

Rubber Research Institute of Sri Lanka

Vision

The Institute's vision is to emerge as the centre of excellence in providing high quality scientific technologies to the rubber industry.

Mission

The Institute's mission is to revitalize the rubber sector by developing economically and environmentally sustainable innovations and transferring the latest technologies to the stakeholders through training and advisory services

Objectives

- Increase productivity to international standards
- Increase national production of NR to meet the increasing demand
- Optimal and sustainable utilization of land, labour and other resources
- Maximize domestic value addition to rubber
- Encourage individual competency and self development of RRI personnel

and in the process, improve the organizational effectiveness of the institute

Policies

- Continuation of the research and extension activities on all aspects of rubber production and processing
- Continue to promote environmentally friendly and sustainable agricultural industry
- Transfer the developed technologies through training and advisory services

**RUBBER RESEARCH BOARD
ANNUAL REPORT - 2013**

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Report of the Chairman

Rubber Research Board as its main mandate guided the management activities of scientific staff of the Rubber Research Institute. RRB extended its fullest cooperation and directed the scientific staff to concentrate on research and development activities to fulfill the needs of the stakeholders. Smooth functioning of the Institute's administration and effective financial management has been looked after by the RRB satisfactorily.

During the year 2013, nine (09) Board meetings were held in order to address the needs of the Institute and the industry. New Additional Director and the Senior Manager (Estate) assumed duties on 06/05/2013 and 01/07/2013 respectively. Meanwhile, Rubber Research Board was able to fill the vacant positions of Technological Officer (Mech.), Technical Officer (Computer Hardware), Seven Management Assistants and two Field Officers.

The most important event of the year was undoubtedly the visit of the President of Sri Lanka. His Excellency Mahinda Rajapakse, the President of the Democratic Socialist Republic of Sri Lanka on the invitation of Honorable Mahinda Samarasinghe, Minister of Plantation Industries declared open Dr. Colvin R de Silva Auditorium on 01st November 2013 at Dartonfield, Agalawatta. During the year, high priority was given to the expansion of rubber cultivation to non-traditional areas specially in Northern and Eastern provinces.

Rubber was planted in 5.61ha with twelve smallholders and four Civil Security Department camps in Mulativu and Vavunia Districts and rubber harvesting was inaugurating commenced in Polgahawela Substation by Honorable Minister Mahinda Sanarasinghe. The training programmes were continued in all rubber growing districts paying special attention to Uva and Eastern provinces.

It was as usual a pleasure to work with the Director who continues to provide leadership to the Institute. I wish to thank him and the staff for their hard work contributing to upholding RRISL's position as the premier research institute in Sri Lanka. I must also thank the members of the Board for their professional advice and support in dealing with the issues facing the institute.

Mr. J. Y. Peiris
Chairman
Rubber Research Board

RUBBER RESEARCH BOARD OF SRI LANKA

BOARD OF MANAGEMENT

Members appointed by the Hon Minister of Plantation Industries

Mr J Y Peries, Chairman, Rubber Research Board
Ms P C Madhuwanthi, Department of Policy Planning, General Treasury
Mr S S Poholiyadda, Director Operations, Kegalle Plantations Ltd.
Mr R C Peiris, Chief Executive Officer, Kotagala Plantation Ltd.
Mr R A D S Ranatunge, Representative of Ministry of Plantation Industries
Mr M S Rahim, Representative, Colombo Rubber Traders Association
Mr Justin Seneviratne, Director, Lalan Rubbers (Pvt.) Ltd.
Mr H Chandrasiri, 90, Temple Road, Meewanapalana
Mr P W Kumara, Secretary/Director, Sri Lanka Council for Agricultural Research Policy
Mr Ranjith Athukorala, No.163 1/2, Castle Street, Colombo 8
Mr K C Fernando, Trade Union Representative, RRI (until 16 July 2013)
Mr S L G Ranjith, Trade Union Representative, RRI (w.e.f.17 July 2013)
Mr P G Chandrasena, Trade Union Representative, (w.e.f.17 July 2013)

Ex-Officio Members

Dr W M G Seneviratne, Director, Rubber Research Institute
Mr R B Premadasa, Director General, Rubber Development Department
Mr S K L Obeysekera, Chairman, Planters' Association of Ceylon (until 13 September 2013)
Mr P G Rajadurai, Chairman, Planters Association of Ceylon (w.e.f.27 September 2013)

STANDING COMMITTEES

Estates Committee

Mr J Y Peries, Chairman, Rubber Research Board
Dr W M G Seneviratne, Director, Rubber Research Institute
Dr C K Jayasinghe, Additional Director, RRI (upto April,2013)
Mr Nissanka Seneviratne, Deputy General Manager, Eladuwa Estate, Matugama
Mr Srinath de Livera, Manager, Paiyagala Estate, Dodangoda
Mr Tony Bertus, General Manager (Rubber), Agalawatta Plantations Ltd., No.10, Gnanartha Pradeepa Mawatha, Colombo 8
Mr Sanjaya Doranegama, Superintendent, Pallegoda Estate, Dharga Town
Mr S A R Samarasekera, Manager – Estate, Dartonfield Estate
Mr W Kularatne, Accountant, RRI (In attendance)

Audit and Management Committee

Ms P C Madhuwanthi, Department of Policy Planning, General Treasury - Chairman
Dr W M G Seneviratne, Director, Rubber Research Institute
Mr R B Premadasa, Director General, Rubber Development Department
Mr R A D S Ranatunge, Representative of Ministry of Plantation Industries
Mr W Kularatne, Accountant, RRI
Mrs S Senadheera, Internal Auditor, RRB
Ms R M D S Ratnayake, Audit Superintendent, MPI
Mrs B H P Balasooriya, Acting Secretary to the Board

Scientific Committee

Mr J Y Peries, Chairman, RRB
Dr W M G Seneviratne, Director, RRI
Dr C K Jayasinghe, Additional Director, RRI
Dr (Mrs) P Seneviratne, Head, Plant Science Dept., RRI
Dr (Mrs) L Samarappuli, Head, Soils and Plant Nutrition Dept., RRI
Dr Anura Dissanayake, Head, Advisory Services Dept., RRI
Dr (Mrs) S P Withanage, Senior Research Officer, Genetics & Plant Breeding Dept., RRI
Dr (Mrs) D G Edirisinghe, Acting Head, Rubber Technology and Development Dept., RRI
Dr (Mrs) A H L R Nilmini, Head, Polymer Chemistry Dept., RRI
Dr S Siriwardena, Head, Raw Rubber Process Development and Chemical Engineering Dept., RRI
Dr A M W K Seneviratne, Botanist, Plant Science Dept., RRI
Dr (Mrs) T H P S Fernando, Assistant Plant Pathologist, Plant Pathology & Microbiology Dept., RRI
Dr R S Dharmakeerthi, Soils Chemist (Principal Research Officer) Soils & Plant Nutrition Dept., RRI
Dr V H L Rodrigo, Head, Biochemistry & Physiology Dept., RRI
Mrs K V V S Kudaligama, Assistant Biochemist, Biochemistry & Physiology Dept., RRI
Mrs A P Attanayake, Assistant Rubber Chemist, Raw Rubber & Chemical Analysis Dept., RRI
Mrs D Seneviratne, Assistant Rubber Chemist, RRI
Dr (Mrs) Wasana Wijesuriya, Biometrician, RRI
Dr S M M Iqbal, Agronomist, Adaptive Research Unit, RRI
Dr U Ratnayake, Senior Research Officer, Raw Rubber Process Development & Chemical Engineering Dept., RRI
Mr K K Liyanage, Research Officer, Genetics & Plant Breeding Dept., RRI
Dr (Mrs) E S Munasinghe, Research Officer, Adaptive Research Unit, RRI
Mr A H Kularatne, Regional Advisory Officer, Advisory Services Dept., RRI

Mrs R P Hettiarachchi, Research Officer, Soils & Plant Nutrition Dept., RRI
Mrs B M D C Balasuriya, Research Officer, Adaptive Research Unit., RRI
Mr W D M Sampath, Research Officer, Rubber Technology and Development Dept., RRI
Mr R Samarasekera, Estate Manager, Dartonfield Group, RRI
Dr N Yogaratnam, Consultant, NIPM, Athurugiriya
Mr Sarath Seneviratne, Superintendent, Bibile Estate, Bibile
Mr R C Peries, CEO, Kotagala Plantations Ltd., No.53 1/1, Sir Baron Jayathilaka Mawatha, Colombo 1
Mr R V K S de Livera, Manager, Kotagala Plantations Ltd., Paiyagala Estate, Dodangoda
Mr N M Amarasekera, No.37/9, Terrance Avenue, Mount Lavinia
Mr D G Wickramasinghe, Director/General Manager, Low Country, Kelanivalley Plantations Ltd., Kiriporuwa Group, Yatiyantota
Mr N B Seneviratne, Deputy General Manager, Namunukula Plantations Ltd., Eladuwa Estate, Matugama
Mr Sriyan Wijesekera, Group Coordinator/General Manager - Rubber, Pussellawa Plantations Ltd., Free Lanka Management Company, No. 228, Havelock Road, Colombo 5
Mr S S Poholiyadda, Director - Operations, Kegalle Plantations Ltd., No.310, High Level Road, Nawinna, Maharagama
Mr A C Bertus, General Manager, Agalawatta Plantations Ltd., Superintendent, Atale Estate, Atale
General Manager, Kahawatta Plantations Ltd., No.52, Maligawatta Road, Colombo 10
Mr Viren Ruberu, Deputy Chief Executive Officer, Kahawatte Plantations Ltd., No.52, Maligawatta Road, Colombo 10
Mr D P A Perera, Deputy General Manager, Balangoda Plantations Ltd., P.O. Box 8, Plam Garden, Ratnapura
Mr Chirstoper Fernando, Executive Director, Malwatte Valley Plantations PLC, 280, Dam Street, Colombo 12
Mr U H Bulugahapitiya, Group Manager, Vincit Estate, Waharaka
Mr Yajith de Silva, General Manager – South, Watawala Plantations Ltd., No.60, Dharmapala Mawatha, Colombo 3
Mr S A Eriyagama, General Manager, Kotagala Plantations Ltd., No.53, 1/1, Sir Baron Jayathilaka Mawatha, Colombo 1
Director General, Rubber Development Department, P.O. Box 184, Vauxhall Lane, Colombo 2
Mr D H Madawala, CEO, Hapugastenna Plantations Ltd., P.O. Box 08, Palmgarden, Ratnapura
Secretary, Ministry of Plantations Industries, No.55/75, Vauxhall Lane, Colombo 2
Mr B A Pradeep Lakshantha, Assistant Secretary, Ministry of Plantation Industries, No.55/75, Vaxhall Lane, Colombo 2

Mr M R C Peiris, Consultant, No.16/2, Charlimont Road, Colombo 6
 Mr Anusha Perera, Pussellawa Plantations Ltd., 168, Negambo Road, Peliyagoda
 Mr G B S de Silva, Deputy CEO, Horana Plantations Ltd., No.8, Sir Chittampalam A
 Gardiner Mawatha, Colombo 2
 Mr A M A S Dhanasekera, Group Manager, Pussella Estate, Eheliyagoda
 Mr Gunendra Sellahewa, Supplies Manager, Dipped Product, No.400, Deans Road,
 Colombo 10
 Mr Asoka Jayasekera, Consultant – Rubber, 69/13a, Templers Road, Mount Lavinia
 Dr M R N Fernando, Loadstar (Pvt.) Ltd., Minuwangoda Road, Ekala, Jaela.
 Mr Christoper Seneviratne, Manager, Peenkanda Estate, Nivitigala
 Mr D B S L Perera, Manager, Kumarawatte, Moneragala Estates, Monaragala
 Mr M R Fernando, Superintendent, Malaboda Estate, Matugama
 Mr U D Premathilaka, General Manager - Rubber, Kelanivally Plantations Ltd., 400,
 Deans Road, Colombo 10
 Mr K A Amarathunga, Manager, Sunycroht Estate, Waharaka
 Mr R A Alahakoon, Superintendent, Yatadola Estate, Matugama
 Mr Bathiya Bulumulla, Deputy Chief Executive Officer, Elpitiya Plantations PLC,
 Aitken Spence Tower 1, Level 9, 305, Vauxhall Lane, Colombo 2.
 Mr Nisala Jayawardena, Manager, Frocester Estate, Govinna
 Mr L W L Gunawardena, CEO, Elpitiya Plantations Ltd., No.52, Maligwatta Road,
 Colombo 10
 Mr T H Gamage, Manager, Madampe Estate, Rakwana
 Mr M P H Gunaratne, Manager, Bentota Estate, Elpitiya
 Mr S F Fernando, Group Manager, Dewalakanda Estate, Dehiowita
 Mr J N Hettiarachchi, Manager, Dalkeith Estate, Baduraliya
 Mr S W Karunaratne, No.36, Mallikarama Road, Ratmalana
 Mr A G Geeth Kumara, General Manager, Talgaswella Estate, Talgaswella
 Mr N D Madawala, Superintendent, Weniwella Estate, Alawwa
 Mr M D B Dasanayake, Manager, Opatha Estate, Opatha
 Mr G J K Nakandala, Consultant, SAPL Association (Pvt.) Ltd., 375/26, Rathnarama
 Road, 4th Lane, Hokandara North
 Mr A I B Rajasinghe, Superintendent, Galatura Estate, Kiriella
 Mr A F Peries, General Manager – Estate Management, Lalan Rubbers (Pvt.) Ltd.,
 No.198 B, Gnanendra Mawatha, Nawala
 Mr D M D B Daswatte, Manager, Millewa Estate, Millewa
 Mr C U Pallege, Senior Manager, Rayigam Estate, Ingiriya
 Mr Athula Rajasinghe, Superintendent, Galatura Estate, Galatura
 Mr A K D Rukmal, Superintendent, Pelmadulla Estate, Kahawatta
 Mr Jeewantha Senarathne, Senior Manager, Rilhena Estate, Pelmadulla
 Mr N P Seneviratne, Manager, Udapolla Estate, Deraniyagala
 Group Senior Manager, Sapumalkanda Group, Deraniyagala
 Mr R Seneneviratne, Group Manager, Halpe Estate, Tummodera

