2000-01 (Rs)
1) Educational stipend	10608	432	3370	6806	1614549	1620000
2) Educational scholarship	185	19	69	97	34750	30000
3) Group insurance-cum-deposit scheme (From III to IX phases)	8457	0	0	8457	845700 (Board's share remitted to Insurance Cos.)	850000

**(b) Plan schemes**

Sl No	Name of the scheme	No. of applns. received	No. of applns. rejected	No. of applns. pending	Total no. of bene-ficiaries	Amount disbursed upto 31.3.2001 (Rs.)	Budget allocation 2000-01 (Rs.)
1.	Housing subsidy (organised)	468	68	264	136	1029000	1046000
2.	Housing subsidy (un-organised-Marginal)	1561	75	1210	276	2072500	2000000
3.	Housing subsidy (Unorg.-Non-marginal)	1236	192	785	259	1955000	2000000
4.	Sanitary subsidy	2774	267	1854	653	1966625	2000000
5.	Medical attendance	698	41	199	458	573451	554000
6.	Housing & Sanitary subsidy (SC/ST/OBC)	728	27	433	268	2022178	2000000

## **INTERNAL AUDIT**

The main functions of the Internal Audit Division are Inspection/Audit of various offices/establishments of the Board, verification of pension/retirement/absorption cases, finalisation/preparation of replies to audit enquiries from the Accountant General, Internal Audit Wing of the Ministry, and conducting special audits as directed by Chairman etc.

During the period under report, internal audit/inspection of 69 offices/establishments spread all over the country, was conducted. Special audit of the TSR factory was conducted during the year as ordered by the Chairman. Replies to 52 audit paras contained in the report of the Accountant General, Kerala on the audit of the accounts of the Board for the year 1999-2000 were prepared. The total number of outstanding audit paras as on 31.3.2001 was 67 including the 52 paras for 1999-2000. Replies to the paras in the inspection report of the Internal Audit Wing of the Ministry of Commerce were also furnished and the number of outstanding paras of the Ministry is 9.

Advice was given in 155 cases including 85 pension cases and 70 pay fixation cases, leave encashment, service matters etc.

Economy in the use and maintenance of vehicles and consumption of fuel was ensured by follow up procedures based on Government Orders.

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

## **Legal**

Legal Section discharges the function of rendering advice/opinion to various departments/sections/divisions of the Board, drafting legal documents, initiating steps for prosecution under the Rubber Act 1947, assisting the departments in conciliation

proceedings in labour matters, tax cases and instructing and assisting the lawyers of the Board in conducting the litigations of the Board.

During the year under report timely action/advice was rendered in 878 files referred to Legal Section. Scrutiny of documents for determining the eligibility under the Rules was done in the case of 52 applications for House Building Advances. Legal documents to be executed by Board during the year under report were drafted/prepared as and when required. Appropriate steps were taken through lawyers to safeguard the interest of the Board in pending cases and 40 new cases pending in various courts. Parawise comments and necessary instructions were given to Standing Counsels of the Board and the Central Government pleaders in cases pending in High Court. In consumer disputes files before Redressal Forum in various districts the section prepared and filed replies and represented the Board during the hearing.

## **VIGILANCE**

During the year under review, the Vigilance Division took up for enquiry/investigation 34 complaints containing allegations against 16 Group A & B officers and 18 Group C & D employees. The allegations in the complaints generally related to irregularities in the electrification works carried out in the Model TSR Factory, failure to supervise / inspect the civil construction works of the Board, practising bigamy in gross violation of the provisions of the Conduct Rules, failure to respond / comply with the directions of the Board and intentionally neglecting duties by unauthorised absence, misbehaviour with superior officers in the presence of public and uttering abusive and filthy language against superiors in violation of the provisions of the Conduct Rules, undertaking official tours without the knowledge / permission of controlling officers / Board and misuse of official position for personal gains etc. All these complaints were properly enquired into and appropriate action taken against the erring Board's employees wherever found necessary.

Major penalty proceedings against 10 officials and minor penalty action against 2 officials were instituted during the period under report.

Annual statements of Immovable property as on 31.12.2000 were called for from all officers of Group A & B status. The statements thus received from the officers have been properly dealt with. The Vigilance Division also processed 110 applications relating to transactions in immovable property and 92 applications pertaining to transactions in movable property.

The Division also dealt with / processed 4 appeal petitions received from the employees of the Board and were forwarded to the authorities concerned with necessary parawise comments and other connected papers / documents for appropriate further action.

As per instructions received from the Central Vigilance Commission, the Board observed the "Vigilance Awareness Week" during the period from 31.10.2000 to 4.11.2000 by taking the pledge by all officers and employees of the Board, exhibiting posters and banners in and around the office premises, organising meetings & elocution competition for the staff of the Board and distributing prizes and certificates to the successful ones and by releasing a journal containing articles and messages from important dignitaries / functionaries on vigilance matters.

## **OFFICIAL LANGUAGE IMPLEMENTATION**

The Rubber Board is a notified Office under Rule 10(4) of Official Language Rules.

The following activities were undertaken by the Hindi Section during the year.

### **1. Official Language Implementation Committee**

Two meetings of the Official Language Implementation Committee of the Board were held during the year, one on 25<sup>th</sup> October, 2000 and the other on 21<sup>st</sup> March, 2001. Annual programme for the year 2001-2002 was discussed and approved in the meeting.

## 2. Hindi Week/Hindi Day Celebration

Hindi week was celebrated from 14<sup>th</sup> September 2000 to 20<sup>th</sup> September 2000 at the Head Office of the Board and RRII. Various competitions were conducted for the Officers/employees of the Board. A large number of Officers/employees participated in the competitions. Winners were awarded prizes.

Hindi day was celebrated in the different subordinate Offices of the Board. Various competitions were arranged for the employees and winners were given prizes and certificates.

## 3. Official Language Conference

An Official Language Conference was held on 27<sup>th</sup> March 2001 at Silver Jubilee Hall of the Rubber Board, RRII, Kottayam-9. The well-known Malayalam Film Director, Writer and Jnanapith Award Winner, Shri MT Vasudevan Nair inaugurated the Sammelan. Dr. CP Rajagopalan Nair, Member, Hindi Advisory Committee, Ministry of Commerce & Industry felicitated the Sammelan. Prizes to the winners of competitions held in connection with the Hindi Week Celebration and cash award (incentive) to the employees for the use of Hindi in official work were distributed. A special issue of 'Rubber Samachar' a Bi-monthly bulletin to commemorate the Golden Jubilee year of Official Language was also released in the Sammelan and the bulletin is being brought out on a regular basis.

As part of Hindi Teaching Scheme, Hindi Pragya/Typewriting classes were conducted at the Head Office of the Board. 26 Officers/Employees attended the classes.

Hindi workshop was conducted in the Regional office at Pala, Kothamangalam, Thodupuzha, Thrissur, Erattupetta, Ernakulam, Mangalore, Manjeri, Kanhangadu, Taliparamba, Sreekandapuram, Kozhikode, Nilambur, Kottayam, Palakkad, Mannarkad, Thalassery, Licensing Division, Kochi and CES Chethackal. A total of 439 Officers/employees were imparted training in Official Language.

A two day Hindi workshop was organized at the Head Office of the Board and at RRII in which 57 employees attended.

A joint meeting of the Hindi Salahkar Samithi of the Department of Commerce and Department of Supply was held on 15<sup>th</sup> March 2001 at New Delhi. Officers of the Board attended the meeting.

### **Town Official Language Implementation Committee**

The second meeting of the Kottayam Town Official Language Implementation Committee was held on 16<sup>th</sup> October 2000 at the Conference Hall of the Rubber Board.