Mr Y N Samarasinghe, Manager, Poranuwa Estate, Kahawatta
Mr L P A N Seneviratne, Group Manager, Moraliya Estate, Ruwanwella
Mr A U A M Athukorale, Superintendent, Pambegama Estate, Parakaduwa
Mr K G Thilakaratne, Group General Manager, Mahaoya Group, Lalan (Pvt) Ltd.,
Dehiowita
Mr N Thilakaratne, Assistant Director (Dev.), Ministry of Plantation Industry,
No.55/75, Vauxhall Lane, Colombo 2
Mr R T Tennakoon, Manager, Padukka Estate, Padukka
Mr B H Weerakoon, Manager, Neuchatel Estate, Neboda
Mr M P K Udugampola, Deputy General Manager, Elston Estate, Puwakpitiya
Mr I D Weerakoon, Manager, Hunuwala Estate, Opanayaka
Mr K Fernando, Manager, Gulugahakanda Estate, Elpitiya
Mr S Doranegama, Superintendent, Pallegoda Estate, Yatadola
Mr C Seneviratne, Manager, Udabage Estate, Deraniyagala
Mr S C T Fernando, Manager, Uskvalley Estate, Baduraliya
Mr Ranil Fernando, Deputy General Manager, Kelanivalley Plantations PLC, No.400,
Deans Road, Colombo 10
Mr D C Samarasinghe, Manager, Arapolakanda Estate, Tebuwana
Mr Asitha de Costa, Managing Director, Sashrike Plantation Management Services
(Pvt.) Ltd., Warakattenne Estate, Warakattenne, Dehiowita
Mr C S Amarathunga, Kelaniya Estate, Yatiyantota
Mr B C Gunasekera, Group Manager, Panawatta Estate, Yatiyantota
Manager, Nottingham Estate, Mawathagama
General Manager, Agalawatta Plantations PLC, No.10, Gnanarthapradeepa Mawatha,
Colombo 8
Manager, Muwankanda Estate, Mawathagama
Mr Chamika Naranpitiya, Manager, Nakiyadeniya Estate, Watawala Plantations Ltd.,
Nakiyadeniya
Mr Rolly Douglas, Manager, Opatha Estate, Kahawatta
Mr I Senanayake, Group Senior Manager, Sapumalkanda Group, Deraniyagala
Mr Sudath Ariyaratne, Superintendent, Rambukkanda Estate, Ratnapura
Mr Eranda Welikala, Wee Oya Estate, Yatiyantota
Mr H A Ariyathilaka Superintendent, Dammeria B Estate, Passara
Chief Executive Officer, Elpitiya Plantations Ltd, No. 52, Maligawatta Road,
Colombo 10
Mr R Dasanayake, Group Procurement Manager, Dipped Products PLC, No 400, Deans
Road, Colombo 10
Mr K A S Fernando, Director (Technical), Dipped Products PLC, No.400, Deans
Road, Colombo 10
Mr A G Geeth Kumara, General Manager, Talagaswella, Estate, Talagaswella
Mr Karunaratne, Manager, Hunuwella Estate, Opanayaka
Mr L P R Mallikarachchi, Manager, Centrifuging, Dipped Products PLC, No
400, Deans Road, Colombo 10

Dr L P Nethsinhe, General Manager (Technical), Dipped Products PLC, 400. Deans Road, Colombo 10

Mr D M A N Senviratne, Rilhena Estate, Pelmadulla

Mr N de Silva, Manager, Kiriporuwa Estate, Yatiyantota

Mr A Wijerathna, Manager, Divitura Estate, Ethkandura

Provident Fund Committee

Dr W M G Seneviratne, Director, Rubber Research Institute

Mr W D Wimaladasa, Elected Committee Member

Mr H H Jayasinghe, Elected Committee Member

Mr W Kularatne Accountant, RRI (In-attendance)

Chairman's Office & Board Secretariat

Chairman - Mr J Y Peiris000

Acting Secretary to the Board - Mrs B H P Balasooriya

(Personal Assistant to the Chairman)

Lawyers

Attorney General

Attorney General's Department

(Government Institutions)

P O Box 502

Colombo 12

Auditors

Auditor General

Auditor General's Department

Independence Square

Colombo 7

Bankers

Bank of Ceylon

Corporate Branch

75, Janadhipathi Mawatha

Colombo 1

Bank of Ceylon

Agalawatta

Head Office and Laboratories*Dartonfield, Agalawatta*

Telephones:

Director	034 - 2248457
Additional Director	034 - 2248458
Deputy Director Administration	034 - 3346118
General	034 - 2247426
	034 - 2247383
	034 - 3349999
Fax:	034 - 2247427
e-mail	dirri@sltnet.lk
Website	www.rrisl.lk

Rubber Research Institute - Substation*Nivitigalakele, Matugama*

Genetics and Plant Breeding Department
Telephone: 034 - 2247368, 034 - 2247199
e-mail: rrigpb@sltnet.lk

Rubber Research Institute - Substation*Kuruwita, Ratnapura*

Telephone: 045 - 2262115, 045 - 3460537
e-mail: rikuruwita@sltnet.lk

Rubber Research Institute - Substation*Polgahawela*

Telephone: 037 – 3378191

Board Office and Rubber Chemistry & Technology Laboratories*Telewela Road, Ratmalana*

Telephones:

Chairman	011 - 2635019
Director	011 - 2635142
Deputy Director Research (Technology)	011 - 2633351
General	011 - 2635851
	011 - 2635852
Fax:	011 - 2605171
e-mail	dirrub@sltnet.lk

RUBBER RESEARCH INSTITUTE OF SRI LANKA

STAFF AS AT 31.12.2013

DIRECTORATE

<i>Director</i>	W M G Seneviratne, BSc (SL), PhD (Essex)
<i>Additional Director</i>	C K Jayasinghe, BSc (SL), MSc (SL), MSc (Agric) (Aust.), PhD (SL) (upto 12 th April, 2013) V H L Rodrigo, BSc Agric (SL), MSc (Essex), PhD (Wales) (from 6 th May, 2013)

RESEARCH DEPARTMENTS

Genetics and Plant Breeding

<i>Senior Research Officer</i>	Mrs S P Withanage, BSc Agric (SL), MSc (India), PhD (Malaysia)
<i>Research Officers</i>	**K K Liyanage, BSc Agric (SL) MPhil (SL) (No pay leave for a period of three months from 4 th Sep. 2013) Miss P V A Anushka, BSc Agric (SL) P K S G Senarath Bandara, BSc (SL), PhD (Japan)
<i>Experimental Officers</i>	I D M J Sarath Kumara L S Kariyawasam T M S K Gunasekera H P Peries, Dip. Agric (Kundasale) Mrs A K Gamage, BSc (SL)
<i>Technical Officer (Research & Development)</i>	B W A N Baddewithana, BSc (SL)
<i>Management Assistant (Clerical)</i>	Mrs S D P K L Peiris

Plant Science

<i>Head of Department</i>	Mrs G P W P P Seneviratne, BSc (SL), PhD (Bath)
<i>Principal Research Officer</i>	A M W K Senevirathna, BSc (SL), MSc (SL), PhD (Wales)
<i>Senior Research Officer</i>	N M C Nayanakantha, BSc (SL), MSc (India) (from June 2013)
<i>Research Officers</i>	Mrs D S A Nakandala, BSc Agric (SL) K A G B Amaratunga
<i>Experimental Officers</i>	T U K Silva, BSc Agric (SL), MPhil (SL) R.P. Karunasena (upto 3 rd August, 2013)

Mrs G A S Wijesekera
 Mrs R K Samarasekera
 M K P Perera, BSc (SL)
 W D M N de Alwis, BSc (SL)
 D L N de Zoysa
 P D Pathirana, BSc (SL)
 P K W Karunathilake, Dip. Agric (Ratnapura)
 R Handapangoda, BSc Agric (SL)

Technical Officer (Research & Development)

Management Assistants (Clerical)

Mrs H D D E Jayawardena
 Mrs Aruni de Almeida

Plant Pathology and Microbiology

Research Officers

Mrs T H P S Fernando, BSc (SL), MPhil (SL), PhD (SL)
 Mrs M K R Silva, BSc Agric (SL), MSc (SL)
 Miss K M S Tennakoon, BSc (SL)
 (upto 1st March 2013)

Experimental Officers

E B Fernando
 Mrs B I Tennakoon, Dip. Agric (Kundasale)
 Mrs E A D D Siriwardene, BSc (SL)
 S C P Wijyaratne, NDT Agric (Hardy)
 S R D P C Peiris, BSc (SL)
 E A D N Nishantha, Dip. Agric. (Ratnapura),
 BIS (Agric) (SL)

Management Assistant (Clerical)

Mrs K A D Y Madushani Lanka

Audio Visual Aids and Photographic Unit

Technical officer (Computer Hardware)

N.T.K. Delpachitra, HNFD (IT)
 (from 26th February 2013)

Soils and Plant Nutrition

Principal Research Officer

R S Dharmakeerthi, BSc Agric (SL), MSc (SL),
 PhD (Canada) (from 9th March, 2013)

Research Officers

Mrs R P Hettiarachchi, BSc (SL), MPhil (SL)
 Miss H G V K T Gunawardena, BSc (SL)
 (upto 25th June, 2013)

Experimental Officers

Mrs S D C K Maheepala
 S N Silva
 A H U Mitrasena

T B Dissanayake
Miss V U Edirimanne, BSc (SL)
Miss A P Thewarapperuma
P D T C Gunatilleke, NDT (Agric)
J A Sarath Chandrasiri
Mrs Eranga de Silva, NDT

Technical Officer (Research & Development)
Management Assistant (Stenography)

Mrs K A D L Rupasinghe Perera

Biochemistry and Physiology

Head of Department
Research Officer
Experimental Officer
Technical Officer (Research & Development)
Management Assistant (Clerical)

V H L Rodrigo, BSc Agric (SL), MSc (Essex), PhD (Wales) (upto 5th May, 2013)
Mrs K V V S Kudaligama, BSc (SL), MPhil (SL)
P D J Rodrigo
R P S Randunu, BSc (SL)
Mrs H A Manoji Erandika

Advisory Services

Head of Department
Regional Advisory Officers
Assistant Training Officer
Divisional Rubber Extension Officers
Rubber Extension Officers

D M A P Dissanayake, BSc Agric (SL), PhD (Aberdeen)
A H Kularatne, BSc Agric (SL), MSc (Reading), MSc (SL)
P K K S Gunaratne, BSc Agric (SL)
R A D Ranawaka
Miss K G P Manahari, BSc (SL)
M G N Gunaratne
D Weerasekera
W D T C Muniratne, Dip. Plant Ex. Mangt.
K V Nandanakumara (upto 10th Dec. 2013)
D R A M G Abeydissanayake
R M S Ratnayake, NDT Agric (Hardy)
D E P M Nanayakkara, Dip. Agric. (Aquinas)
W D Chandrasiri
M Dharmadasa, BSc (SL), MSc (SL)
J A J Perera
E G U Dhanawardena
Nihal Gamage, Dip. Agric. (Angunakolapelessa)

U N Jayasuriya
G D N Seneviratne
W C Siriwardena, Dip.Agric. (Angunukolapelessa)
S G G Wijesinghe
N G Yasaratne
I P L Kithsiri
W M A S L Wanigasuriya, Dip. Agric (Aquinas)
N L Dharmasena
W P G D C P K Senanayake, NDT Agric (Hardy)

Experimental Officer

S M A Samarakoon, Dip. Agric. (Kundasale)

*Management Assistants
(Clerical)*

Mrs M K Wijetilleke

Mrs C Gunatilleke
Mrs J N R Jayasinghe
Mrs S M Kaluarachchi
Miss S.V. Shirani Madurika, BA (from 21st Oct.
2013)

Polymer Chemistry

Senior Research Officer

Mrs A H L R Nilmini, BSc (SL), PhD (Cardiff)

Research Officer

A M K S P Adikari, BSc (SL), MPhil (SL)

Experimental Officers

Mrs D I R Denawaka, Dip. Rubber Tech. (PRI)
Mrs W C M Kuruppu, Dip. Rubber Tech. (PRI),
Certificate Rubber Tech. (Moratuwa) (upto 16th Feb.2013)
Mrs N Jayawardane, Dip. Agric. (Bibile)

*Technical Officer (Research &
Development)*

Mrs H M H Dhanukamalee, BSc (SL)

*Management Assistant
(Clerical)*

M A W K Tillekeratne
(from 21st Oct. 2013)

Raw Rubber and Chemical Analysis

Research Officer

Mrs A P Attanayake, BSc (SL)

Mrs I H K Samarasinghe, BSc (SL)

Experimental Officers

Mrs L Wanigatunga
Mrs H V K Gamage
Mrs C S Lokuge
Miss D M S Wijesekera, Dip. Rubber Tech. (PRI)
L P P Vitharana
B Gunasiri

Technical Officer (Research & Development) Miss S P Wijewardena, BSc (SL)
Miss W M I Nuwangi, Dip. in Chem.

Management Assistants (Clerical) Miss W D D Samanmali
G.N.K. Gunasena (from 21st May 2013)

Electronic Instruments Repair Unit

Instrument Technician L G P Lelwela (Upto 22nd August, 2013)

Rubber Technology and Development

Acting Head of Department Mrs D G Edirisinghe, BSc (SL), MSc (SL),
MPhil (UK), PhD (SL)

Research Officers *Mrs G D D Seneviratne, BSc (SL)
W D M Sampath, BSc (SL)

Experimental Officers Mrs M K Mahanama, Dip. Rubber Tech. (PRI)
Mrs S I Yapa, Dip. Rubber Tech. (PRI)
Mrs P C Wettasinghe, Dip. in Science
S L G Ranjith, Dip. Rubber Tech. (PRI)
P L Perera
Mrs G M Priyanthi Perera, BSc (SL), MSc (SL)

Technical Officer (Research & Development) V G M J Abeywardena, NDT

Management Assistant (Clerical) Mrs. Sanjeevani Sigera

Raw Rubber Process Development and Chemical Engineering

Head of Department S Siriwardene, BSc (SL), MSc (Australia),
PhD (Malaysia)

Senior Research Officer R M U N Ratnayake, BSc (SL), PhD (Loughborough)

Experimental Officers Mrs W K C Nalinie, Dip. Rubber Tech. (PRI)
E C D Senanayake (upto 28th Oct. 2013)
Mrs U M S Priyanka, BSc (SL), MSc (SL)
Mrs V C Rohanadeepa
A K D W Prasad

Technical Officer (Research & Development) Miss K G P M Dharmatilleke, BSc (SL)

Management Assistants (Clerical) Miss H A Janani Lakshika, BA
Mrs U K Akila Tharinduni
Miss A.R.M.de Alwis

Biometry Section

Biometrician

Mrs B W Wijesuriya, BSc Agric (SL), MPhil (SL),
PhD (SL)

Experimental Officers

Mrs H K D C S Munasinghe, NCT Polymer (Moratuwa),
Dip. Rubber Tech. (PRI), Dip. Computer Science (IDM)
O V Abeyawardene, Dip. Agric. (Kundasale)

Adaptive Research Unit

Principal Research Officer

S M M Iqbal, BSc Agric. (SL), MPhil (SL),
PhD (Essex)

Research Officers

Mrs E S Munasinghe, BSc Agric (SL), PhD (SL)
Mrs B M D C Balasooriya, BSc Agric (SL)

*Technical Officer (Research &
Development)*

P M M Jayatilleke, NDT (Agric.)

*Management Assistant
(Clerical)*

Mrs M A Randima Srimalee

Agricultural Economics Unit

Research Officer

J K S Sankalpa, BSc (SL), MSc (SL)

Polgahawela Sub-Station

Experimental Officer

E A T Senadeera (upto 4th December, 2013)

*Management Assistant
(Accounting)*

Mrs W A C Weeramanthre

Moneragala Sub-Station

Research Officer

H D S P Perera, BSc (SL), MSc (SL)

Field Officers

V.G.D.Nishantha Gunaseela (from 21st Oct. 2013)

N.V.U.S. Vijitha Kumara (from 21st Oct. 2013)

*Management Assistant
(Clerical)*

T.R.C. Silva

Library and Publications Unit

Librarian

S U Amarasinghe, BSc (SL), MA (SL), ASLLA

*Library Assistant & Assistant
Publication Officer*

Mrs R M Amaratunga, Intermediate; Lib. Sci. Doc. &
Info. (SLLA)

*Management Assistant
(Clerical)*

P M P Jayantha

N W E C Maduranga

Administration Department (Dartonfield)

<i>Assistant Medical Practitioner</i>	M Subasinghe
<i>Administrative Officers</i>	L P K W Weliwatta, BA (SL), Dip. in HRM
<i>Management Assistant (Clerical)</i>	
<i>Management Assistants (Clerical)</i>	Mrs P W Neelamanie
	Mrs S K Handunge
	Mrs J A D Wijyanthi
	Mrs B D Niranjala
	Mrs O W D Namali Udayanthi
	Mrs P C Athukorala
	Mrs Thamosha Munasinghe
	Mrs O W D Nilusha Udayanthi
	Miss H N Kanchana
	Miss R.P. Thilini (from 21 st May 2013)
	K A Dilan Sampath
<i>Management Assistant (Stenography)</i>	Mrs J A H S Kumarie
<i>Translator</i>	Mrs D N Senevirathna, BSc (SL), Dip. Agric. (Kundasale)
<i>Telephone Operator</i>	Mrs J A D C Preethika
<i>Pharmacist</i>	S Lankeshwara

Administration Unit (Ratmalana)

<i>Administrative Officer</i>	Mrs. P Mandalawatta
<i>Management Assistant (Clerical)</i>	D.P.N.P.Dissanayke (from 21 st Oct. 2013)

Internal Audit Unit*Internal Auditor*

Mrs M S I Senadeera, AFA, IIPF, IRCA, LICA

Internal Audit Officer

K C Fernando

Management Assistant

Mrs S N Munasinghe

(Clerical)

R G A S Dharmaratne

Udaya Samantha Munindradasa, BA

(from 21st Oct. 2013)**Works Section***Technological Officer (Civil)*

M A D K Jayasumana, NCT

Transport Officer

U L D R L Gunasinghe

*Technological Officer (Mech.)*H.J.P. Fernando, HNDE (from 26th Feb..2013)*Management Assistants*Miss M G Silva (upto 25th Nov.2013)*(Clerical)*

Mrs K C S Wickremasinghe

Mrs J A S Dharshanie (Dip. in Management)

Miss H E H Perera (upto 10th June 2013)

Mrs. K.K.D.K.P. Ranaweera

Mrs. M.N.D. Perera (from 21st Oct. 2013)

Work Supervisor (Electrical)

T M R P Tennakoon

Accounts Section*Accountant*

W. Kularatne

Accounting Assistant

D D R Lankatilaka, BCom (SL)

Management Assistants

Mrs Irene Perera

(Accounting)

Mrs M Gunawardene

Mrs R Handungoda

Mrs G P Kukulewithana

Management Assistant

A V Nandasena

(Clerical)

Mrs K J M C R Fernando

Mrs C Dissanayake

A K D A Wickremasinghe

Mrs S I K Pathirage

Miss K.T.D. Jayawathi

Mrs S A Niluka Harshani

Mrs K K D Y L Ranaweera

Miss K K T L Jayasekera

J A J R Lakmal, BA

Cashier

Mrs. G A D D Jayawardena

*Assistant Purchasing Officer*K.D. Sumanasena (upto 5th April, 2013)

DARTONFIELD GROUP

*Senior Manager - Estate
Experimental Officer
Management Assistant*

P.A. Lakshman, BSc (SL) (from 1st July, 2013)
S S Warnapura
K K P Gunawardena
H D D Achinda
M A N Sachith Pawinda
T D Harsha

Field Officers

B.M. Siriwardena (from 21st Oct. 2013)
A.B. Nakandala (from 21st Oct. 2013)

Kuruwita Sub-Station

*Assistant Estate Superintendent
Management Assistants
(Clerical)*

S A R Samarasekera
D S Jayasinghe
K D P Senaratne

* On study leave overseas
** No pay leave

RUBBER RESEARCH INSTITUTE OF SRI LANKA

DIRECTOR'S REVIEW

Rubber Agronomy departments continued their research and development activities with the broad objective of achieving higher productivity.

New series of RRISL clones was released by the Genetics and Plant Breeding department during the year under review and their first clone was registered as RRISL 2100. Annual hand pollination programme was done at Neuchatel estate but due to uncontrollable level of *Phytophthora* infections the success rate of pollination was low. Routine data collection was done in all existing small scale and estate collaborative trials but heavy rainfall experienced throughout the year affected yield data collection. Smallholder/RRI collaborative trials progressed well and six new trials were established in the Eastern province. Selected germplasm accessions were prepared to screen stress tolerance genes. A wide range of biodiversity was confirmed in the progeny of 2008 hand pollination programme using SSR molecular markers. IRRDB Plant Breeders' group meeting was held at Galadhari Hotel, Colombo to discuss the "Expedition to Peru 2014" to collect new stress tolerance germplasm to enrich the breeding population.

As per the research and development mandate of the Plant Science department, all rubber nurseries were inspected for plant quality improvement and reports were submitted. "Rubber Home Garden" project was conducted satisfactorily during the year. Further expansion of sprinkler irrigation system was done at Monaragala Substation. Nine acres of smallholdings were planted with rubber in Meegahakivula and Kandaketiya of Badulla district. A strategic plan was given to government rubber nurseries to improve clonal composition in their budwood nurseries. Arrangements were made to bud graft sufficient number of RRIC 100 budded plants to expand budwood nurseries in government rubber nurseries in order to supply plants for North and East rubber expansion programmes.

Effect of tapping quality on productivity and sustainability was addressed through awareness and training programmes. An island wide programme was launched to popularize the usage of rainguards.

Research was done to improve seed germination and early detection of good quality rubber seeds. Root promoting and enhancing chemicals were tested for young budding plants for improved performances.

Testing the efficacy of new application technology, tree injection, against white root disease was among the main activities of the Plant Pathology and Microbiology department. White root disease survey was carried out at requested estates to trace out the gaps of knowledge and to establish the disease distribution. Identification of a locally available biological control agent (micro-organisms and plants) against white root disease was attempted. Screening of clones was conducted against economically important foliar diseases. Continuation of the study of biology of economically important pathogens were done. Screening of new and potential fungicides against economically important rubber diseases was continued. Testing was carried out on the chemical repellent against mammalian pests and continuation of assessing the effectiveness of physical excluders and the control of mammalian pests. Isolation of soil micro-organisms in different rubber growing soils was conducted to detect any beneficial populations in view of rehabilitation of soil health. Monitoring of the efficiency of alternative chemicals to chlorophyphos against Cockchafer grubs was done. Molecular plant pathological work on common pathogens of rubber was conducted.

Research on plant nutrition was carried out while providing services to stakeholders on development activities such as site-specific fertilizer recommendation, selection of suitable lands, evaluation of land suitability for rubber cultivation in non-traditional drier areas, testing fertilizer quality

and troubleshooting activities related to soil and plant nutrition. Research conducted on humic acid based liquid organic fertilizer confirmed that locally produced Humate Plus© could be effectively used in improving growth of the nursery and immature rubber plants while reducing the chemical fertilizer usage by 50%. Several efficient phosphate solubilizing bacteria spp. were isolated from rubber root rhizosphere and their effectiveness to be used as a biofertilizer was investigated. Research on biochar as a soil amendment to improve environmental quality continued throughout the year. Site specific fertilizer recommendations for 3500 hectares of mature rubber were issued and approximately 2450 ha were surveyed for suitability of planting rubber under land selection programme. The department also analyzed approximately 1250 samples (5000 parameters) for outside organizations including 230 fertilizer samples for rubber growers to assure application of good quality fertilizers to their rubber lands.

Biochemistry and Plant Physiology department continued on commercial testing of extended low intensity systems in the wet zone. Financial assessment on long term impacts of S/2 d4 and S/4 d3 systems showed an increase of net present value in Rs.310,984 and Rs.197,746 respectively. Testing of LIH systems in the Intermediate zone was commenced in Ampara district and also in Polgahawela Substation with the financial assistance of National Science Foundation. Assessments on latex physiological parameters were done. Three new rubber smallholdings were established in Padiyathalawa, Vavuniya and Welioya for long-term investigation of biochemical and physiological changes in rubber tree under different climatic conditions. Biochemical analyses of rubber wood of different clones were continued.

Advisory Services department conducted group extension programmes effectively, while providing advisory and extension services. Advisory visits were made to solve problems in technology adoption in the rubber smallholder sector. Model holdings were set up to demonstrate the value of using rainguards and intercropping systems. The extension strategy focused on farmer participatory development of selected rubber units in each REO division was continued. Status of substandard rubber holdings was improved and *Mucuna* cover crop was introduced. Rubber processing centers were developed as “models” and training programmes were conducted on quality improvement of RSS for the benefit of smallholders.

As a solution to the tapper shortage, new harvesting assistants were introduced through Tapping Training Schools and semi skilled harvesting assistants were trained in skill development programmes. New rubber processing centers were constructed and substandard processing centers were rehabilitated under the supervision of REOO. Under “Nipunatha Saviya”, training programmes were conducted in collaboration with NIPM. Farmer training programmes were conducted to educate rubber growers on general cultivation and processing aspects. Educational programmes on the adoption of control measures of the white root disease were conducted. The collaborative research study funded by National Research Council (NRC) was continued to assess the feasibility of expanding rubber cultivation into non-traditional areas. On farm trials set up in Uva, Eastern, North-central and Northern provinces were successfully maintained.

Four Technological departments situated at Ratmalana Laboratory complex also continued to carry out research and development work successfully during the year. In addition, these departments provided raw materials, rubber compounds, limited rubber product testing, compound development and troubleshooting services to the stakeholders in the areas of raw rubber processing and rubber product testing. They also provided limited analytical services on polymeric materials and industrial waste water to the allied industries in addition to the stakeholders in the rubber industry. A brief summary of the major activities and achievement is given below.

Development of fenders based on coir and natural rubber latex for plantations sector to protect immature plants against animal attack and safety of boats in boat yards was a success story of the department of Rubber Technology and Development. Utilization of waste material to develop new

rubber composites with specific properties was given a significant focus during the year. Dry rubber composites, latex and form rubber compounds incorporated with waste materials such as coconut fibre, palmyrah fibre, waste paper pulp, ground rubber tyre were prepared and tested for their functional properties. Research work also focused on development of high end products with a high value addition. For example, research work was initiated to develop a low protein, transparent, thin film suitable as a wound dressing by gamma irradiation of natural rubber latex.

Department of Polymer Chemistry was successful in developing a commercially accepted Nano-reinforced nitrile rubber based adhesive to bond nylon fabric on to nitrile rubber surface in the palm area of industrial gloves. Moving into the synthetic rubber area, a new material based on NBR/EPDM blend in the presence of different compatibilizing systems were developed in order to enhance durability of conveyor belts used in oil transportation industry. These two departments initiated research projects to find more environmentally friendly (nitrosamine free or water soluble) preservatives for natural rubber latex in order to meet the future challengers against the use of conventional secondary preservative systems used in natural rubber latex preservation.

Raw Rubber Process Development & Chemical Engineering department secured three research grants from NRC and NSF. Construction of a pilot scale Ultra-fast dryer developed for drying of different types of rubber was commenced with the financial support of National Science Foundation (NSF). Development of high performance lighter weight prosthetic foot based on Hybrid Nanomaterial filled natural rubber which was funded by NSF through Technology Grant Scheme "Support for Technology Development" was continued throughout the year. National Research Council funded project titled "Rubber nanocomposites: Effects of hybrid nanomaterial systems on mechanical and flame retardant properties" was also commenced during the year.

Field level trials were continued to assess the long-term performance of the newly designed small scale natural rubber latex coagulating tanks. Studies on raw rubber properties of crepe rubber manufactured out of Tetramethyl thiuramdisulphide (TMTD) incorporated latex and ribbed smoked sheet rubber manufactured out of ammoniated latex were carried out on the requests made by centrifuged latex manufacturing industries. The effect of heat treatment on the composition and crystalline structure of latex sludge powder derived from latex sludge generated at the centrifuged latex manufacturing industry was carried out. A detail study was carried out on the effect of montmorillonite clay on curing characteristics of different vulcanization systems of NR compounds.

Being the main department responsible for testing services of rubber and rubber chemicals, Raw Rubber and Chemical Analysis department has tested and issued test reports on various aspects of quality of the materials for more than 1000 samples of rubber and chemicals during the year. The department has expanded their range of tests carried out by accruing facilities to determine the sludge content and coagulum content of latex. The department also carried out a few research projects in addition to providing their testing services. The study carried out on raw rubber properties of rubber manufactured from newly introduced clones was one of the major research projects conducted by the department.

All the departments conducted training programs and Workshops for stakeholders in their respective fields and provided resource persons and facilities to various professional institutes such as national Universities, National Institute of Plantation Management, Plastics & Rubber Institute and Thurusaviya Fund throughout the year.

Growth and the physiological assessments of the rubber in Northern Provinces were done by the Adaptive Research Unit. Further, rubber was planted in 5.61ha with 12 smallholders and 4 CSD camps in Mullaitivu and Vavunia districts. More adaptive research clone trials were established in dry areas (Uhana and Welioya) of the Eastern Province. Rubber harvesting was commenced in two sites (2005 new planting) of the Helakomana area in Ampara district. In Polgahawela Substation rubber harvesting was

commenced in 2005, 2006 and 2007 fields and RSS was produced using the newly established rubber processing centre at Polgahawela Sub-station.

Agricultural Economics Unit continued to provide necessary information regarding domestic and international market updates on rubber and related products and appropriate guidance to make rubber farming and processing a profitable venture. They involved in multidisciplinary research collaborations with other research departments. Databases were updated on rubber products manufacturing companies, domestic and international market prices and rubber exports and imports of Sri Lanka. The Unit completed a research on analysis of technical efficiency of rubber tappers in RRISL. Economics Unit was engaged in a variety of outreach activities during the year in collaboration with the Biometry Section.

The focus of the research and development programme of the Biometry section was based on three aspects; *viz.* research support, statistical methods and meteorology and climatology. On statistical methods, the Biometry section was involved in research, focusing on biometrical aspects especially on development, modification and application of statistical methodologies to suit the needs of the rubber sector. Database on meteorological data collected was updated and provided for scientific purposes on request. A meteorological station was established in the Monaragala Substation. The industry data and information management strategy for the rubber sector was developed under City Cluster Economic Development Phase III, Asian Development Bank Regional Technical Assistance Project No: TA REG 6337. GIS work during 2013 included mapping of technical efficiency and productivity of smallholder lands in Kalutara district.

The performance of the Dartonfield group showed the mature and immature extents as 169.03 ha and 39.76 ha respectively. Total crop of 174,543 kg has been harvested. The actual yield per hectare (YPH) was 1,033 kg for the year under review. The average intake per tapper (IPT) recorded during the year was 8.0 kg. The annual rainfall was 3,565.4 mm with 207 wet days during the last year. The total number of normal, late, rainguard and no tapping days recorded during the year were 216, 28, 61, and 56 days respectively. The cost of production (COP) for the year under review was Rs.262.39 per kg. When compared with the last year it has increased by Rs.46.16 per kg. The net sale average (NSA) for the year was Rs.348.74 per kg. The profit per kg was Rs.86.35 and profit made for the year was Rs.15 million. When consider the content profit recorded for the year was Rs.89,166.35 per hectare. Grade percentages of Latex Crepe No. 01X and RSS No. 01 manufactured during the year were 76% and 94% respectively.

The mature and immature extents of the Kuruwita Sub station were 74.29 and 10.12 hectares respectively. A total crop of 104,806 kg have been harvested during the year recording an increase of 4,534 kg on previous year's crop. The actual yield per hectare (YPH) and the average intake per tapper were 1,410 kg and 8.7 kg respectively. The total number of normal, late, rainguard and no tapping days recorded during the year were 232, 11, 95 and 27 respectively. The annual rainfall was 3,817.8 mm with 174 wet days as against 3881.8 mm with 160 wet days during the last year. The cost of production (COP) and the net sale average (NSA) for the year were Rs.187.19 and Rs.339.62 per kg respectively giving a profit margin of Rs.152.43 per kg and a total profit of Rs.15.9 million. Profit recorded for the year was Rs.215,043.46 per hectare.