A two day workshop for Officers and employees of the member organisations was organised at the Headquarters of the Board under the auspices of TOLIC.

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## **PART V RUBBER RESEARCH**

The Rubber Research Institute of India (RRII) was established in 1955 with headquarters at Kottayam. It has the main research farm of 250 ha at Ranni in Pathanamthitta District, Kerala State. The institute has 13 regional research stations spread over the states of Kerala, Tamil Nadu, Karnataka, Maharashtra, Orissa, West Bengal, Assam, Meghalaya, Tripura and Mizoram. Five regional research stations in the North-East form the North-Eastern Research Complex with headquarters at Agartala. The Institute has 133 scientists and 339 supporting staff. Research work was continued in the fields of Rubber Processing Technology, Plant Breeding, Germplasm, Biotechnology, Exploitation, Agronomy, Soil Science, Plant Pathology, Economics and Plant Physiology.

Perfecting the technology, for the production of Styrene Grafted Natural Rubber (SGNR), introduction of five new clones, having higher yield than the most popular high yielding clone RRII 105 and standardization of low frequency tapping systems for reducing the cost of production were the major achievements of the Institute during the year.

The research component under the World Bank Aided Rubber Project was formally concluded in September 2000. Long-term projects/experiments are being continued. Implementation completion report and detailed final technical report were submitted. The project on 'Resource Soil Survey and Mapping of Rubber Growing Regions of Kerala and Tamil Nadu' was completed by the consultant (ICAR). Detailed reports and maps (400 copies) were obtained from the consultant. Consultancy project on 'Impact Studies on Copper Fungicides on the Rubber Ecosystem' was completed by Kerala Agricultural University. Follow-up actions on the recommendations of the study were taken up.

The Rubber Chemistry, Physics and Technology (RCPT) division was involved in 21 experiments during the period. Six new experiments were started and three experiments concluded. The division provided technical support for the production of styrene grafted natural rubber (SGNR). Laboratory scale preparation of a new product called NR-g-SAN Natural Rubber grafted with Poly (Styrene Acrylo Nitrile). The study on the effect of its incorporation on the impact strength modification of Styrene Acrylonitrile Copolymer (SAN) revealed encouraging results. A semiautomatic machine was fabricated for upgrading the low quality rubber sheets. A thermoplastic natural rubber formulation was prepared from natural rubber, polypropylene and polyethylene. The material was sent to M/s. Oswal International for evaluation in products. Coconut shell powder was identified to be a filler imparting higher abrasion resistance and electrical resistance in rubber composites. Studies were initiated on the effect of antioxidants in the latex used for road rubberisation. Another study on the impact of storage on properties of raw rubber and on quality status of rubber sheets from different rubber growing regions was also initiated.

Around 120 experiments on genetic improvement were continued by the Botany Division. The experiments are mainly aimed at evolving clones having higher rubber and timber yield. Monitoring of yield and secondary characters was continued on hybrid clones, ortet clones and introduced clones. Research on planting materials, propagation techniques, bark and wood anatomy and cytogenetics was also continued. Five new clones were included in the Category III of recommended planting materials. These are RR II 414, RR II 417, RR II 422, RR II 429 and RR II 430. These clones show 18-50% higher yield than RR II 105, the most popular clone. Based on the data collected from the experiments of RR II and various other sources, the status of the clone PB 260 was raised to Category I from Category III in the recommended list of planting materials. Planting was done for a polyclonal seed garden in the Kulasekharam region (Tamil Nadu). Anatomical studies showed higher contents of starch and calcium oxalate crystals in the bark during the high yielding season. A catalogue was prepared for giving basic information about all clones recommended for planting. Wide adaptability of the clone RRIM 600 in the nontraditional regions was confirmed.

Germplasm Division continued activities related to the conservation and documentation of 4426 Brazilian accessions and 177 domesticated clones. Characterization and evaluation of the accessions. Screening of the accessions for biotic and abiotic stresses were continued. Screening was also done for timber characteristics. Characterization by molecular methods was initiated. One Brazilian accession MT 1057 showed double test tap yield, than the popular clone RR11 105. Genetic divergence study on 80 accessions showed presence of 8 groups. Screening for disease tolerance showed varying levels of tolerance to powdery mildew and *phytophthora* diseases. For screening for cold tolerance 71 accessions were planted in the Regional Research Station at Nagrakatta in West Bengal.

Biotechnology Division had 26 ongoing experiments. The project for production of tissue culture plants via somatic embryogenesis was developed and around 500 plantlets were produced. Out of these, 250 are being raised in polybags filled with soil. Transgenic plants integrated with the gene coding for SOD (superoxide dismutase) were hardened and planted in polybags filled with soil. Transgenic tissues with other important enzymes could be differentiated to mature embryos. Molecular studies showed that RAPD marker associated with resistance to bark dryness (physiological syndrome) hybridized with one of the messenger RNAs isolated from the bark of healthy trees. The RAPD marker for tolerance to abnormal leaf fall disease was identified. Genomic DNA sequences were isolated for the genes chitinase and rubber elongation factor.

Genetic diversity studies on Brazilian accessions employing molecular methods conducted by the Genome laboratory gave fruitful results. Good progress was made in developing RAPD markers for resistance to *Phytophthora* leaf fall disease. Studies on RAPD profile showed existence of ten different genotypes of the pathogen *Corynespora* and two species of *Colletotrichum*.

Under exploitation (crop harvesting) studies, there were 30 ongoing experiments. Eight new experiments were also started in the non-traditional regions. Based on the results of extensive experiments, stimulation (hormone application) schedules were formulated for recommending low frequency tapping systems on

different clones. Low frequency tapping results considerable reduction in the cost of production of natural rubber. Unlike in other countries, methods were found out for successfully carrying out even weekly tapping. Stimulation schedules were evolved for tapping once in three days (d/3), four days (d/4) and seven days (d/7). In more than 95% of the holdings tapping is done either daily or once in two days. In addition to the direct savings, low frequency tapping reduces cost of production indirectly also by substantially increasing the economic life of trees. Experiments on minicuts also showed promising results for further reduction in the cost of production. The paper presented describing the results of the experiment was awarded prize for the second best oral presentation in the XIV Plantation Crop Symposium held at Hyderabad. Recommendation was also formulated for panel application of ethephon so that there is 50% reduction in the requirement of the chemical for stimulation. Latex diagnosis studies were continued. There were 5 on-going experiments and 3 new ones.

More than 60 experiments were continued in the Agronomy and Soils division. The areas of research comprise intercropping and cropping systems, weed management, density of planting and soil and water conservation. The division continued the advisory service of discriminatory fertilizer recommendations to the small holders and estates and 4100 such recommendations were issued during the year. For this, around 8000 soil samples and 700 leaf samples were analysed in the headquarters and various regional soil and leaf testing laboratories. In addition to soil and leaf analysis, these laboratories estimated dry rubber content (DRC) in 15571 samples of latex brought by growers / firms. Studies showed that intercropping did not have any adverse effect on the growth of rubber. Ecological studies showed litter fall of 5 tonnes/ha/yr (dry weight) contributing 88 kg Nitrogen, 24 kg Phosphorus and 45 kg Potassium to the soil system. It was estimated that the cover crops in the immature phase, *Pueruria* and *Mucuna* produced 5.5 and 7.6 tonnes of dry matter per year per hectare respectively. The respective contribution of fixed nitrogen is 174 and 226 kg/ha/yr nitrogen.