Trends in the rubber industry in Sri Lanka

Rubber production

The natural rubber production in the country in 2013 has been decreased by 14.2% from 152,000 MT in 2012 to 130,420MT during the year 2013. There were many reasons to this drastic decrease. Due to heavy fall of rain compared to last year was one of the major reasons for reduction of quantity of rubber due to loss of tapping days particularly in the large estates which accounts to 37% of the total land area under cultivation.

The decline in natural rubber prices from the highest ever price recorded in 2011 has also contributed to this. The two largest contributors to total rubber production, Sheet rubber and Latex crepe rubber, have declined by around 6 per cent and 49 per cent to 62.8 Mn kg and 20.2 Mn kg, respectively. Low rubber prices affected the good agricultural practices of rubber smallholders adversely, thereby affecting yield despite the fertilizer support program. As a result, the rubber productivity has declined to 1,219 kg per hectare in 2013 from 1,492 kg per hectare in 2012.

Increased rubber production in other rubber producing countries and the buildup of carryover stocks in the international market too have contributed to the decline in natural rubber prices. The average prices of both Ribbed Smoked Sheet 1 (RSS1) and Latex Crepe IX declined at the Colombo Rubber Auction (CRA) by 9 per cent to Rs.377 per kg and 3 per cent to Rs.397 per kg respectively in 2013, compared to 2012. During this period, export prices of RSS1 and Latex Crepe IX also declined by 6 per cent and 7 per cent to Rs.422 per kg and Rs.377 per kg respectively.

Rubber extent

As per the latest figures reported the total rubber extent of the country is 132,000 hectares with total mature extent of 107,000 ha, while in 2012 total extent was 131,000 hectares. This increase of rubber extent during year 2013 is mostly taken place in nontraditional, Monaragala and Ampara regions.

Replanting and new planting is being carried out in the country and accounts to 1782ha and 1574ha according to Rubber Development Department data but both are lower than that of 2012 figures which account to 2161ha of replanting and 2476 new planting respectively.

NR consumption exports and imports

NR consumption in 2013 in the country was reported as 107,258 MT as against 110,300 MT in the year 2012 which was about 3% decrease. This was primarily due to low demand from industries catering to the export market where Latex Crepe is used as one of the main inputs for high end products. Total NR exports in 2013 amounts to 23,586 MT as against 49,500MT in the year 2012 while NR imports to Sri Lanka accounts to be 12,302MT in 2013 where as in 2012 it was 15,700MT.

Total synthetic rubber consumption in 2013 was 36 thousand metric tones while in the year 2012 it was 33 thousand metric tones which was around 9% increase.

Rubber manufacturing industry

Export income from the rubber products in 2013 recorded a total of Rs.110,050 million, a remarkable increase from the year 2012 which was recorded as Rs.103,921 million according to custom figures.

Sri Lankan industry is dominated by solid tires and affiliated product exports which accounts to Rs.71,306 million in 2013 which accounts to 65% of the total income from the rubber manufacturing sector in Sri Lanka. In 2012, the Tyre sector income was Rs.68,671.9 million. This continuous increase confirms that the steady development rubber manufacturing industry in the country.

Production of latex products such as latex gloves too continued to increase in the country and exports of these products earned Rs.25,424.7 million as against Rs.22,546 million in the year 2012.

Exports of raw rubber

In the year 2013, a total of 23,586 metric tons of raw hard rubber and centrifuged latex were exported and earned a foreign exchange earnings equivalent to Rs.9,194 million according to custom figures. Crepe rubber exports 15,210 MT were dominated raw rubber exports earnings accounted for 6,094.6 millions, while export of 4751.7 MT of RSS earned Rs.1,743.3 millions while liquid concentrated latex exports of 579.4 MT metric tons earned 240.1 million rupees in the year 2013.

Review on global rubber industry

Natural rubber (NR) supply

World NR production increased sharply towards the end of year 2013 and total NR production was recorded 12,217 thousand tonnes dominated by south East Asian countries. According to the statistics of IRSG, Global NR production increased by 24% after the economic recession period prevailed in year 2008 to 2009 period. Lowest NR production was 9,723 thousand tonnes recorded in year 2009. NR production by estates has been increased by 20% from year 2009 to 2013 while the smallholder production has been increased by 24% for the same period. Total NR stock has increased from 2320 thousand tonnes to 3095 thousand tonnes from year 2012 to year 2013. Table 1 shows the trends in NR supply by major producing countries and their annual growth. NR supply for year 2013 was higher in Thailand (10.4%), Indonesia (7.5%), Vietnam (8.2%) and Cambodia (32.1%). It has shown a negative annual growth in Malaysia (-10.4%), India (-13.4%) and Sri Lanka (-14.2%).

Table 1. Trends in NR supply in major producing countries

	Quantity (000 tonnes)		Annual growth (%)
	2012	2013	2013
Thailand	3,778	4,170	10.4
Indonesia	3,012	3,237	7.5
Malaysia	923	827	-10.4
India	919	796	-13.4
Vietnam	877	949	8.2
China	802	865	7.9
Cote d Ivoire	254	289	14.0
Brazil	171	187	9.0
Sri Lanka	152	131	-14.2
Myanmar	136	147	7.9
Philippine	111	111	0.1
Guatemala	94	94	-0.9
Cambodia	65	85	32.1
Liberia	64	69	7.6
Others	258	261	1.4
World total	11,616	12,217	5.2

Source: IRSG Statistical Bulletin

Table 2. Average yield of ANRPC group

	Average yield per hectare of tapped area (kg)	
	2012	2013
Cambodia	1166	1086
China	1232	1261
India	1823	1676
Indonesia	1073	1082
Malaysia	1462	1400
Philippine	1324	1121
Sri Lanka	1459	1247
Thailand	1751	1808
Vietnam	1720	1740

Source: ANRPC

Table 2 gives the annual average yield and mature area in major ANRPC group from year 2012 to 2013. Average yield has been declined in Cambodia, India, Malaysia, Philippine and Sri Lanka except in China, Thailand, Vietnam and Indonesia. The expansion in mature area reflects the large scale planting under taken during the period from year 2005 to 2012. Average annual yield figures reflect the and harvesting technology which have not been translated into improvement in average yield. The sharp fall in rubber prices especially during the year 2013 has aggravated the yield performance further.

Total rubber demand

Total rubber consumption has been increased sharply by 3.1% in year 2013. Total rubber consumption was 11,386 thousand tonnes in year 2013. World NR consumption is dominated by China with 4,210 thousand tonnes followed by India with 962 thousand tonnes and USA with 913 thousand tonnes. China was the highest SR consumer in year 2013 followed by the USA and European Union countries. China consumed 5,441.6 thousand tonnes of SR and USA consumed 1,698.2 thousand tonnes in the year 2013.

Natural rubber demand

Apart from economy's dominant role, the demand for NR in Sri Lanka is greatly influenced by geographical shifting of manufacturing base, capacity expansion in auto tyre industry, substitution between natural and synthetic rubber and change in consumption basket. Table 3 shows the trends in NR consumption and their annual growth of demand for major consumers in the world.

China accounted for 37% of the total quantity and 11.38 million tonnes of NR consumed globally during the year 2013. Other major consuming countries or regions are the European Union (9.3%), India (8.4%), The US (8%), Japan (6.2%), Indonesia (4.4%), Thailand (4.5%) and Malaysia (3.8%). Among those countries, annual growth rate of demand of NR has decreased in all the countries except china, Thailand and Indonesia. Rubber industry has expects a faster growth rate for year 2014 relative to the year 2013 for the other major consumers like USA, India and Total EU countries.

NR demand and supply gap

Global demand experienced a 3.1% growth in year 2013 while the supply has headed for a 5.2% increase. The resultant demand supply position for 2013 is shown in Table 4 in comparison with the previous year. Global market at the end of year 2013 was in a surplus by 831,000 tonnes.

World NR price movement

According to forecasted figures by IRSG, price of NR is likely to be on lower strata till year 2018. Natural rubber has coming down in price in Southeast Asian markets in over the last few months. At the end of December in year 2013, price of RSS3 dropped from Yen 263.2 a kg to a Yen 261 a kg in TOCOM market. Malaysian SMR20 declined to RM 6.2 and bulk latex to RM 4.5 a kg in Kuala Lumpur. At the end of year, Indian RSS3 decreased by 8% recording Indian Rs.171.60 a kg while latex 60% has fallen to Rs.119.56 a kg. Average price TSR20 declined from \$ 3.16 a kg to \$ 2.51 a kg in year 2013 in Singapore market. It was about 20% drastic fall of rubber price in the market. Indonesian TSR20 has experienced the similar situation with the world market rubber price reduction. Average TSR20 price declined from \$ 3.2 to 2.54 per kilo resulting about 21% of price reduction.

Table 3. Trends in NR demand by major consumers

	Consumption ('000 tonnes)		Annual growth (%)
	2012	2013	2013
China	3,857	4,210	9.2
Total EU28	1,076	1,060	-1.5
India	988	962	-2.6
U.S.A.	950	913	-3.8
Japan	728	710	-2.5
Thailand	505	521	3.2
Indonesia	465	509	9.5
Malaysia	441	434	-1.7
World	11,048	11,386	3.1

Source: IRSG Statistical Bulletin

Table 4. Outlook for the demand supply gap

	Quantity ('000 tonnes)		Annual growth (%)
	2012	2013	2013
Production	11,616	12,217	5.2
Consumption	11,048	11,386	3.1
Gap	568	831	
	Surplus	Surplus	

Source: IRSG Statistical Bulletin

Synthetic rubber consumption

The world synthetic rubber (SR) consumption continued to expand, increasing by 3.5% in fourth quarter 2013. The same reason that accounted for the deceleration of total rubber and NR consumption is also behind deceleration of SR consumption in fourth quarter 2013. Mechanically, the deceleration in the growth rate is mainly due to the negative growth rates of EMEA (excluding the EU-28) and the USA. In the USA, the light vehicle tyres production (passenger car tyres and light commercial vehicle tyres) slumped by negative 3.7% in fourth quarter 2013 from negative 1.0% growth in third quarter 2013. This was in response to the combined sharp slowdown in the growth rate of domestic sales of light vehicle tyres, dropping from an average 8.1% over April - September 2013 to an average 2.5% in October - December 2013 and 13.0% growth in imports of passenger car tyres for 2013. The increases in the PMI and relatively robust GDP growth of the USA in fourth quarter 2013 all indicate that the demand for rubber products was still intact and healthy, but international competition in the tyre sector is causing rubber demand to decrease. EMEA's (excluding EU-28) negative 13.8% growth in fourth quarter 2013 is mainly a reflection of the methodology used to calculate SR consumption and the SR production schedule of Russia, which sometime produces distorted data, not reflecting the actual state of consumption. In this specific case, SR production of December 2012 was 37.0% higher than the average of the first eleven months of that year, which led to the same month's consumption being 55.0% higher than the average January -November 2012 consumption. Thus, the anomalous December 2012 SR consumption level ultimately produced the unexpected negative growth rates for December 2013 and fourth quarter 2013 SR consumptions. Furthermore, it also served to artificially increase the rate of deceleration of world SR consumption in fourth quarter 2013.

Dr W M G Seneviratne
Director
Rubber Research Institute of Sri Lanka

Major Achievement during 2013

- Recommended a new clone as RRISL 2100 for commercial planting
- Took 5 selections for final analysis to be recommended in 2014
- Made diverse progeny for clonal evaluation
- Two work shops were conducted to train about 70 Senior Managers/Managers at RRISL on nursery management and high quality plant production.
- An action plan was sent to all estates under RPC's to improve productivity through five different approaches
- Island wide budder training programmes were conducted at government rubber nurseries in all rubber growing regions. About 65 were issued with certificates after evaluation.
- Accommodating extra 10% of plants within the field itself up to the third year upkeep was recommended.
- New rainguard types were tested at Dartonfield Estate and gutter types too were recommended.
- 200,000 plants were distributed among 20,000 beneficiaries in Ampara, Moneragala, Vauniya, Mulliaitvu and Hambantota districts to establish home gardens.
- Plants were distributed among 335 beneficiaries under Thurusaviya societies in Kalutara district for home garden of rubber.
- Chemicals tested on branch induction were found effective and comparable to manual branch induction techniques.
- Introduction of a novel application technology - trunk injection for rubber plants (Figure.1).
- White root disease survey was completed at Dartonfield Estates (Dartonfield, Kuruwita, and N/Kale), Opata Estate, Arappolakanda Estate & Sorana Estate.
- Surveying of disease in nontraditional rubber growing districts showed the incidence of Brown & white root disease conditions. Incidence of Brown root disease is reported to be high.
- First record of *Corynespora* leaf fall disease from the field plants of RRIC 121 (Figure 2). Illustrations on the symptoms were published enabling the growers to identify the disease.
- Chemical control of Powdery mildew using sulphur containing fungicides is successfully being done.
- A repellent formulation was developed against mammalian pests.
- New alternative host; *Artocarpus nobilis* was recorded for white root disease.
- Biological control agents (antagonistic fungi and antagonistic plants) for white root disease were identified.
- Molecular plant pathological studies on the economically important pathogens were initiated with the financial support from the National research council (NRC grant 11-39).
- Several disease problems related to nurseries were solved.
- All the advisory and training requests were attended.