Plant Pathology Division had 56 experiments during the period covering various fields. The incidence of *Corynespora* disease in South Karnataka and North Kerala, declined. Rubber seed oil was found useful for partial substitution of spray oil. This can reduce the cost of spraying. For control of Powdery mildew disease in Kanyakumari, 2% hexaconazole dust was found more effective than sulphur dust. It

was found that Garryllacrys (cricket) attack on rain guards can be effectively controlled by application of used engine oil, cashew kernel oil or mustard oil. Biogas generated using rubber processing effluent was found to reduce 25% of the fuel requirement for drying of rubber sheets.

Plant Physiology Division conducted various experiments under 12 projects. These studies led to identification of functional markers for possible drought tolerance. It was found that the influence of root stock on scion might be due to the genetic distance between the two.

The Economic Research Division carried out 20 projects during the period. Six projects were completed and four projects were newly started. A study on rubber based industrialization and product export by major natural rubber producing countries showed progressive shift from primary exports to value addition. Share of rubber products exported by natural rubber producing countries rose from 2.6% in 1980 to 38.3% in 1996. A study on price stability showed that area expansion in India was on account of institutional and R&D support, extension programmes and the protected price regime.

Regional Research Station, Agartala had undertaken 25 experiments during the period. Results of the intercropping experiment showed that banana and pineapple can be cultivated profitably in the initial years of cultivation of rubber. Data from a clone trial revealed that the highest yielding clone is PB 235. High fertilizer dose (60:60:40 NPK/ha) than the requirement in the traditional region was found to significantly increase growth and yield. Ecological study showed high organic content in the soil under rubber than in the barren soil. More than 630 hybrid seedlings were established in nursery. Ten genotypes were selected from the polycross progenies. Multiple shoot formation was achieved from immature embryo culture. Three exploitation experiments were newly started.

Regional Research Station, Tura, Meghalaya had undertaken 10 experiments. The clone trials showed clones RRIM 600, RRIM 118, RRIM 105 and PB 235 to be superior. Fourteen mother trees were selected from a 30 year old seedling plantation for

cloning and evaluation. Appearance of powdery mildew in severe form has been reported.

There were 22 ongoing experiments in the Regional Research Station, Guwahati. Results of a clone trial showed better performance of the clone RRIM 600 followed by RRII 203 and RRII 118. Clone PB 311 also showed good performance. Dry rubber yield of 10 polyclonal seedling trees shows good promise for selection. Fertilizer dose of 40:20:20 kg/ha of NPK was found optimum. Severe incidence of powdery mildew disease could be controlled by three rounds of sulphur dusting at ten day intervals. Regional Research Station at Nagrakatta in North Bengal had 13 ongoing experiments. Data showed superior yield performance by clones SCATC 88/13, SCATC 93/114, PB 235 and RRII 208. New exploitation experiments were also started.

At Regional Research Station, Dapchari, Maharashtra yield performance of clones RRII 105 and RRIM 600 were better under both rain-fed and irrigated conditions. Three exploitation experiments were started during the period. There are 10 ongoing research projects in the station. All the experiments at the Regional Research Station, Orissa also progressed well during the period. The clone RRIM 600 gave the highest yield followed by RRII 105.

There were seven ongoing research projects in the Regional Research station at Sukma, Chattesgarh State. The trees were not ready for tapping. There were 9 ongoing research projects in the Regional Research Station at Padiyoor in Kannur district of Kerala. Experimental planting was done in 14 ha area during the period. Experiment on nursery irrigation progressed well and irrigation requirement could be estimated. Ortet selection made from high elevation showed good tolerance to powdery mildew disease.

The available land in the Central Experiment Station, regional research stations and the breeding stations were fully utilized for field experiments under various research projects.

The Annual Review Meetings for the year 2000 were conducted in two sessions one in June and the other in August 2000 to evaluate the ongoing research projects. All scientists and division/section heads presented ongoing research projects and experiments in the Annual Review Meeting which was attended by two external subject experts in each discipline. Based on the deliberations in the Annual Review Meeting, research programmes were reoriented.

The Institute conducted 14 internal seminars in which 51 research papers were presented. Six research papers were presented in internal seminars/symposia and 48 papers in national seminars/symposia. Around 100 research papers were published/communicated during the period.

The Institute published a comprehensive publication, entitled "Natural Rubber: Agromanagement and Crop Processing" and 2500 copies were printed. Three volumes of the journal "Indian Journal of Natural Rubber Research (Vol. 11, 12 and 13) and projectwise annual reports were also published during the period. A subject bibliography on rubberised bitumen was compiled and published.

Seven scientists of the Institute received advanced training in reputed institutions abroad. Joint Directors, Heads of Divisions and Officers-in-charge of regional research stations were given management training at Indian Institute of Plantation Management, Bangalore. Twenty three personnel were given computer training.

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## **PART VI PROCESSING AND PRODUCT DEVELOPMENT**

Department of Processing and Product Development continued to provide support to Rubber Processing and Rubber product manufacturing in areas from conception and design to implementation. Quality improvement and treatment and disposal of effluents were also given priority. The key activities of the Department during the year were the following.

### **I ENGINEERING DIVISION**

The civil work, electrification and the Effluent Treatment Plant in respect of the Model TSR Factory were completed. The approval of the electrical inspectorate and KSEB for the power supply was obtained. As a result, the formal inauguration of the TSR Factory was done in July 2000. The main factory building for the Model Rubber Wood Factory was completed. There was much progress in the erection of machineries and electrical installations. Consultancy on noise control also progressed.

The laboratory equipments required for the Rubberwood Testing Laboratory were procured and installed. The required staff was recruited and posted and training was given at IPIRTI, Bangalore. The entire civil works, electrification and installation of equipments in respect of the two Rubber Training Centres at Kottayam and Agartala were completed and the centres were made operational. The Civil work in respect of the new office building at Guwahati was completed. The electrification work were in progress. Similarly, the civil works and electrification of the Office Complex at Tura, Meghalaya were also completed.

Necessary technical assistance was given to the following Co-operative Societies for setting up processing/manufacturing units as noted against their names:

Sl. No.	Name of Co-operative Society	Name of product
1)	Kozhancherry Taluk Agricultural Marketing Co-operative Society Ltd., Konni	Creamed latex
2)	Iritty Marketing Co-operative Society Ltd., Iritty	Procured tread rubber
3)	Kasaragod Dist.Rubber Marketing Co-operative Society Ltd., Chittarickal.	Foam rubber
4)	Meenachil Rubber Marketing & Processing Co-operative Society Ltd., Pala	Effluent treatment plant of their cenex unit

Besides, project reports for setting up sheet processing units for individual entrepreneurs and for the Co-operative sector of Kerala, were prepared and supplied.

Apart from the above, necessary assistance was rendered to the Training Dept. in conducting different training courses, monitoring and maintenance of Board's vehicles. The construction work of Staff quarters Type III block No.IV at a cost of Rs.22 lakh was completed.

## II PROCESSING & QUALITY CONTROL DIVISION

With a view to ensure the quality of the technically specified rubbers produced and marketed in the country and to see whether the technical standards prescribed by the Bureau of Indian Standards are maintained by the various processing units, the Division conducts periodical visits at the units and analyses the samples and issues test reports/certificates after collecting the required fees. During the year, Division tested 37069 samples at the Central Laboratory and 11590 samples at the specification laboratory and collected a sum of Rs.13.79 lakh towards testing fee/marketing fee from BIS etc. The total number of inspections conducted at premises of the Factory was 1020 and the number of test reports issued was 586.

The study on the effect of storage of high and low ammonia latex with and without lauric acid on various parameters such as DRC, TSC, NH<sub>3</sub> KOH No., MST, IV, ZOV, ZHST etc. was continued.

The officials in the Division conducted Round Robin Cross check on block rubber and centrifuged latex and made statistical evaluation of the results and communicated their comments to the concerned Factories.

### III FACTORY MANAGEMENT DIVISION

The trial run of the Model TSR Factory for the processing of Technically Specified Rubber as a component of the India Rubber Project CR 2409 IN was started in December 2000. The design capacity of the plant is 20 tonnes per day of three shift operation. The effluent treatment plant is designed for total recycling of treated effluent to minimize adverse impact on environment.

The strength of the radiation source was enhanced to 100 kCi and additional laboratory facilities for research and development activities on radiation vulcanization of natural rubber latex were established as a component of the India Rubber Project at an investment of about Rs.12.00 million. The R&D activities are monitored by a Research Group, constituted for the purpose. The ongoing activities include work on standardization of the processing of styrene grafted natural rubber and property improvement of Radiation Vulcanised Natural Rubber Latex. The Board has permitted the use of these facilities by the Universities to promote R&D efforts on RVNRL.

The Pilot Latex Processing Centre established in 1989 to promote the production and marketing of low ammonia latex concentrate, processed the field latex produced in the Central Experiment Station of the Board at Chethackal and the crop collected through Rubber Producers' Societies in the locality. The Factory processed 142.27 tonnes of latex concentrate during the year under report.

The Pilot Crumb Rubber Factory established in 1976 to promote and accelerate the process of modernization of natural rubber processing, especially field coagulum grade rubber is at present providing R&D support for the development of speciality rubbers such as constant viscosity rubber, grafted natural rubber, blended natural rubber

etc. The Factory produced 230.4 tonnes of different grades of block rubber during the year under report and 23.6 tonnes of SGNR.

#### IV **RUBBER PROMOTION AND MARKET DEVELOPMENT ACTIVITIES**

The Division provided quality screening assistance (grading support) to STC for the procurement of 13034 MT of RSS grade rubber. The Division also inspected 9889 MT of RSS IV purchased by M/s. RUBCO and 600 MT DRC of Cenex procured by STC.

Under 21 schemes operated for the development of rubber marketing and processing activities an amount of Rs.52,05,204/- was disbursed to various Co-operative Societies, Rubber Board Companies, RPSs & exporters of rubber.

In addition to the above, Rs.1,47,50,000/- had been released to the Trading/Processing Companies towards share capital contribution, short term loan and working capital loan.

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## PART VII TRAINING AND TECHNICAL CONSULTANCY

The Dept. of Training and Technical Consultancy consists of two Divisions viz. the Training Division and Technical Consultancy Division. The Training Division conducts various training programmes while the TC Division provides technical assistance to promote rubber goods manufacturing industry in the country.

### A TRAINING DIVISION

The Training Division (Rubber Training Centre) imparts training on various aspects related to rubber cultivation, rubber processing and rubber products manufacture with a view to make available trained manpower for the overall development of the rubber industry. The major target groups are Rubber Growers, Rubber Processors, Rubber Products Manufacturers, Rubber Dealers, Rubber Marketing Societies, Entrepreneurs, Women and Employees of the Board. Training programmes are being chalked out for the benefit of the various target groups and employees of the Board and an annual training calendar is being prepared.

During the year under report 3697 persons were imparted training. It includes 383 women participants, 48 SC/ST persons and 295 employees of the Board. The Rubber Training Centre contemplated in the World Bank Assisted India Rubber Project was made functional during the year. The Division collected US\$ 7770 and Indian Rupees 2,21,447/- towards training fee.

#### Details of Training conducted during the financial year 2000-01

Sl. No	Training	Duration	No.of batches	No.of participants	Beneficiaries	Remarks
1	Rubber cultivation and management	3	1	6	Managers from Sri Lanka	
2	Training on 'Rubberisation of roads'	3	1	1	Technical persons from Thailand	

3	Short term training in Rubber products manufacture	10	2	17	Technical Officers from Sri Lanka	Women -2
4	Rubber processing and quality control	5	5	60	Rubber Processors & Technologists from Appollo Tyres	
5	Training on rubber sheet grading	1	6	142	Rubber dealers/farmers	
6	Short term training on latex products manufacture	5	4	56	Entrepreneurs/ persons from rubber industries	SC/ST - 2
7	Short term training on dry rubber products manufacture	8	3	54	- do -	
8	Product-wise training	3	4	4	Persons from industries	SC-1
9	Training on Beekeeping in rubber plantations	1	4	124	Farmers	Women-4
10	Decentralised training on Beekeeping at various RPS centres	1	31	1360	RPS members	Women - 377 (ST-45)
11	Training on pest management at RPS centres	1	1	10	RPS members	
12	Training for employees of the Board	3	9	295	Employees of the Board	From various departments
13	Visit cum Training	1	74	1568		
	<b>TOTAL</b>		<b>145</b>	<b>3697</b>		

## B TECHNICAL CONSULTANCY DIVISION

The major activities of the division are providing technical assistance to entrepreneurs in setting up rubber based industries, development of rubber products, solving production problems of existing units and quality control by testing rubber chemicals / rubber compounds / products as per National and International standards. The Division also undertakes activities like conducting workshops and seminars to promote rubber based industries, preparation of detailed project reports, market survey reports, trade directories etc., With the aim of increasing the consumption of Natural

Rubber, the division is now engaged in the setting up of Rubber Industrial Parks. Steps have also been taken to promote export of Natural Rubber.

During the year 2000-01, 12 project reports/schemes were prepared for the setting up of various rubber based industries. Technical services were offered to 10 units on consultancy basis. 42 products were developed and the relevant technology was transferred to 40 clients. Rubber compounds / products received from about 400 units (about 1500 samples for the testing of about 4800 parameters) were tested and technical advice was given for achieving the quality. About 100 nos. of rubber chemicals/compounding ingredients were evaluated for its suitability in rubber compounding and recommendations given. Export assistance was given to 400 units. Preparation of 4 Nos. of market survey reports and 2 Nos. of Trade Directories was in various stages of completion. Other functions of the Division viz academic and training, advisory, procurement of testing equipments etc. were continued. The annual income of the division from the above consultancy activities was Rs. 9,62,858/-.

A scheme was proposed for rubberisation of roads by local bodies and an amount of Rs. 20 lakh was allotted for this.

An Export Promotion Cell for promoting the export of Natural Rubber and rubber product was set up. Various procedures connected with the EPC and issue of certificates of origin etc were started.

45 acres (phase I) of land earmarked for the Rubber Park Project at Kochi was developed out of which 7 acres had already been allotted to a latex product manufacturing unit (Latex Thread) with Malaysian collaboration. 30 acres were ready for allotment. Arrangements for the supply of water and power were in progress. The development of the 50 acres (Phase II) would commence soon. Steps for marketing of plots were initiated.

The Division developed the following rubber products during the year.

The following rubber products were developed.

1. Transparent play ball (Import substitution)
2. Latex Toys (Import Substitution)
3. Floor Mat (Special Type Import Substitution)
4. Oil Seal & Mud flap
5. EPDM Rubber Gasket
6. Hawai Chappals
7. Tongue of Toy Snake (Dipped article)
8. Penrose Tubing
9. Hollow Mat (grease resistant)
10. Solution Adhesive
11. Neoprene Gasket
12. Rubber Sealing Rings for water transmission pipes
13. Vibration pad and rubber holder for A/C units
14. Neoprene Adhesive
15. Natural Rubber Adhesive
16. MC solings & flexible mattings
17. Autoboot
18. Transparent rubber band
19. Moulded rubber item
20. Rubber Beading
21. Floor Mat for LPG carriers
22. Mould for plaster of paris works
23. Catheter Tubes
24. Ebonite Sheet for comb
25. Non-slip foam mat
26. Industrial Gloves
27. Rubber moulds for floor tiles
28. Pharmaceutical Closures
29. Catheter tubes from NR latex
30. Catheter Vials
31. Engine Mounting and Coupling Bush
32. Tank Lining
33. Auto Rubber Components
34. Anti-vibration pad
35. Mounting for automotive application
36. Mouse pad
37. Bonding gum & Black Vulcanizing Cement
38. Precured Tread
39. Surgical tubing and Tube connectors
40. Pre vulcanized latex for balloons
41. Latex adhesive
42. Seals and grommets

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## **PART VIII**

### **FINANCE & ACCOUNTS DEPARTMENT**

The Finance & Accounts Department is concerned with designing and operating the Accounting system, preparing budget, financial statements and reports, exercising budgetary control, effective Funds Management, establishment and maintaining systems and procedures, overseeing internal audit and arranging for Statutory audit, 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 by the Department during the year.