Fig1 Novel application technology - trunk injection for rubber plants



Fig. 2 New symptoms reported from the clone, RRIC 121 in the non-traditional rubber growing areas

- Effectiveness of locally produced Humate-Plus® as an organic fertilizer in rubber nurseries was confirmed. Humate-Plus® could reduce chemical fertilizer usage in young budding rubber nurseries by about 50%.
- Short term research project to evaluate biochar produced from different raw materials to increase pH, pH buffer capacity and P availability in some rubber growing soils was successfully completed.
- Produced biofilms using bacterial and fungal Spp. isolated from rubber root rhizosphere that were found to be efficient phosphate solubilizers and N fixers. It was found that some of these biofilms synergistically increased P solubilization and N fixation.
- Site-specific fertilizer recommendations were given to 4850 ha of mature rubber fields.
- Suitability of 640 ha of lands in Uva, Eastern and Northern provinces was evaluated for rubber cultivation.
- Financial assessment on long term impacts of S/2 d/4 and S/4 d3 low intensity harvesting (LIH) systems was completed with consideration given to foregone benefits and avoided costs under extended lifespan of trees. This showed an respective increase in Net Present Value by Rs.310,984 and Rs.197,746. In these systems over the S/2 d/2 system. Benefit cost ratio for the LIH systems as 1.21 and 1.18. respectively.
- Sensitivity analysis of the financial benefits of LIH systems to rubber price, worker wage and land productivity was completed.
- Established 790 model rubber holdings, 72 model rubber processing centres and 68 rain guard demonstrations.
- Established 265 Mucuna demonstrations and 65 intercropping demonstrations.
- Completed construction of 32 new RSS production centers and rehabilitation of 16 substandard RSS production centers

- Completed rehabilitation of 380 substandard immature rubber holdings.
- 3654 advisory visits were conducted to promote selected technology packages, and 1034 special advisory visits were conducted on requests of rubber growers to solve their technology adoption & institutional problems.
- Completed 17 "Vihidum Sathkara" special group advisory programmes to solve technology adoption problems of 1183 rubber small holders and 65 special group advisory visits programmes were completed to solve technology adoption problems of 291 medium scale rubber estate owners (10-50 Acs.)
- Completed 33 Awareness programmes to educate 1130 rubber smallholders on general cultivation and processing aspects of rubber.
- Completed 16 Mobile Tapper Training Schools and introduced 319 new rubber tappers to the rubber industry.
- Completed 39 skills development programmes for 593 rubber tappers.
- Completed 28 training programmes for product quality Improvement of 479 RSS producers.
- Completed 49 training programmes to educate 1038 rubber smallholders on adoption of control measures for white root disease.
- Completed 93 "Nipunatha Saviya" training programmes in collaboration with the NIPM to improve the tapping skills of 4228 selected rubber tappers.
- Established 08 smallholder field trails in Eastern and Northern provinces under NRC collaborative project on "Empowering smallholders to combat the adverse of growing rubber in non-traditional rubber growing areas
- Completed 02 workshops were for 445 rubber smallholders and one workshop for 42 field officers of other government departments on rubber cultivation and processing aspects.
- A novel reclaim rubber was produced by mechano-chemical modification of ground rubber tyre (GTR) using an environmental friendly natural product.
- A rubber composite with short coconut fibre uniformly distributed in the NR latex foam matrix was produced.
- NR / polybutadiene rubber / palmyrah fibre composites suitable for production of the middle layer of solid tyres were developed.
- Conducted about fifteen workshop / training programs for SME's on manufacture of rubber based products.
- Tested about 575 raw rubber / rubber compound / rubber product samples for properties.
- Liquid Natural Rubber (LNR) was manufactured using a chemical method with improved physical properties
- Nano-reinforced nitrile rubber based adhesive was prepared to bond nylon fabric on to rubber surface in palm area of industrial gloves
- Nano-reinforced natural rubber based adhesive was prepared for general purpose application One workshop was conducted on adhesives and adhesive technology for 35 participants from Ministry of Science and Technology

- More than 1000 samples were tested for polymer analysis using Fourier Transform Infrared Spectrophotometer (FTIR) and Differential Scanning Colorimeter (DSC).
- Effect of storage conditions on UFUB,FB & Yellow fraction rubber & one conference paper was published
- Raw rubber and vulcanized properties of fractioned bleached crepe rubber were evaluated.
- A number of 1252 samples were analyzed and test certificates were forwarded to clients in the rubber industry.
- Two Research grants were awarded for “development of ultra-fast dryer for different grades of rubber” and for “Development of high performance lighter weight prosthetic foot based on hybrid nanomaterial filled natural rubber by NSF through Technology Grant Scheme “Support for Technology Development”.
- A research grant was awarded for the “Rubber nanocomposites: Effects of hybrid nanomaterial systems on mechanical and flame retardant properties” from the National Science Foundation.
- 80% of the construction work of a pilot scale ultra-fast dryer for drying of different grades of rubber was completed.
- Standard and user friendly coagulating tanks were designed to overcome some common processing difficulties of using conventional coagulation utensils.
- Three projects on natural rubber based nonocomposites were commenced
- Rubber was planted in 5.61ha with 12 smallholders and 4 Civil Security Department (CSD) camps in Mullativu and Vavunia Districts.
- Rubber harvesting was inaugurally commenced in Polgahawela substation by Honorable Minister Mahinda Samarasinghe(Figure 3).
- All activities of *in-situ* rubber nurseries with 10 smallholders were successfully completed and plants were established in their own fields as an adaptive research trials at Polgahawela, Nungamuwa area (Figure 4).
- The yield obtained by the first smallholder who tapped rubber in the eastern province in 2013 was 1166kg per hectare.



Figure 3.
Commencement of latex harvesting in Polgahawela Sub-Station with the presence of Hon. Minister of Plantation Industries



Figure 4.
Inspection of smallholder’s rubber nurseries by Hon. Minister of Plantation Industries

Activities of Research Department – 2013

Genetics and plant Breeding

New series of RRISL clones was released and their first clone was registered as RRISL 2100. This clone is developed from 1992 hand pollination progeny. Following this clone, few more selections were taken to final analysis to be registered.

Annual hand pollination programme was done at Neuchatel estate and clone RRIC130 was used as female parent and male parents were used from RRISL 2000 series. However due to uncontrollable level of *Phytophthora* infection the success rate of pollination was reduced and produced fifty eight genotypes only.

Annual girth measurements were recorded in all existing small scale and estate collaborative trials but their yield data collection was interrupted due to heavy rainfall experienced throughout the year. New small scale clonal trial was established in higher elevation with forty one different genotypes derived from 2008 hand pollination progeny. New clone RRISL 2100 also established in higher elevation to test their adaptability. Smallholder/RRI collaborative trials were progressed well and six new trials were established at Uhana, Ampara area. Selected twenty five germplasm accessions were prepared for bud woods to screen stress tolerance genes.

Wide range of biodiversity was confirmed in the progeny of 2008 hand pollination programme using SSR molecular markers.

IRRDB plant breeders' group meeting was held at Galadhari Hotel, Colombo to discuss the "expedition to Peru 2014" for collect new stress tolerance germplasm to enrich the breeding population.

Plant Science Department

All rubber nurseries were inspected for plant quality improvement & reports were submitted to RDD and to estates.

Leaflet on "Rubber Home Gardens" were prepared and printed in Sinhala and Tamil and about 10,000 copies were used at training programmes.

Authentic budwood and budded plants were issued to stake holders.

A plan was given to government rubber nurseries to improve clonal composition in their budwood nurseries.

New budwood nursery was established at Dartonfield Estate.

Arrangements were made to bud graft sufficient number of RRIC 100 budded plants to expand budwood nurseries in government rubber nurseries in order to supply plants for North and East rubber expansion programmes.

Propagation of elite trees was continued with newly identified individuals. Yield data collected indicated promising genotypes.

Effect of tapping quality on productivity and sustainability was addressed through awareness programs. About 15 training programmes were conducted on correct harvesting.

Island wide programme was launched to popularize the usage of rainguards. About 25 programmes were conducted for small holder and estate sector. Supplier registration for raw materials and rain guards was done.

Research was done to improve seed germination and early detection of good quality seeds.

Low density trials were established in Galewatta and Nivitigalakele substations with new clones.

Rubber seed suppliers were identified with the help of media and information was circulated among nurseries for speedy seed collection.

Three day training programme was conducted to beneficiaries of home garden in Mullaitivu district with the financial assistance from NIPM.

Further expansion of sprinkler irrigation system was done at Monaragala Substation and irrigation trials with the application of salicylic acid, were carried out in the intermediate zone.

Nine (09) acres of smallholdings were planted newly with rubber in Meegahakivula and Kandaketiya of Badulla district.

Growth, root promoting and enhancing chemicals were tested for young budding plants for improved performances and gave promising results.

Wintering, flowering and seed production data from different localities and from different clones were collected.

Girth, yield and bark measurements were taken in crop estimation experiments at Sapumalkanda and Moneragala in different girth classes to estimate crop behaviour. Yield and Bark measurements were done in ½ S experiment at Pussella and girth at opening experiment at Pitiakanda.

Plant Pathology & Microbiology Department

Testing the efficacy of new application technology, tree injection against white root disease.

White root disease survey to be carried out at requested estates to trace out the gaps of knowledge and to establish the disease distribution.

Screening of clones against economically important foliar diseases: *Corynespora* leaf fall disease, Powdery mildew, *Colletotrichum* leaf disease and *Phytophthora* leaf disease.

Continuation of the biology of economically important pathogens.

Screening of new and potential fungicides against economically important rubber diseases.

Testing of new chemical formulations and potential adhesives on the chemical repellent against mammalian pests.

Continuation of assessing the effectiveness of physical excluders and the control of mammalian pests.

Isolation of soil micro-organisms in different rubber growing soils to detect any beneficial populations in view of rehabilitation of soil health.

Identification of a locally available biological control agent (micro-organisms and plants) against white root disease.

Monitor the efficiency of alternative chemicals to chlorpyrifos against Cockchafer grubs.

Molecular plant pathological work on common pathogens of rubber to facilitate disease diagnosis and also to detect any genetic variability.

Improvement of a new medium enabling rapid skeletonization of rubber leaves to make the process more economical.

All advisory visits & training programmes are to be attended.

Soil and Plant Nutrition Department

Nine research projects were carried out while providing services to stake holders on five development activities such as site-specific fertilizer recommendation, selection of best suitable lands, evaluation of land suitability for rubber cultivation in non-traditional drier areas, testing fertilizer quality, and troubleshooting problems related to soil and plant nutrition. Research conducted on humic acid based liquid organic fertilizer, confirmed that locally produced Humate

Plus© could be effectively used in improving growth of the nursery and immature rubber plants while reducing the chemical fertilizer usage by 50%. Several efficient phosphate solubilizing bacteria Spp. were isolated from rubber root rhizosphere and their effectiveness to be used as a biofertilizer was investigated. Research on biochar as a soil amendment to improve environmental quality continued throughout the year. Under soil and foliar survey program, site-specific fertilizers were recommended to 4850 ha of mature rubber fields. Around 640ha of lands from non-traditional areas were evaluated for suitability for rubber cultivation. Soils and plant nutrition laboratory analyzed about 2100 samples (more than 8000 parameters) of which about 200 were fertilizer samples received for quality assurance from rubber estates.

Biochemistry & Physiology Department

Commercial testing of extended low intensity systems in the wet zone was continued. Financial assessment on long term impacts of S/2 d4 and S/4 d3 system showed an increase of net present value in Rs. 310,984 and Rs.197,746, respectively. Testing of LIH systems in the Intermediate zone was commenced with three farmers at Padiyathalawa area in Ampara district and also in five tapping blocks in Polgahawela substation of RRISL with the financial assistance of National Science Foundation. Assessments on latex physiological parameters in rubber smallholdings in Padiyathalawa were done during the dry period in 2013. Three new rubber samallholdings were established in Padiyathalawa, Vavuniya and Welioya for long-term investigation of biochemical and physiological changes in rubber tree under different climatic conditions. Biochemical analyses of rubber wood of different clones were continued.

Advisory Services Department

- Participatory development of Model rubber holdings
- Participatory development of model rubber processing centers
- Promotion of rain guard fixing
- Promotion of soil conservation practices
- Construction, & rehabilitation of rubber processing centers.
- Promotion of area- specific intercropping and mixed cropping systems.
- Promotion of fertilizer application for mature rubber
- Rehabilitation of substandard immature rubber holdings
- Participatory development of “Forward March’ model rubber villages
- Advisory visits in traditional rubber growing areas pre-planned

- Advisory visits on requests of stake holders traditional rubber growing areas
- Advisory visits on requests of stake holders non- traditional rubber growing areas
- "Vihidum Sathkara" Centrally planned group advisory visits for smallholdings below 10 Ac.
- Vihidum Sathkara Centrally planned group advisory visits for rubber smallholdings between 10 to 50 Ac.
- Awareness Raising Programmes in traditional Rubber Growing areas
- Awareness Raising Programmes in non- traditional areas
- Plantation management training programmes for medium level rubber growers.
- Mobile Tapper Training Schools
- Skill Development Programmes for semi-skilled rubber tappers.
- Quality improvement of RSS
- Training programmes on White root disease
- "Nipunatha Saviya" training programmes to improve the skills of rubber tappers
- "Nipunatha Saviya" Special extension programmes to improve the skills of rubber tappers conducted in regional Advisory Offices
- "Training for village youth" training programmes on land preparation, lining and soil conservation aspects
- In-service training programmes
- Farmer participatory rural appraisal programmes.
- Socio economic surveys
- Management of information systems and development of data bases
- Need based analysis for effective programme modifications
- Introduction and facilitation of possible avenues for productivity improvements

Rubber Technology and Development Department

Several trials were conducted to develop a low protein, transparent, thin film suitable as a wound dressing by gamma irradiation of natural rubber latex. A fender for boat yards was produced. Production of a large quantity of fenders to test against production of immature plants against animal attack was initiated. Development of rubber composites with NR latex foam and short coconut fibre was continued. Effectiveness of a water soluble material as a secondary preservative in low centrifuged was assessed.

Influence of silane coupling agent on the physic-mechanical properties of NR/silica/non-reinforcing filler composites was evaluated. Physico-mechanical properties of NR containing waste paper pulp modified according to two treatment processes were evaluated. Physico-mechanical properties of NR / polybutadiene rubber (BR) composites produced with coconut as well as palmyrah fibres were evaluated. NR/low density polyethylene blends were produced according to three different vulcanizing systems, using silane coupling agent as the compatibilizer. GTR was mechanical properties of virgin NR / modified GTR blend compound were evaluated. Properties of a series of NR / were evaluated and compared. Five research papers were presented at local as well as international conferences.

Compound development and trouble shooting work were carried out on requests from the industry. The department tested and issued reports on hardness of sole crepe samples and physic-mechanical properties of rubber compounds and products forwarded by rubber industries. Workshops / training programs on rubber based products manufacture were conducted to small and medium scale entrepreneurs in collaboration with the Thurusaviya Trust Fund. The staff actively participated at two national level exhibitions.

Polymer Chemistry Department

A project on nitrosoamine free preservative system for natural rubber latex was continued throughout the year. Large scale trials were completed at two centrifuged latex manufacturing industry. Some work is being carried out to solve few problems faced during above trials. Liquid natural rubber was manufactured using a chemical method. Some physical properties were improved with the chemical method however colour of the final rubber was not met the acceptable levels. Nano-reinforced nitrile rubber based adhesive was prepared to bond nylon fabric on to nitrile rubber surface in the palm area of industrial gloves. Extension of this adhesive for other surfaces are being tested. Physical properties of NBR/EPDM blend in the presence of different compatibilizing system were analyzed in order to enhance durability of conveyor belts used in oil transportation.

Raw Rubber and Chemical Analysis Department

- Test & issue quality certificate for field & Centrifuged latex.
- Test, grade and issued shipping certificates for all TSR produced in the country.
- Test and issued quality certificates for different grades of raw rubber produced in the country for local industries and for shippers.
- Analysis of chemicals used for processing raw rubber in the rubber products manufacturing industry, for percentage purity & made recommendations accordingly.
- Expanded the latex testing facilities in determination of sludge content & coagulum content.
- Conducting training programmes for laboratory personnel from rubber manufacturing companies, University students, NDT students, NIPM, PRI students.

Raw Rubber Process Development and Chemical Engineering Department

Construction of a pilot scale Ultra-fast dryer developed for drying of different types of rubber was commenced with the financial support of National Science Foundation (NSF).

Field level trials were further carried to assess the long-term performance of the newly designed small scale natural rubber latex coagulating tanks. Low cost and user friendly coagulation tanks

were also designed. Writing of draft procedure manuals for effluent water testing to obtain accreditation for the effluent water quality testing laboratory was completed. Three new short-term projects were also commenced during the year. Studies on raw rubber properties of crepe rubber manufactured out of Tetramethyl thiuramdisulphide (TMTD) incorporated latex and ribbed smoked sheet rubber manufactured out of ammoniated latex were carried out based on the requests made by centrifuged latex manufacturing industries. The effect of heat treatment on the composition and crystalline structure of latex sludge powder was carried out. A detail study was carried out on the effect of montmorillonite clay on curing characteristics of different vulcanization systems of NR compounds. Research and development work on development of high Performance Lighter Weight Prosthetic Foot based on Hybrid Nanomaterial Filled Natural rubber which was funded by NSF through Technology Grant Scheme “Support for Technology Development” was continued throughout the year. National Research Council awarded financial assistance to a project titled “Rubber nanocomposites: Effects of hybrid nanomaterial systems on mechanical and flame retardant properties” conducted by the department.