1. Preparation of Annual Budget, Performance Budget, Foreign Travel Budget etc and exercising budgetary control.
2. Drawal and disbursement of money against the sanctioned budget of the Board.
3. Maintenance of the accounts of the Board, preparation of Annual Accounts and Balance Sheet, submission of the accounts for audit by the Accountant General Kerala and the audited accounts to the Rubber Board/Ministry/Parliament.
4. Placing demands for grant from Govt. from time to time, receiving funds from Government and financial management ensuring its optimum utilisation.
5. Advising on financial propriety and regularity of transactions and regulating payments.
6. Assisting the Cost Accounts Branch of the Ministry of Finance in ascertaining the cost of production and in fixing price of Natural Rubber.
7. Preparation of financial statements for project reports and schemes.
8. Dealing with Central Income Tax, Agricultural Income Tax and Sales Tax matters relating to the activities of the Board.
9. Co-ordinating the activities of the companies jointly promoted by the Rubber Board and RPSs.
10. Computerised Data Processing in the field of financial accounting, pay roll etc. and coordinating computer applications in other areas.
11. Preparation of detailed cost tables and other financial statements supporting the proposals periodically presented to the World Bank Mission for Review.

12. Drawal and disbursement of pay and other entitlements of the employees of the Board based on the orders issued by Govt.of India from time to time.
13. Management of Pension Fund and General Provident Fund and regulating disbursements therefrom.
14. Implementation of the Scheme of Computerisation and Networking of all departments of the Board.

### **Annual Accounts 1999-2000**

Statutory Annual Accounts for the year 1999-2000 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 placed before the Board and forwarded to the Ministry.

### **Revised Estimates 2000-01 and Budget Estimates 2001-02**

The Revised Budget for 2000-01 and Budget Estimates for 2001-02 were prepared within the time frame and submitted to the Government. Budget sanctioned for the year 2000-01 both Plan & Non plan put together was Rs. 112.45 crore which was reduced to Rs.94.52 crore in the approved Revised Estimate. As against this the actual expenditure for the year was Rs.83.07 crore. The financial target originally set could not be achieved due to closing down of the World Bank Project Schemes abruptly on 30.09.2000 and inability to implement certain schemes in the NE Region within the stipulated period due to several constraints. The total budget estimates proposed for the year 2001-02 was Rs.89.38 crore against which the sanctioned budget is Rs.85.42 crore including the internal resources.

### **Management of Funds**

#### **(i) General Fund**

Funds amounting to Rs. 77.11 crore was received from Government as budgetary support including Rs.32.11 crore of Foreign Aid during the year 2000-01. The internal resources during the year was about Rs 10.70 crore. The total expenditure for the year 2000-01 was Rs.83.07 crore.

**(ii) General Provident Fund/Pension Fund**

The balance under the General Provident Fund as on 31<sup>st</sup> March 2001 was Rs.1359.85 lakh and that under Pension Fund Rs. 1037.27 lakh. The accumulations in the funds were invested to obtain optimum returns. The Board is maintaining 2548 GPF accounts. Pension was given to 440 pensioners during the year.

**(iii) Cost Accounts**

Collecting and analyzing cost data and updating to provide information sought for from the Government, ANRPC etc. on raising rubber plantation per hectare in different regions, the cost of production of planting materials and natural rubber, cost of processing etc. for enabling the regulation of price of rubber.

**iv) Computerisation of the Board.**

The Finance Department has been coordinating an ambitious programme for the computerisation of all Departments of the Board (The second phase of Computerisation under the World Bank assisted Rubber Project).

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## PART IX LICENSING & EXCISE DUTY

The Rubber Board is vested with powers of assessment and collection of duty of excise (cess) on all rubber produced in India under Section 12 of the Rubber Act, 1947. The cess so levied and collected is to be remitted to the Consolidated Fund of India after deducting the cost of collection. All transactions in rubber are regulated in accordance with the licences issued by the Board as provided in Section 14 of the Rubber Act, 1947. The quantity of rubber transacted by every licensee is to be reported to the Board in his periodical returns. Interstate transport of rubber is regulated by a declaration in Form 'N'. Periodical inspections are conducted to ascertain the correctness of the books of accounts maintained and stock held by the manufacturers/dealers/processors. These functions are discharged/monitored by the Licensing & Excise Duty Department of the Rubber Board, which consists of the following Divisions & Offices.

### I EXCISE DUTY DIVISION

The issuance of licence to manufacturers to acquire rubber, assessment, collection and remittance to the consolidated Fund of India, the duty of excise (cess) on rubber are some of the important functions attended by the Excise Duty Division.

- (1) **Issuance of licence**  
 (a) **Issuance of licence for the year 2000-2001.**

The function of issue of licence includes the work of issue of new licences to prospective manufacturing units and renewal of the existing licence for the subsequent year. The details of licences issued during 2000-2001 are furnished below.

Fresh licence	275 Nos.
Renewal of licence	4800 Nos.
<b>TOTAL</b>	<b>5075 Nos.</b>

During the period, licences in respect of 13 units were cancelled on the basis of their request. Thus, the total number of licensed manufacturers as at the end of

31.3.2001 was 5062. The state-wise distribution of licensed manufacturers as at the end of 31<sup>st</sup> March 2001 is detailed hereunder.

Sl.No.	Name of State/Union Territory	No. of units
01	Kerala	891
02	Maharashtra	612
03	Punjab	537
04	Tamilnadu	502
05	West Bengal	447
06	Uttar Pradesh	438
07	Gujarat	378
08	Delhi	276
09	Haryana	289
10	Karnataka	229
11	Andhra Pradesh	139
12	Rajasthan	87
13	Madhya Pradesh	88
14	Bihar	34
15	Pondicherry	30
17	Chandigarh	17
16	Goa, Dadra, Nagarhaveli & Daman	25
18	Orissa	14
19	Himachal Pradesh	6
20	Jammu & Kashmir	8
21	Assam	6
22	Tripura	9
<b>Total</b>		<b>5062</b>

The Division 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) Renewal of licence for the year 2001-2002**

The Division renewed the licences of 3113 existing manufacturers for the year 2001-02.

**(2) Registration of letter of authorisation to purchase rubber by agent/dealers on behalf of manufacturers**

The Division registered 426 letters of authorisation issued by various manufacturers in favour of their agent dealers to purchase and despatch rubber on their behalf.

**(3) Registration of Branch/Purchase Depot**

On the basis of the applications received from the manufacturers, 14 new branches/purchase depots were registered during the year under report.

**(4) Letter of authorisation to purchase rubber**

Special authorisation 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 and collection of duty of excise (cess) on rubber**

The total assessment of cess on rubber made during 2000-01 was Rs.8255.05 lakh as against Rs.7790.96 lakh assessed during 1999-2000. The total number of half yearly returns (Form 'M') collected from the manufacturers during the year was 10273. Of this 1765 were 'Nil' returns. The Liaison Officers and the Inspecting staff functioning at various parts of the country have furnished 1653 individual inspection reports, on which appropriate actions were taken.