Head of the department and other officers visited crepe rubber processing factories and centrifuged latex processing factories those which entered to the national plantation award competition. The purpose of visits is to evaluate them for their adaptation of hygienic practices and standard manufacturing procedures as the first round evaluation of the factories applied for “best crepe rubber factory in Sri Lanka” award and “best centrifuged latex manufacturing factory in Sri Lanka” at the national plantation award ceremony scheduled to be held in 2013.

A patent application titled “Process of Reducing Extractable Proteins from Natural Rubber Latex Dipped Products” was jointly submitted with university of Moratuwa at Sri Lankan Patent based on the joint research project carried out on Natural Rubber latex/clay nanocomposites.

Adaptive Research Unit

In Northern Province, growth and the physiological assessments of the rubber plants were done in the fields planted in 2010, 2011 and 2013 (Figure 5). Further, rubber was planted in 5.61ha with 12 smallholders and 4 CSD camps in Mullativu and Vavunia Districts (Figure 6). Seven adaptive research clone trials were established in dry areas (Uhana and Welioya) of the Eastern Province in collaboration with Genetics and Plant Breeding Department. Rubber harvesting was commenced in two sites (2005 new planting) of the Helakomana area in Ampara District. In Polgahawela substation rubber harvesting was commenced in 2005, 2006 and 2007 fields and RSS was produced using the newly established rubber processing centre at Polgahawela substation (Figure 7).



Figure 5



Figure 6



Figure 7

Agricultural Economics

Agricultural Economics Unit aims to provide necessary information regarding domestic and international market updates on rubber and related products and appropriate guidance to make rubber farming and processing a profitable venture. Agricultural Economics unit committed to conduct researches on socio economic analysis and involve in multidisciplinary research collaborations with other research departments. Agricultural Economics Unit continued its assistance to other research departments through economic analyses in various forms during this year. Databases were updated on rubber products manufacturing companies, domestic and international market prices and Rubber Exports and Imports of Sri Lanka. The Agricultural Economics unit completed a research on analysis of technical efficiency of rubber tappers in Rubber research Institute of Sri Lanka. Economics Unit was engaged in a variety of outreach activities during this year in collaboration with the Biometry Section.

Biometry

The focus of the research and development programme of the Biometry section was based on three aspects; *viz.* research support, statistical methods and meteorology and climatology. On statistical methods, the Biometry section was involved in research, focusing on Biometrical aspects especially on development, modification and application of statistical methodologies to suit the needs of the rubber sector. The disciplines covered were experimental designs, statistical methods for Economics and Social Sciences, time series methods and non-linear modeling. Biometry section carried out research and development work also on Meteorology and Climatology. Database on meteorological data collected were updated and provided the data for scientific purposes on request. The meteorological station in the Moneragala substation was established and data collection commenced on 01st July 2013. Detail analyses of rainfall were done for 9 stations in proposed

rubber growing areas in the Northern, Eastern and North Central provinces. The Industry Data and Information Management Strategy for the rubber sector was developed under City Cluster Economic Development Phase III, Asian Development Bank Regional Technical Assistance Project No: TA REG 6337. GIS work during 2013 included mapping of technical efficiency and productivity of smallholder lands in Kalutara district.

Library and Publications Section

The reference section of the Library was updated with forty four (44) books bringing the total collection to 5831. All textbooks requested by the research staff were purchased. While eight journal titles were purchased, twenty four titles were received on exchange basis.

The most important event of the year was the AGRINET user seminar which was held for the RRISL scientists on 22/03/2013 at Ratmalana Auditorium. Meanwhile, the scholarly literature output of RRISL was successfully digitized under the guidance and support of the NSF staff.

Dartonfield Group

The mature and immature extents of the Dartonfield group were 169.03 hectares and 39.76 hectares respectively during the year.

Total crop of 174543 kg has been harvested during this season recording and decrease 17047 kg on previous crop due to the bad weather and decrease extent of 5.82 hectares.

The actual yield per hectare (YPH) achieved was 1033 kg and when compared with the same period of last season YPH has decreased by 63 kg.

The average intake per tapper (IPT) recorded during the year was 8.0 kg and last year was 8.3 kg.

The annual rainfall was 3565.4 mm with 207 wet days as against 3622.6 mm with 195 wet days during the last year.

The total number of normal, late, rain guard and no tapping days recorded during the year were 216, 28,61, and 56 days respectively.

The cost of production (COP) for the season was Rs. 262.39 per kg. When compared with the last year it has increased by Rs. 46.16 per kg. The net sale average (NSA) for the year was Rs. 348.74 per kg. The profit per kg was Rs. 86.35 and profit made for the year was Rs. 15 million. Profit per hectare recorded for the year was Rs. Rs. 89166.35

Latex Crepe No. 01X and RSS No. 01 manufactured during the year were 76% and 94% respectively.

Kuruwita Sub – Station

The mature and immature extents of the kuruwita Sub – Station were 74.29 and 10.12 hectares respectively during the year.

A total crop of 104,806 kg. have been harvested during the year recording an increase of 4,534 kg. on previous year's crop.

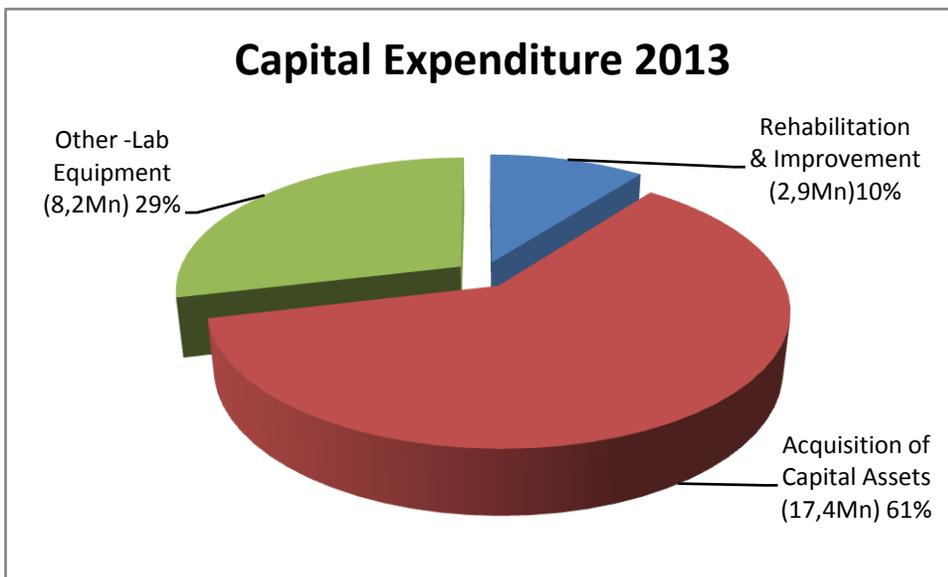
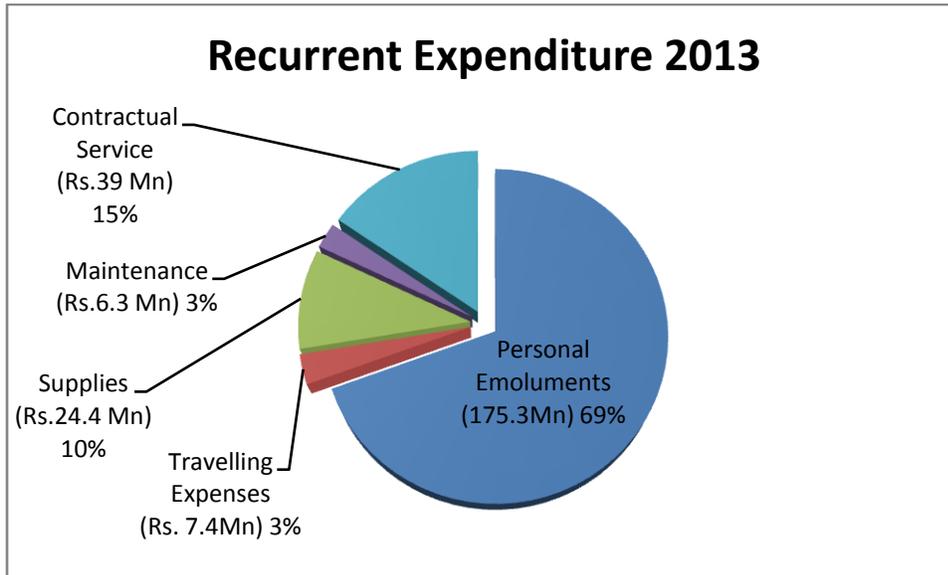
The actual yield per hectare (YPH) and the average intake per tapper were 1410 kg. and 8.7 kg. respectively.

The total number of Normal, Late, Rainguard and No Tapping Days recorded during the year were 232, 11, 95 and 27 respectively.

The annual rainfall was 3817.8 mm with 174 wet days as against 3881.8 mm with 160 wet days during the last year.

The cost of production (COP) and the net sale average (NSA) for the year were Rs. 187.19 and Rs 339.62 per kg. respectively giving a profit margin of Rs. 152.43 per kg. and a total profit of Rs. 15.9 million. Profit per hectare recorded for the year was Rs. 215,043.46

RECURRENT & CAPITAL EXPENDITURE 2013



Rubber Research Board of Sri Lanka - Statement of Financial Position
As at December 31, 2013

Assets		2013	2012
Current Assets	Note		
Cash and cash equivalents	01	(2,574,695.75)	16,044,712.14
Receivables	02	9,000,110.98	8,529,460.33
Inventories	03	11,133,811.95	20,850,691.08
Prepayments			
Other Current Assets	04	49,195,478.83	58,594,923.21
		<u>66,754,706.01</u>	<u>104,019,786.76</u>
Non-Current Assets			
Receivables			
Investments in associates	05	476,419.88	479,729.47
Other financial assets	06	1,480,966.11	1,292,892.36
Infrastructure, plant and equipment	07	200,463,752.51	187,151,117.60
Land and Buildings	07	100,197,835.09	65,845,162.57
Intangible assets			
Other non-financial assets			
Working Progress		4,984,728.72	29,476,068.26
		<u>307,603,702.31</u>	<u>284,244,970.26</u>
Total Assets		<u>374,358,408.32</u>	<u>388,264,757.02</u>
LIABILITIES			
Current Liabilities			
Payables	08	(66,948,270.48)	(43,591,879.30)
Short-term borrowings			
Current portion long term borrowings			
short -term Provisions	09	(2,349,944.17)	(1,849,551.61)
Employee benefits			
Superannuation			
		<u>(69,298,214.65)</u>	<u>(45,441,430.91)</u>
Non-Current liabilities			
Payables			
Long term Borrowings			
Long term Provisions			
Employee benefits	10	(105,762,946.03)	(100,393,471.50)
Superannuation			
Total Liabilities		<u>(175,061,160.68)</u>	<u>(145,834,902.41)</u>
Net Assets		<u>199,297,247.64</u>	<u>242,429,854.61</u>
NET ASSETS/EQUITY			
Capital Contributed by Other	11	538,594,081.61	489,907,925.61
Government entities			
Reserves			
Contingency Liability		-	6,868,467.84
Accumulated Surpluses/(deficits)	12	(339,296,833.97)	(254,346,538.84)
Minority interest			
Total net assets/equity		<u>199,297,247.64</u>	<u>242,429,854.61</u>

Accountant -RRI

Director - RRI

Chairman - RRB

Rubber Research Board of Sri Lanka
Statement of Financial Performance for the Year
Ended December 31, 2013

Revenue	Note	RRI		Df. Estate		K'wita Estate		Kumarawatta Estate		Narampola Estate		Total	
		2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
Taxes													
Fees, fines, penalties and licenses													
Revenue from exchange transactions													
Transfers from other government entities		195,750,000.00	185,705,000.00									195,750,000.00	185,705,000.00
Other revenue	13	10,034,215.72	12,175,882.30									10,034,215.72	12,175,882.30
Gross Profit Df. Estate & K'wita Estate	22,23			60,292,359.33	74,510,346.31	38,066,949.59	34,456,466.12					98,359,308.92	108,966,812.43
Other Income Estate (Projects)	22,23			7,198,258.27	3,719,820.39	1,043,420.14	1,317,643.99	357,475.89	392,176.50	381,376.26	85,738.93	8,980,530.56	5,515,379.81
												-	-
Total Revenue		205,784,215.72	197,880,882.30	67,490,617.60	78,230,166.70	39,110,369.73	35,774,110.11	357,475.89	392,176.50	381,376.26	85,738.93	313,124,055.20	312,363,074.54
Less:													
Expenses													
Wages, Salaries and employee benefits	14,15,14A,14B,14C	187,297,831.70	179,684,522.56	37,341,664.63	33,186,343.32	16,351,384.45	14,772,675.01	5,216,156.78	3,263,027.46	2,680,106.42	2,116,219.93	248,887,143.98	233,022,788.28
Grants and other transfer payments												-	-
Supplies and consumables used	16,14A,14B,14C	18,299,293.25	15,509,059.52	2,107,088.85	2,149,559.07	1,312,199.46	1,498,925.48	228,596.53	244,157.53	28,540.00	114,065.00	21,975,718.09	19,515,766.60
Depreciation and amortization expenses	17,14A,14B,14C	21,540,169.16	18,813,151.73	842,804.72	821,171.27	339,676.90	314,684.60					22,722,650.78	19,949,007.60
Maintenance of property, plant and equipment	14A			4,589,809.02	4,570,797.75							4,589,809.02	4,570,797.75
Other expenses	18,19,20,21,14A,14B,14C	93,305,132.44	98,426,989.33	270,929.26	389,436.78	1,590,503.76	1,126,466.67	1,819,292.06	2,032,236.80	763,206.97	214,395.85	97,749,064.49	102,189,525.43
Finance Costs	14A,14B	203,919.06	187,684.39	645,964.57	432,884.19	161,570.54	163,620.62					1,011,454.17	784,189.20
Other Expenditure Estate (Projects)	22,23			1,138,509.80	888,638.79							1,138,509.80	888,638.79
												-	-
Total Expenses		320,646,345.61	312,621,407.53	46,936,770.85	42,438,831.17	19,755,335.11	17,876,372.38	7,264,045.37	5,539,421.79	3,471,853.39	2,444,680.78	398,074,350.33	380,920,713.65
Surplus/(dificit) for the Period		(114,862,129.89)	(114,740,525.23)	20,553,846.75	35,791,335.53	19,355,034.62	17,897,737.73	(6,906,569.48)	(5,147,245.29)	(3,090,477.13)	(2,358,941.85)	(84,950,295.13)	(68,557,639.11)

2012 Prior Year Adjustment (70,271.38)

(84,950,295.13) **(68,627,910.49)**

**Rubber Research Institute of Sri Lanka
Consolidated Cash Flow Statement
For the year Ended 31 December 2013**

<u>Cash Flows from operating Activities</u>	2013
Surplus/Deficit	(84,950,295.13)
Non Cash movements (Depreciations Amortization)	22,722,650.78
Increase Payables	23,356,391.18
Increase in provisions relating to Employees cost	5,369,474.53
Increase in Short-term provision	500,392.56
Decrease other current Assets	9,399,444.38
Decrease in Investment	3,309.59
Increase Receivables	(473,650.65)
Decrease Inventories	(9,716,879.13)
Increase other financial Assets	188,073.75
Net Cash flow from operating Activates	(33,601,088.14)
<u>Investing Activities</u>	
Interest on Investment	35,989.65
Purchase of Plant & Equipment	(40,987,174.67)
Decrease Working Progress	24,491,339.54
Net Cash Flows from Investing Activities	(16,459,845.48)
<u>Financial Activities</u>	
Capital Grant (Treasury)	53,400,000.00
Project Receipts	(21,958,474.87)
	31,441,525.13
Net Cash Flows from the Financing Activities	(18,619,408.49)
Cash and Cash Equivalents at beginning other period	16,044,712.74
Cash and Cash Equivalents at end of the period	(2,574,695.75)

**RUBBER RESEARCH BOARD OF SRI LANKA
CONSOLIDATED CASH FLOW STATEMENT
FOR YEAR ENDED 31ST DECEMBER 2012**

	2012
A <u>Operational Activities</u>	Rs.
Operational Activities	(68,557,639.11)
<u>Add-</u>	
Depreciation	19,852,718.72
Amortization	
Less-	
Interest on Investments	32,985.26
Sale of Rejected Item	31,669.00
Cash Received from vehicle sale	479,569.93
Operating Surplus/Deficit before Adjusting Working Capital's Movement	(48,160,696.20)
<u>Working Capital's Movements</u>	
Increase in Payables - Creditors	
Increase in Accrued Expenses	830,914.26
Increase in Provisions Gratuity	11,625,922.01
Increase in Stock	(5,242,702.06)
Increase in Receivables	(2,788,304.06)
Increase in Prepayment	(276,314.63)
Decrease Liability -Sury Bond	
Decrease in Payable (8-B)	(18,276.00)
Increase in Audit fees	90,147.32
Decrease in Payables - Creditors (8-A)	
Net Cash Flows from Operating Activities	(43,939,309.36)
 B Investment activities	
Interest on Investments	32,985.26
Sale of Rejected Item	31,669.00
Timber Sold	479,569.93
Purchase of Plant and Equipment	(42,027,709.16)
Changes of Plant & Equipment	
Increase in Investments	14,366.52
Increase in WIP	(12,361,549.76)
Other Financial Assets (Projects Increase)	(915,886.35)
Increase Monaragala Project	(325,581.33)
Net cash flows from investing activities	(99,011,445.25)
 C Financial Activities	
Project Receipts	(2,655,680.00)
Capital Grant (treasury)	46,000,000.00
Prior Year Adjustment	(70,271.38)
Net Cash Flow from the Financing Activities	43,274,048.62
 Net Increase/Decrease in Cash Flows	(65,286,091.76)
Cash and cash equivalents at beginning of the period	81,330,804.50
Cash and cash equivalents at end of the period	16,044,712.74

Rubber Research Board of Sri Lanka
Statement of Changes in Net Assets/Equity
Ended December 31, 2013

	Attributable to owners of the controlling entity					Minority Interst	Total net Assest/euqity
	Contributed Capital	Other Reserves	Translation Reserves	Accumulated Surpluses/ (Deficits)	Total		
Balance at December 31, 2013							
Changes in accounting policy	489,907,925.61			(254,346,538.84)	235,561,386.77		235,561,386.77
Restated balance							
Change in net asset/equity for 2013							
Gain on property revaluation							
Loss on revaluation of investments							
Exchange differences on translating Funds Receivad	48,686,156.00				48,686,156.00		48,686,156.00
foreign operations							
Net revenue recognized directly in net asset/equity							
Surplus for the period				(84,950,295.13)	(84,950,295.13)		(84,950,295.13)
Total recognized revenue and expenses for the period							
Balance at December 31, 2013							
Carried forward	538,594,081.61	-	-	(339,296,833.97)	199,297,247.64	-	199,297,247.64

RUBBER RESEARCH BOARD OF SRI LANKA

ANY OTHER DISCLOSURES

1. ACCOUNTING POLICIES

1.1 General Accounting Policies :

1.2.1 The accounts for the year end 31 December 2013 has been prepared in accordance Sri Lanka Public Sector Accounting Standards 2009.

1.3 Conversion of foreign exchange:

Foreign currency has been converted at prevailing rates

1.4 Government and other grants and subsidies:

1.4.1 Government and other grants and subsidies related to income have been taken in to the income statement considering the periods and with related costs

1.4.2 Government and other grants related to assets, have been presented in the balance sheet at their costs and non monetary grants presented at a fair value.

1.4.3 Replanting subsidies have been set off against replanting expenditure and net amount has been represented in the balance sheet under fixed assets.

RUBBER RESEARCH BOARD OF SRI LANKA

1.5 Consolidation Policies:

1.5.1 The Rubber Research Board accounts comprise the consolidation of the activities of the R.R.I. plantations (Estates) managed by the Rubber Research Institute. i.e Dartonfield Group & Kuruwita Estate.

1.5.2 The Rubber Research Institute and estates have a common financial year which ends on 31 December.

1.5.3 The profits and losses of the plantations have been taken in to the Rubber Research Institute surplus/deficit account and reflected in the balance sheet.

1.5.4 The project Accounts have not been consolidated with the Rubber Research Institute Accounts, since they are separate entities. However, the balance of the relevant control Accounts have been incorporated.

RUBBER RESEARCH BOARD OF SRI LANKA

2. Non Current Assets:

2.1 Lands

The Institute is the sole owner of all the lands except Kumarawatta Monaragala and Narampola, Alawwa.

2.1.1 Substation at Narampola (Alawwa) Kumarawatta (Monaragala)

2.1.1 (a) Narampola (Alawwa)

The extent of this land is 106 Acres 02 Roods & 31 perches. This land was taken over on 14.12.2004 under MOU on a Rental agreement. When preparing MOU agreement between RRI and JEDB the Narampola Lands has been monetary valued as Rs. 16,000,000/-

2.1.1 (b) The extent of the land is 50 acres and this was taken over from the JEDB on 19 September 2006 under MOU on 30 years Lease agreement. Assessment value is Rs. 10,000,000/- for this Land.

Development cost for those lands is reflected in RRI Assets as additions during the year. The approval of the relevant authorities have been given to acquire these lands and action is been taken accordingly.

2.1.1 (c) A sum of Rs. 1,302,848.78 which was included in to the total value of the RRI building is the construction cost of the building at Narampola, Alawwa.

RUBBER RESEARCH BOARD OF SRI LANKA

2.1.1 (d) In accordance with MOU agreement RRI has to pay Rs. 640,000- annually as rental for Narampola Estate, Alawwa.

Rs. 400,000/- annually as and rental for Kumarawatta Estate, Monaragala. The rentals have not been paid as the RRI was trying to acquire these Lands since 2004 and 2006 respectively by communicating with relevant authorities

2.1.1 (e) **Profit Loss Narampola & Kumarawatta Substations**

(i) Lands of Narampola is still in developing stage. The income generated by the estate is not sufficient to bear its expenditure.

(ii) Kumarawatta (Monaragala) Substation has been established for Research and extension activities related to non traditional Rubber growing areas including Northern and Eastern Provisions. RRI cannot be expected a profit from the substation as it is a small Lands for research activities and cultivation cannot be established in commercial basis.

3.1 **Depreciation Policy**

- Fixed Asset will not be depreciated in the year of purchasing and the depreciation will be commence as from the following year.
- In depreciation the Reducing balance method is applied by the Institute
- Value of the Non current Assets have been reflected in the balance sheet on written down value basis.

RUBBER RESEARCH BOARD OF SRI LANKA

3.2 Non Current Assets have been stated at written down value basis and the rates of the depreciation are as follows:-

Item	Percentage
Buildings	3.5 %
Furniture, Fixtures & Fittings	20.0
Power and Water supply	10.0
Laboratory apparatus	20.0
Motor Vehicles	20.0
Documentary films	20.0
Periodicals and Journals	20.0
Earth slip project	3.5
Rubber in bearing	5.0
Machinery & Tools	10.0
Tea in bearing	5.0
Cinnamon	5.0

4. Work in Progress

4.1 Nursery -Monaragala

The Nursery has been initially established out of the Cess Fund. Now it has been developing by Treasury Capital allocation. The management has decided to commence the depreciation after completion of the Nursery work and amortize the fund proportionately.

5. Current Assets

5.1 Debtors & Other Receipts

5.1.1 The amount of Rs. **6,915,540.14** was shown as Surety Bond Debtors in the balance sheet of 2012 were the balances due from Bond defaulters. Contingency liability a/c is a Pararell A/c to the Surety Bond Debtors A/C. As per the Audit report 2011 the contingency liability accounts was closed from 31.12.2013 and the balance as at and 2013 is 5,821,097.64 . The similar amount was ejected from debtors and the contingency liabilities will be shown in para 7.1.1

RUBBER RESEARCH BOARD OF SRI LANKA

5.1.2 Other debtors amounting to Rs.1,286,278.99 is also generated out of the Bond defaulters. The legal action has not been taken by the Institute against them as yet due to some documentary lapses. The above amount is built up as follows.

Thurul Warmapura	-	936,278.34
D.E.D.E.I.N.Perera	-	350,000.65

5.1.3 **Bad & doubtful debts. of Rs. 830,936.88 and Provision for Bad & Doubtful Debts. Rs. 1,074,162.13**

Approval of the Ministry has been sought in 2009 for writing off the above, but the approval has not yet been given by the Ministry so far.

6. Stock Valuation

6.1.1 Rubber Stock has been valued on Market Price

6.1.2 Other Stock Items

Those are valued on cost basis

- 6.1.3 (1) Rubber Stock amounting to 4,120,513/- has been physically verified.
- (2) Stationery stock amounting to 377,528.70 has been physically verified.
- (3) Since the general stock amounting to 5,807,034.35 has been verified but the report was not submitted at the time of finalise the annual accounts. Hence adjustments will be made in 2014.
- (4) Stocks of Kuruwita and Dartonfield which were shown under note 5 II and 5 III has been physically verified.

RUBBER RESEARCH BOARD OF SRI LANKA

7. Liabilities

7.1 Contingency Liability

This accounts has been closed from 31.12.2013 as per the details referred in para 5.1.1 . The contingency liabilities balance as at 31.12.2013 is Rs. 5,821,097.64 which has made up as follows.

Mr. H.H.Talgaswatta	-	38,402.56
Mr. G.V.L.Nilmini	-	1,837,540.51
Mr. S.M.C.E.Silva	-	1,604,205.85
Mrs. Samantha P. Herath	-	519,289.87
Mr. N.A.A.D.Wickramasinghe	-	7,244.76
Mr. Nalinda P Wickramasinghe	-	10,643.54
Mr. B.P.Weerathna	-	1,803,768.55
Mr. M.D.J.R.Gunathilaka	-	<u>2.00</u>
		<u>5,821,097.64</u>

This amount will be keeping as a note to the balance sheet as from year 2013. If some defaulters will settle the bonded amount in the future it will be taken as sundry income and deducted from the amount shown in the Note.

7.2 Gratuity

Gratuity Provision have been calculated as per the gratuity Act. No. 12 of 1983 in respect of all eligible employees for the period of service under the Institute. Gratuity Provisions includes the provisions for newly absorbed Rubber Development Department staff to the New Advisory Services Dept of the Rubber Research Institute.

RUBBER RESEARCH BOARD OF SRI LANKA

8. Writing off long outstanding balance

This matter has been discussed in COPE meeting held in 2012 and the COPE instructed to appoint a committee to investigate the long outstanding Debtors and creditors balances to take a decision to write off the balances which con not be settled.

A detail report has been submitted to the Rubber Research Board accordingly and the Board has appointed a outside committee for further investigation before requesting to write off action.

09. Research & Development Expenditure:

Research and development expenditure have been charged to departmental expenditure for the period which they are incurred, including the RRI New Advisory Services Department.

10. New planting /replanting /crop diversification expenditure

The above categories of expenditure have been capitalized in the accounts with effect from 1993. Depreciation will be made on maturity.

11. Categorizing Expenditure against Budget Format.

Laboratory Working expenses and Field Working expenses have been shown under Research and Development Expenditure in the Statement of Financial Performance. In the Budget Format, Laboratory working expenses have been shown under Supplies and Field working expenses have been shown under services (Note 20)

Other Operating Expenses are the value of services rended from the estates (Dartonfield and Kuruwita) to the Rubber Research Institute except Rent for Narampola and Kumarawatta. These expenses are charged to the Rubber Research Institute from the Monthly accounts of Dartonfield and Kuruwita Estates (Note – 22). Labour Charges borne related to Insititute activities have been charged to the relevant department expenditure votes. The total cost charged from both estates are as follows.

From Dartonfield	-	42,953,923.40
From Kuruwita	-	<u>4,481,208.53</u>
	Rs.	<u>47,435,131.93</u>

Dartonfield
Agalawatta

RUBBER RESEARCH BOARD OF SRI LANKA				
Notes to the Accounts for the Year Ended 31/12/2013				
Note -01 CASH AT BANK AND IN HAND				
			2013	2012
	Cash at Bank	Cash in Hand	TOTAL	
Bank of Ceylon - Cor.Branch	2,963,836.04		2,963,836.04	4,923,355.97
A/C No.1837				
Bank of Ceylon - Agalawatta	(7,526,470.54)		(7,526,470.54)	9,652,706.25
A/C No.335976				
Dartonfield Estate	41,862.42	2,336.50	44,198.92	440,318.60
A/C No.335978				
Kuruwita Estate	1,177,743.69	3,452.50	1,181,196.19	1,028,331.32
A/C No.4320540				
Cash in Transist - Kuruwita Estate		762,543.64	762,543.64	0.00
Rathmalana Office			-	-
	(3,343,028.39)	768,332.64	(2,574,695.75)	16,044,712.14

RUBBER RESEARCH BOARD OF SRI LANKA

Notes to the Accounts for the Year Ended 31/12/2013

Note 02 - Receivables

	2013	2012
	Rs.	Rs.
RDD / ASD / RRI Control A/C.	2,260,360.20	1,798,731.57
Festival Advance	308,950.00	287,200.00
Travelling Advance	33,000.00	43,500.00
A.S.D.Building Complex	5,214,500.00	5,214,500.00
Staff Salary Advance	1,350.00	5,350.00
RRI Departments - Sundry	1,200.00	1,200.00
Graduate Trainees Reimbursable	627,983.56	627,983.56
Security Deposits	32,150.00	31,150.00
RDD/ Nurseries RRI Main Control A/C	98,910.15	98,910.15
E T F	51,532.71	47,632.69
Insurance	34,356.64	34,356.64
Pre Payments T.Premaratne,Suranga Motors Ampara	150,000.00	150,000.00
NIPM	71,349.88	71,349.88
Graduate Trainees Payment	84,442.84	84,442.84
Cheques Purchase Advance	29,925.00	29,750.00
Cash Purchase Advance A/C		
Payment in Advance A/C		3,303.00
Petty Cash Advance A/C	100.00	100.00
	9,000,110.98	8,529,460.33

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note 03

Inventories/Stocks

		2013	2012
RRI	Schedule 01	10,305,076.05	19,426,092.60
K'wita Estate	Schedule 02	262,216.49	447,913.67
Df Estate	Schedule 03	566,519.41	976,684.81
	Rs	<u><u>11,133,811.95</u></u>	<u><u>20,850,691.08</u></u>