The duty of excise (cess) on rubber collected during the period under report was Rs.8219.05 lakh against Rs.7556.25 lakh collected during 1999-2000. Out of this, a

sum of Rs.8087.44 lakh was remitted into the Consolidated Fund of India after deducting the cost of collection.

The total number of security instruments (demand drafts) received towards cess on rubber, licence fee & service charge etc., during 2000-01 was 14094. Besides reconciliation of CFI remittance with Central Bank of India, Kottayam and Regional Pay & Accounts Officer, Chennai was also completed. The demand, collection and balance (DCB) statement for 1999-2000 and final account of cess collection during the period under report were prepared.

The total licence fee and service charges collected during 2000-01 was Rs.9,69,360/-. Besides a sum of Rs.31,45,452/- was collected towards penal interest on belated remittance of cess.

## **II LICENSING DIVISION**

Licensing of rubber dealers and processors and registration of their branches and agents, initiation of punitive action against erring dealers and processors are the main functions of the Licensing Division situated at Kochi.

(i) The number of Licensed dealers which stood at 10,514 at the end of the last year marginally came down to 10482 at the end of the year. During the period under report, 791 new licences were issued and the licenses of 716 dealers were renewed. Besides, the licences of 1724 dealers were renewed for five year term, commencing from 1/4/2001.

(ii) **Licensing of processors**

57 licences were renewed during the year.

(iii) **Suspension and Revocation of licence of dealers and processors**

During the year 344 dealer's licences and one processor's licence were cancelled. Besides, 4 licences of dealers were suspended for violation of the provisions of the

Rubber Act & Rules. Six dealers licenses were also revoked. However, the order of suspension of licences of 2 dealers was rescinded and their licences were restored on getting satisfactory explanation.

**(iv) Registration of branches and agencies**

During the year 311 branches of dealers and processors were newly registered making the total number of branches to 1189 as at the end of March, 2001. Besides, letters of authorisation issued by 267 principal dealers in favour of their agents to purchase and despatch rubber on their behalf were registered during 2000-01.

**(v) Collection of cess from dealers**

On account of irregularities and discrepancies in stock, a sum of Rs.7,20,579/- equivalent to the amount of cess was collected from dealers.

**(vi) Supply of 'N' Form**

6549 books of 'N' forms were supplied to various estates, dealers, processors and Manufacturers in Kochi area to transport rubber out of the State.

**(vii) Distribution of dealers and processors**

Sl. No.	Name of State	No. of dealers	Processors
01	Kerala	9290	115
02	Andhra Pradesh	3	-
03	Assam	26	-
04	Andaman & Nicobar	7	-
05	Bihar	6	-
06	Chandigarh	6	-
07	Delhi	144	-
08	Goa	1	-
09	Gujarat	36	-
10	Haryana	42	-
11	Jammu & Kashmir	1	-
12	Karmataka	118	8
13	Madhya Pradesh	5	-
14	Maharashtra	90	-

15	Meghalaya	13	-
16	Orissa	1	-
17	Punjab	170	-
18	Rajasthan	18	-
19	Tamilnadu	213	9
20	Tripura	120	1
21	Uttar Pradesh	83	-
22	West Bengal	86	-
23	Pondicherry	2	-
25	Nagaland	1	-
<b>TOTAL</b>		<b>10482</b>	<b>133</b>

a) **Districtwise distribution of dealers in Kerala**

Sl.No.	Name of District	No. of dealers
01	Alappuzha	133
02	Ernakulam	1241
03	Idukki	457
04	Kannur	449
05	Kasaragod	103
06	Kollam	1146
07	Kottayam	2523
08	Kozhikode	220
09	Malappuram	419
10	Palakkad	326
11	Pathanamthitta	1175
12	Thiruvananthapuram	869
13	Thrissur	168
14	Wynad	61
<b>TOTAL</b>		<b>9290</b>

### III MARKET INTELLIGENCE DIVISION

Detection of bogus/unlicensed dealing in rubber, arranging surprise inspection/squad inspection of the business premises of the rubber dealers for checking the correctness of their books of accounts and physical stock, cross verification of the statutory returns filed by the dealers/manufacturers and processors for ascertaining the correctness of the quantity of rubber acquired, road checking and surprise visit to check post and Railway Parcel Office with a view to prevent evasion of cess on rubber and thereby improve cess collection form the important functions in Market Intelligence Division. Inspections are 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.

#### 1. *Inspection Squad*

- 1.1 The inspection squad functioned from Kozhikode, Kochi, Kottayam and Thiruvananthapuram and the Inspectors (Market Intelligence) at Palakkad, Punalur and Nagercoil helped to a great extent in arresting the illicit trade in rubber and thereby improve the cess collection. The inspection also helped in collecting monthly returns from a large number of rubber dealers.
- 1.2 During the period under report, the squad spent several days on tour and inspected the business premises of 2806 licensed dealers, 70 unlicensed dealers and detected irregularities in 350 cases involving 400 MT as shortage/unaccounted stock/irregular sale. A sum of Rs.6,66,917/- was also collected towards cess on rubber from the parties involved. The squad also conducted road checking and surprise visits in the check posts and border areas which resulted in reducing the illicit trading and smuggling of rubber across the border.

Special attention was also given for scrutiny of inspection reports, form N declarations/daily statement of check posts. On the basis of serious irregularities detected, the licence of 2 dealers was recommended for suspension.

## 2. *Checkposts/interstate movement of rubber*

2.1 In order to strengthen surveillance of interstate movement of rubber, regular checking of the documents accompanying the rubber consignments were done at the three check posts at Walayar, in Palakkad District, Bengra Manjeswaram in Kasargod District, both in the State of Kerala and Kavalkinar in Thirunelveli District of Tamilnadu.

2.2 The surveillance exercised through the three check posts helped in detecting illicit transport of rubber. During the period under report, the officials at Walayar, Manjeswaram and Kavalkinar check posts detained 30 consignments of rubber for various reasons. Of this 19 consignments were allowed to cross the border on production of valid documents/satisfactory explanations and 9 consignments were released after collecting a sum of Rs.1,40,257/- towards cess amount and security deposit equivalent to the cess involved in the quantity as the consignors failed to produce convincing evidence/explanation. In the remaining two cases, the consignments were released after collecting a sum of Rs.4,70,297/- as cess. The Board's checkpost officials/Inspectors (MI) rendered all necessary assistance to the Sales Tax/Police officials who detained 9 consignments of rubber despatched under suspicious circumstances.

2.3 During the period under report, 43791 consignments of rubber had passed through the three check posts as shown below.

i)	Walayar Checkpost	:	29610
ii)	Manjeswaram Checkpost	:	9284
iii)	Kavalkinar Checkpost	:	4897
	<b>Total</b>	:	<b>43,791</b>

2.4 During 2000-2001, 2276 form 'N' books were supplied to various estates, processors, dealers and manufacturers. 65532 copies of form 'N' declarations were received at the Market Intelligence Division and appropriate action taken wherever discrepancies were noticed.

### 3. *Cross checking of monthly returns*

3.1 The monthly returns and copies of Form 'N' declarations received from various dealers/manufacturers/processors/estates were cross checked at random and detected discrepancies in 164 cases. A sum of Rs.19,23,759/- was also realised in the case of irreconcilable transactions.

3.2 Due to the close monitoring of the Market Intelligence Division

- (a) A sum of Rs.41,15,000/- was realised towards cess on rubber during the year 2000-2001, from one manufacturer who indulged in irregular trade practices.
- (b) A foam manufacturing unit who was making heavy purchase of rubber without valid licence was brought under licence and a sum of Rs.9,56,778/- could be collected from him.

3.3 Thus on account of the efforts of the Market Intelligence Division, a total sum of Rs.82,73,008/- could be collected additionally during the year.

## IV SUB/LIAISON OFFICES

With a view to improve collection of Cess on rubber and to maintain liaison with various Ministries and other Departments like Customs, Central Excise, Revenue authorities etc. and monitor the transactions of dealers and manufacturers. Board maintains 9 Sub/Liaison offices in the major rubber consuming centres outside Kerala at Chennai, Bangalore, Secunderabad, Ahmedabad, Kanpur, Mumbai, Calcutta, Jalandhar

and New Delhi. These offices function mainly to assess the suitability of applicants to hold licences to deal in rubber or acquire rubber for manufacturing rubber products. The purchase made by the rubber goods manufactures and dealers and the stock held by them were verified at random. Verifications of the books of accounts and records of the licencees were also done to ensure that all rubber procured by them were properly accounted and subjected 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 loss of revenue towards cess.

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## **PART X STATISTICS AND PLANNING**

### **1 General Statistics**

The activities undertaken by the S&P Department during the period April 2000 to March 2001 included regular monitoring of the data on supply, demand, stock and price of rubber and presenting them to the Board and the Government. Demand-Supply position of rubber was reviewed periodically by Board which met on 7/4/2000, 30/9/2000 and 21/12/2000. For discussions in these meetings, notes supplemented with statistical data showing the prevailing scenario in the NR sector and the future trends were prepared by the Department.

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, consumption, 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. The 'Indian Rubber Statistics Vol.24' containing detailed information on area under rubber, production, consumption, import, export, price etc of natural, synthetic and reclaimed rubber, manufacturers, dealers, rubber products, labour, etc besides world rubber statistics with necessary tables was published in March 2001 using inhouse computer facilities.

The Department furnished relevant statistical information to the Government and various organizations connected with the rubber industry. For answering Parliament questions and Legislative Assembly questions pertaining to import/export, production, price etc of rubber and the various aspects of rubber industry, materials were prepared and submitted.

In order to ascertain the production of various grades of processed rubber in the country during 1999-2000, annual reports were collected from the processors of centrifuged latex, block rubber, PLC and crepe mills. Annual returns relating to the year 1999-2000 were collected from manufacturers of rubber industry to work out consumption of rubber according to end products.

The census work initiated in 1988 to collect the data on production of NR in the small holding sector was continued in the reporting period also. Census work was conducted in 60 villages in Kerala employing the stratified random sample technique in selecting the villages and with the help of 153 enumerators recruited at Regional Office level. The S&P Department co-ordinated and monitored the census work. For selection of enumerators, training and assignments of work etc the technical officers of the Department assisted the field staff.

## **II Planning**

Annual Plan proposal on rubber for 2001-2002 was prepared and presented to the Ministry. A comprehensive note on achievements of the Board and review of rubber plantation industry was also prepared and presented.

..

Review on production, consumption, import, stock, price, policy changes, market interventions and global trends of NR during the period of implementation of the World Bank Assisted Rubber Project, was prepared.

The forecasting model component of the World Bank Assisted India Rubber Project had contemplated construction of a computer based rubber sub-sector. The modeling component has three blocks, viz., supply, demand and price. Forecasting models for price, production and consumption for tyre and non-tyre sector were built separately and updated periodically. The result was also presented to the World Bank. Also monitored the developments and impact of the WTO regulations as related to rubber industry.

### III Supply of information to World Organizations

The S&P Department continued to supply information about the NR industry to the world organizations like the Association of Natural Rubber Producing Countries (ANRPC), Kuala Lumpur (Malaysia) and International Rubber Study Group (IRSG), London. As a measure of economy, India had withdrawn its membership from the IRSG in July 2000.

The Rubber Board on behalf of the Govt. of India hosted the 23<sup>rd</sup> Assembly of ANRPC at Kochi from 13<sup>th</sup> to 16<sup>th</sup> March 2001. Shri LV Saptharishi, Addl. Secretary to Govt. of India, Ministry of Commerce and Industry, inaugurated the Assembly. Shri SM Desalphine, Chairman of the Rubber Board, was elected as Chairman of the Assembly. The Assembly was preceded by the 24<sup>th</sup> meeting of the ANRPC Executive Committee. The Executive Committee had examined and discussed in detail the problem faced by the NR industry. It was noted that global and regional developments as well as national issues had profound bearing on the industry and member country's co-operation was called for more urgently.

The Assembly drew up a programme which would enhance closer cooperation among member countries to deal with the challenges ahead. Further strengthening of the organization was also reiterated in the Assembly.

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**PART-XI**  
**STATISTICAL TABLES**

**Table-1**

**PRODUCTION, IMPORT, EXPORT & CONSUMPTION OF NR**  
(Tonnes)

Month		Production	Import*	Export	Consumption (Indigenous & imported)
April	2000	44105	247	1349	51040
May	"	47345	505	581	51675
June	"	40400	1394	995	53225
July	"	42750	2163	1188	53950
August	"	45320	481	527	52415
September	"	56550	973	247	51565
October	"	64825	861	1468	51060
November	"	72090	832	1748	55450
December	"	76850	240	2318	56245
January	2001	70550	280	1028	52440
February	"	32515	182	844	50475
March	"	37105	414	1063	51935
<b>Total</b>		<b>630405</b>	<b>8572</b>	<b>13356</b>	<b>631475</b>

\* Source: DGCI&S, Calcutta.

**Table-2****STOCK OF NATURAL RUBBER AT THE END OF EACH MONTH**  
(Tonnes)

Month		Growers,dealers & processors	Manufacturers	Total
April	2000	135278	49602	184880
May	"	131517	48958	180475
June	"	117945	50075	168020
July	"	113355	44185	157540
August	"	116395	34000	150395
September	"	129010	27080	156090
October	"	136715	32475	169190
November	"	148580	36240	184820
December	"	167950	35380	203330
January	2001	178540	43160	221700
February	"	161980	41095	203075
March	"	136310	47590	183900

**Table-3**  
**PRODUCTION, IMPORT & CONSUMPTION OF SYNTHETIC RUBBER**  
 (Tonnes)

Month		Production *	Import **	Consumption
April	2000	4401	9014	13455
May	"	2913	6308	14340
June	"	6136	8697	14450
July	"	5751	8670	14310
August	"	5819	6229	13850
September	"	5443	8354	14180
October	"	5308	18319	14025
November	"	5083	9498	14820
December	"	6563	7626	14785
January	2001	6504	9128	14330
February	"	5597	8654	14050
March	"	5942	7856	14075
<b>Total</b>		<b>65460</b>	<b>108353</b>	<b>170670</b>

\* Provisional

\*\* Source DGCI & S, Calcutta.

**Table-4**  
**PRODUCTION & CONSUMPTION OF RECLAIMED RUBBER**  
 (Tonnes)

Month		Production *	Consumption
April	2000	4815	5040
May	"	5320	5205
June	"	5435	5450
July	"	5385	5405
August	"	5340	5395
September	"	5235	5280
October	"	5230	5285
November	"	5390	5430
December	"	5210	5260
January	2001	5020	5080
February	"	4745	4685
March	"	4995	4745
<b>Total</b>		<b>62120</b>	<b>62260</b>

\* 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	2000	3687	3555	3396	3199	3115	3046	3307	3186	3069	3011
May	"	3820	3648	3437	3356	3288	3189	3450	3324	3261	3185
June	"	3806	3596	3390	3248	3169	3058	3395	3258	3201	3055
July	"	3832	3567	3402	3253	3145	3010	3396	3286	3199	2992
August	"	3683	3508	3332	3198	3046	2914	3347	3247	2999	2897
September	"	3637	3427	3306	3122	2962	2853	3271	3171	2818	2771
October	"	3566	3374	3266	3061	2930	2831	3220	3120	2745	2699
November	"	3408	3242	3142	2909	2762	2613	2996	2896	2496	2402
December	"	3273	3169	3037	2867	2685	2579	2978	2878	2528	2424
January	2001	3263	3146	3029	2853	2667	2563	3015	2914	2680	2527
February	"	3128	3038	2894	2694	2558	2501	2890	2673	2543	2469
March	"	3047	2961	2828	2667	2578	2483	2869	2667	2538	2476
<b>YEARLY AVERAGE (2000-01)</b>		<b>3513</b>	<b>3353</b>	<b>3205</b>	<b>3036</b>	<b>2909</b>	<b>2803</b>	<b>3178</b>	<b>3052</b>	<b>2840</b>	<b>2742</b>

**Table-6**  
**MONTHLY AVERAGE PRICE OF VARIOUS GRADES OF NATURAL RUBBER**  
**IN KUALALUMPUR MARKET**  
 (Rs/Quintal)

Month		RSS-1	RSS-2	RSS-3	RSS-4	RSS-5	SMR-5	SMR-10	SMR-20
April	2000	3160	3090	3073	2951	2893	3102	2984	2960
May	"	3197	3103	3085	2963	2905	2957	2802	2779
June	"	3137	3022	3004	2880	2820	2847	2694	2671
July	"	3003	2875	2857	2733	2673	2746	2643	2618
August	"	3215	3075	3056	2929	2869	2906	2855	2831
September	"	3127	2994	2975	2847	2787	2891	2820	2796
October	"	3173	3047	3028	2899	2838	2926	2881	2857
November	"	3104	3010	2991	2861	2799	2926	2890	2865
December	"	3137	3055	3037	2906	2844	3031	3012	2988
January	2001	3057	2940	2921	2792	2730	3008	2928	2904
February	"	2942	2818	2800	2670	2608	2926	2814	2789
March	"	2821	2687	2669	2539	2477	2668	2544	2519
<b>YEARLY AVERAGE (2000-01)</b>		<b>3089</b>	<b>2976</b>	<b>2958</b>	<b>2831</b>	<b>2770</b>	<b>2911</b>	<b>2822</b>	<b>2798</b>

**ANNEXURE****LIST OF MEMBERS OF THE RUBBER BOARD**  
**AS ON 31.03.2001**

- |    |  |   |
|----|--|---|
| 1. | <b>Shri S Maria Desalphine IAS</b>   | <b>Chairman, Rubber Board</b>   |
| 2. | <b>Secretary<br/>Environment and Forest Department<br/>Govt.of Tamil Nadu<br/>Chennai.</b>   | <b>Representative of the Govt.of<br/>Tamil Nadu under sub-rule (2) of<br/>rule 3.</b>                         |
| 3. | <b>Shri A Jacob<br/>Velimala Rubber Company Ltd.<br/>Ooppootil Buildings, KK Road<br/>Kottayam.</b>  | <b>Representative of the Large<br/>Growers from the State of Tamil<br/>Nadu under sub-rule (2) of rule 3.</b> |
| 4. | <b>Agricultural Production<br/>Commissioner, Govt.of Kerala<br/>Agriculture Department,<br/>Government Secretariat<br/>Thiruvananthapuram.</b> | <b>Representative of the Govt.of<br/>Kerala under sub-rule (3) of rule 3.</b>                                 |
| 5. | <b>Chairman<br/>Plantation Corporation of Kerala Ltd.<br/>Kottayam.</b>  | <b>- do -</b>   |
| 6. | <b>Shri MD Joseph<br/>Manniparambil<br/>Kanjirappally<br/>Kerala</b>   | <b>Representative of Large Growers<br/>from the State of Kerala under sub-<br/>rule (3) of rule 3.</b>        |
| 7. | <b>Shri K Jacob Thomas<br/>Managing Director<br/>M/s. Vaniampara Rubber Co.Ltd.<br/>Vazhakala Buildings, KK Road<br/>Kottayam</b>              | <b>- do -</b>   |
| 8. | <b>Shri George John<br/>Managing Director<br/>M/s. Thamarappally Rubber Co.Ltd.<br/>Kottayam</b>   | <b>- do -</b>   |
| 9. | <b>Shri KG Ravi<br/>General Secretary<br/>Kerala State Karshaka Congress<br/>Trivandrum</b>  | <b>Representative of small rubber<br/>growers in the State of Kerala under<br/>sub rule (3) of rule (3)</b>   |

10. **Shri PR Muralidharan**  
**Pathalil House**  
**SN Puram Post, Kottayam**  
**Kerala** - do -
11. **Shri PB Sathyan**  
**Plavada Kochuveedu**  
**South Vazhakulam Post**  
**Aluva-5**  
**Kerala** - do -
12. **Shri Suresh Elwadhi**  
**Managing Director**  
**Elwadhi Rubber Products**  
**New Delhi & Vice-President**  
**All India Federation of Rubber**  
**Products Manufacturers & Member,**  
**Management Committee, AIRIA** Representative of Rubber Goods  
manufacturers under clause (d) of  
sub-section (3) of section 4.
13. **Shri VV Augustine**  
**Valavanthuruthel**  
**Edapally PO, Cochin.** - do -
14. **Shri P Lalaji Babu**  
**General Secretary**  
**All India Plantation Workers'**  
**Federation, Quilon District.** Representative of Labour Interests  
under clause (d) of sub-section (3) of  
section 4.
15. **Shri Kanam Rajendran**  
**Secretary**  
**Kerala State Committee of AITUC**  
**Thiruvananthapuram** - do -
16. **Shri CK Sajinarayanan**  
**'Gayathri'**  
**11/6, Link Road, Ayyanthole**  
**Thrissur - 680 003.** - do -
17. **Shri. C Anantha Krishnan**  
**General Secretary**  
**Kanyakumari District**  
**Rubber Estate Workers' Union**  
**INTUC, Nagacode**  
**Kulasekharam.** - do -
18. **Shri ET Varghese**  
**President**  
**Indian Rubber Dealers Federation**  
**Rubber Bhawan, Kodimatha**  
**Kottayam.** Representative of Other Interests  
under sub-rule (4) of rule 3.

- |     |   |  |
|-----|---|--|
| 19. | <b>Shri Ettumanoor V Radhakrishnan<br/>Valayil House<br/>Ettumanoor<br/>Kottayam District.</b>      | - do -   |
| 20. | <b>Smt. Rema Reghunandan<br/>'Smriti', Akkikkavu<br/>PO Chavakkad, Trichur District<br/>Kerala.</b> | - do -   |
| 21. | <b>Shri Joseph Vazhakkan<br/>Vazhakamayil<br/>Ramapuram<br/>Kottayam</b>                            | - do -   |
| 22. | <b>Shri Jawahar Lal Jaiswal<br/>Member, Lok Sabha</b>   | <b>Member of Parliament under<br/>section 4(3)(e).</b> |
| 23. | <b>Vacant</b>   | - do -   |
| 24. | <b>Shri Ramachandra Khuntia<br/>Member, Rajya Sabha</b>   | - do -   |
| 25. | <b>Dr. AK Krishnakumar<br/>Rubber Production Commissioner<br/>Rubber Board, Kottayam.</b>           | <b>Ex-officio</b>                                      |
| 26. | <b>Executive Director</b>   | <b>Vacant</b>  |