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note 04

Other Current Assets

		RRI		K'wita Estate		Df. Estate		Total	
		2013	2012	2013	2012	2013	2012	2013	2012
Deposits	Schedule 04	426,013.41	443,447.41					426,013.41	443,447.41
Other Deposits	Schedule 05	1,286,278.99	1,286,278.99					1,286,278.99	1,286,278.99
General Deposits	21,471,556.96								
Less : Provision for bond debtors (Schedule 06)	1,074,162.13	20,397,394.83	18,920,223.53					20,397,394.83	18,920,223.53
Debtors		10,940,983.28	11,112,316.86					10,940,983.28	11,112,316.86
Loan Receivable		7,217,793.11	6,943,267.38					7,217,793.11	6,943,267.38
Trade & Other Receivables	Schedule 07			3,341,003.18	3,656,328.77			3,341,003.18	3,656,328.77
Trade & Other Receivables	Schedule 07					5,586,012.03	9,317,520.13	5,586,012.03	9,317,520.13
Bond Debtors			6,915,540.14					-	6,915,540.14
								-	-
		40,268,463.62	45,621,074.31	3,341,003.18	3,656,328.77	5,586,012.03	9,317,520.13	49,195,478.83	58,594,923.21

RUBBER RESEARCH BOARD OF SRI LANKA

Notes to the Accounts for the Year Ended 31/12/2013

<u>Note - 05</u>	<u>Investment</u>	<u>2013 Year</u>	<u>2012 Year</u>
		Rs	Rs
Bank Of Ceylon Agalawatta C/29 200835		200,000.00	200,000.00
National Savings Bank-City Branch A/C No.1-0002-04-5806-06		275,419.88	262,017.89
National Savings Bank-Matugama FD No.2-0045-10-18736			
National Savings Bank-Matugama FD No.2-0045-01-58658		1,000.00	17,711.58
		<hr/>	<hr/>
		476,419.88	479,729.47

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note (06) Other Financial Assets
Note 1B -i Kuruwita

	Rs. 2013	Rs. 2012
Tea in Bearing	55,974.62	
Tea in Bearing	96,736.48	
2011 Young Budding Nursery		5,903.65
2012 Young Budding Nursery		428,468.96
Young Budding Nursery 2013	396,715.13	
2007 Bud Wood Nursery	3,550.13	6,550.13
Young Budding Nursery 2013/2014	30,637.06	
Banana Trail	47,548.48	47,548.48
Cinnamon Bearing A/c	242,599.46	206,648.66
Bud wood Nursery 2008	6,651.79	12,627.83
Bud Wood Nursery 2011	18,534.99	16,442.65
2013 Young Budding Nursery		133,125.25
Cinnamon Bearing	38,978.20	
Sub Total	937,926.34	857,315.61

Note 1B -ii Dartonfield Estate

	Rs. 2013	Rs. 2012
N'Kele Replanting 2014	67,821.25	
2012/2013 Young Budding Nursery NK		151,239.77
2013/2014 Young Budding Nursery NK	232,828.81	
Df Young Budding Nursery 2012/2013	69,589.41	127,582.19
G/W Young Budding Nursery 2012/2012		156,754.79
G/W Young Budding Nursery 2013/2014	172,800.30	
Sub Total	543,039.77	435,576.75
Grand Total	RS 1,480,966.11	1,292,892.36

Rubber Research Board of Sri Lanka
Notes to the Accounts for the Year Ended 31/12/2013

Note 07 - Land & Buildings Assets	Cost as at 01.01.2013	Additional during the year 2013	Vehicles Sales Rubber Came into Tapp	Total as at 31/12/2013	accumulative Depreciation as at 31.12.2013	Depreciation for the year 2013	accumulated Depreciation as at 31/12/2013	Written down value as at 31/12/2013	
Road Development Df.	3,386,525.12	1,170,324.50		4,556,849.62			-	4,556,849.62	
Land - Df.	1,010,704.74			1,010,704.74			-	1,010,704.74	
- N'kele	357,805.89			357,805.89			-	357,805.89	
- Galewatta	1,865,476.48			1,865,476.48			-	1,865,476.48	
- Kuruwita	732,681.96			732,681.96			-	732,681.96	
- Rathmalana	270,760.81			270,760.81			-	270,760.81	
Lease Land - Alawwa (55 years lease)	662,365.75			662,365.75			-	662,365.75	
- Monaragala (99 years lease)	106,650.00			106,650.00			-	106,650.00	
Buildings - Df. H.Q	24,675,257.27	645,716.04		25,320,973.31	5,623,102.81	666,825.41	6,289,928.22	19,031,045.09	
- Auditorium		33,803,623.04		33,803,623.04				33,803,623.04	
- Df. Estate	3,579,933.36			3,579,933.36	551,397.12	105,998.77	657,395.89	2,922,537.47	
- N'kele	3,559,630.44			3,559,630.44	292,987.18	114,332.51	407,319.69	3,152,310.75	
- Galewatta	713,605.29			713,605.29	57,240.51	22,972.77	80,213.28	633,392.01	
- Kuruwita	2,894,205.81	82,901.29		2,977,107.10	379,071.89	88,029.69	467,101.58	2,510,005.52	
- Rathmalana	17,384,426.01	154,867.27		17,539,293.28	2,918,160.27	506,319.30	3,424,479.57	14,114,813.71	
- Alawwa	796,781.68	506,067.10		1,302,848.78	105,828.55	24,183.36	130,011.91	1,172,836.87	
- Monaragala	14,739,679.92			14,739,679.92	963,539.63	482,164.91	1,445,704.54	13,293,975.38	100,197,835.09
Infrastructure, Plant and equipment									
Machinery & Tools - Df.	459,729.42	13,239.00		472,968.42	203,859.38	25,587.00	229,446.38	243,522.04	
- N'kele	31,050.00			31,050.00	18,129.52	1,292.05	19,421.57	11,628.43	
- Df. Estate	902,086.13			902,086.13	440,063.04	46,202.31	486,265.35	415,820.78	
- Kuruwita	109,300.50			109,300.50	25,596.64	8,370.39	33,967.03	75,333.47	
- Rathmalana	2,697,390.00			2,697,390.00	1,533,445.98	116,394.40	1,649,840.38	1,047,549.62	
- Alawwa	13,045.50			13,045.50	4,486.35	855.92	5,342.27	7,703.23	
Laboratory Equipments - Df.	61,920,104.30	2,939,810.00		64,859,914.30			-		
- Rathmalana	65,973,815.52	14,710,744.60		80,684,560.12	66,458,623.41	13,138,105.13	79,596,728.54	70,461,051.19	
- N'kele	4,255,229.31	258,076.00		4,513,305.31			-		
Effluent Treatment Plant		9,422,910.68		9,422,910.68				9,422,910.68	
Motor vehicles - H.Q	78,925,665.17			78,925,665.17	41,813,945.50	7,422,343.93	49,236,289.43	29,689,375.74	
- Df. Estate	1,443,598.00			1,443,598.00	993,011.68	90,117.26	1,083,128.94	360,469.06	
- Kuruwita	365,960.00			365,960.00	208,284.09	31,535.18	239,819.27	126,140.73	
Power & Water Supply - Df.	1,511,183.60			1,511,183.60	201,104.37	131,007.92	332,112.29	1,179,071.31	
- N'kele	29,995.00			29,995.00	16,914.77	1,308.02	18,222.79	11,772.21	
- Kuruwita	228,831.39			228,831.39	38,222.52	19,060.89	57,283.41	171,547.98	
- Rathmalana	272,067.00			272,067.00	139,868.81	13,219.82	153,088.63	118,978.37	
- Monaragala	1,695,132.00			1,695,132.00	582,955.89	111,217.61	694,173.50	1,000,958.50	
- Alawwa	90,685.00			90,685.00	31,186.58	5,949.84	37,136.42	53,548.58	
Furniture & Fixtures & Office Equipment -Df. H.Q	20,001,592.68	1,549,386.94		21,550,979.62	10,223,458.39	1,955,626.86	12,179,085.25	9,371,894.37	
- N'kele	1,327,433.08	11,883.33		1,339,316.41	943,650.12	76,756.59	1,020,406.71	318,909.70	
- Kuruwita	444,805.75			444,805.75	147,923.36	59,376.48	207,299.84	237,505.91	
- Rathmalana	6,146,739.35	460,187.44		6,606,926.79	2,902,140.77	648,919.72	3,551,060.49	3,055,866.30	
(vote No-01.07.06 +01.08.06) - Alawwa	310,838.89			310,838.89	89,136.90	44,340.40	133,477.30	177,361.59	
- Df. Estate	578,824.61			578,824.61	383,116.58	39,141.61	422,258.19	156,566.42	
- Monaragala	1,230,151.63			1,230,151.63	392,724.19	167,485.49	560,209.68	669,941.95	
Others Assets - Df. H.Q	4,085,416.27	656,034.01		4,741,450.28			-		
- Df. Estate	28,195.64	860,356.40		888,552.04			-		
- Rathmalana	509,377.02	165,823.00		675,200.02			-		
- N'kele	18,794.00	101,050.00		119,844.00	1,539,305.25	557,547.48	2,096,852.73	6,862,750.77	
- Kuruwita	658,406.16			658,406.16			-		
- Alawwa	2,500.00	61,560.00		64,060.00			-		
- Monaragala	1,812,091.00			1,812,091.00			-		
Library Periodicals Journals & Sub etc.	7,315,923.13	188,660.00		7,504,583.13	4,620,554.51	539,073.72	5,159,628.23	2,344,954.90	
Rubber Replanting Df & K'wita	38,464,358.50	6,769,184.97	22,013.91	45,211,529.56			-	45,211,529.56	
Rubber in bearing Df & k'wita	12,830,709.49	22,013.91		12,852,723.40		641,535.49	641,535.49	12,211,187.91	
Tea Replanting K'wita	3,468,450.57	1,249,879.48		4,718,330.05		173,422.53	173,422.53	4,544,907.52	
Replanting Cinnamon K'wita	732,207.09			732,207.09		36,610.36	36,610.36	695,596.73	
Replanting Pepper	106,848.01			106,848.01			-	106,848.01	
Earth Slip Project	139,543.30			139,543.30	35,830.83	3,629.94	39,460.77	100,082.53	
Documentary film	3,723.33			3,723.33	3,140.30	116.61	3,256.91	466.42	200,463,752.51
Total	397,878,287.87	75,804,299.00	22,013.91	473,660,572.96	144,882,007.69 ★★★	28,116,977.67 ★★★	172,998,985.36	300,661,587.60	300,661,587.60
2013.01.01 Accumulated Depreciation	=	144,882,007.69	★★★★		2013 Total Depreciation	=	28,116,977.67	★★★★	
2013 year Depreciation	=	27,265,409.29	★★★		2013 Replanting Depreciatin Transfer to the Estate A/C	=	851,568.38	★	
		<u>Rs. 172,147,416.98</u>					<u>Rs. 27,265,409.29</u>	★★★	

Note 08

Payables

		RRI		K'wita Estate		Df. Estate		Total	
		<u>2013</u>	<u>2012</u>	<u>2013</u>	<u>2012</u>	<u>2013</u>	<u>2012</u>	<u>2013</u>	<u>2012</u>
Creditors	Schedule 08	43,846,357.34	22,980,427.95					43,846,357.34	22,980,427.95
Payables	Schedule 08,	5,273.87	5,819.87	2,817,882.97	2,411,024.26	10,675,074.84	9,760,697.73	13,498,231.68	12,177,541.86
				(Schedule 09)		(Schedule 10)			
Accrued Expenses	Schedule 11	9,346,341.68	8,187,422.51	20,479.89		236,859.89	246,486.98	9,603,681.46	8,433,909.49
Total	Rs	53,197,972.89	31,173,670.33	2,838,362.86	2,411,024.26	10,911,934.73	10,007,184.71	66,948,270.48	43,591,879.30

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Provision for Audit Fee

Note - 09

	2013	2012
Beyond 2013.01.01	1,849,551.61	1,759,404.29
Provision for 2013	500,392.56	454,902.32
Paid 2010		(364,755.00)
Total	2,349,944.17	1,849,551.61

Provision for Gratuity

Note - 10

	2013	2012
RRI	79,846,234.03	79,293,822.50
Kuruwita	6,818,332.00	5,610,734.00
Dartonfield	19,098,380.00	15,488,915.00
Total	105,762,946.03	100,393,471.50

Provision were made for 536 employees including Dartonfield and Kuruwita Esate details are available in the JE 836 and Estate Accounts Schedules

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note - 11

Accumulated Fund		45,044,234.46
Other Capital Grants	Schedule 12	56,955,811.75
Treasury Grants Capital		350,466,000.00
Treasury Grants Cess		79,828,035.40
Plantation Crop Development Fund		6,300,000.00
	RS	<u><u>538,594,081.61</u></u>

Note 12

Deficit A/C Balance B/F 01.01.2013		254,346,538.84
Deficit 2013 year		84,950,295.13
	RS	<u><u>339,296,833.97</u></u>

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note-13 - OTHER INCOME - 2013	Non Research	Research	Total Rs.	
			2013	2012
Interest On Institute Loans	244,666.15		244,666.15	198,828.71
Sales Of Publication	172,086.96		172,086.96	312,539.00
Sale Of Processed Rubber/Analytical Charges			-	31,950.00
Bus fare Recoveries	307,868.32		307,868.32	301,758.85
Sundry Receipts	1,571,105.92		1,571,105.92	2,904,324.38
Claims From Insurance Corporation	99,391.52		99,391.52	-
Suppliers Registration Fees			-	-
External heavy vehicles entering to RRI Premises	4,750.00		4,750.00	-
Sale of bud wood/stumps		98,950.00	98,950.00	450,700.00
Effluent Treatment- B/C Dept.		26,470.00	26,470.00	14,250.00
Testing of Soil Samples		195,699.10	195,699.10	82,404.00
Testing of Rubber - Polymer		41,275.00	41,275.00	-
Testing of Rubber - Rubber Technology		79,300.00	79,300.00	134,150.00
Testing of Rubber - RRP Dept.		590,475.00	590,475.00	551,075.00
RRI Timber Sold /Utilized			-	-
Kuruwita Guest House Occupational Charges	14,200.00		14,200.00	1,800.00
Sale of Rejected Items	64,527.00		64,527.00	31,669.00
Soil & Foliar analysis Fee		273,448.12	273,448.12	261,766.58
Kiosk	1,000.00		1,000.00	1,900.00
Interest on Investments	35,989.65		35,989.65	32,985.26
Sale of Tapping Knives		2,735,700.00	2,735,700.00	3,035,360.00
Use of RRI Vehicles for Projects		247,575.05	247,575.05	342,025.90
Profit on Training Programmes		300,672.09	300,672.09	251,264.50
Guest House Income	61,189.00		61,189.00	197,398.00
Sail Foliar Survey		953,162.01	953,162.01	850,432.90
Waste Rubber of RRI Depts Sold		134,904.83	134,904.83	-
Tapping Panel Making plants sale		32,445.00	32,445.00	16,575.00
Re pellent for wild Boar and Procupine		3,400.00	3,400.00	5,000.00
Income Rain Guard			-	-
Sale Vehicle Income			-	727,625.22
Testing T.S.R.Samples		893,850.00	893,850.00	645,350.00
Testing and Analytical Fees Polymer Chemistry		850,115.00	850,115.00	792,750.00
			-	-
	2,576,774.52	7,457,441.20	10,034,215.72	12,175,882.30

Rubber Research Institute of Sri Lanka
Note to the Accounts for the Year Ended 31/12/2013
Dartonfield Estate Expenditure

Note 14A

Wages, Salaries & Employee Benefits

	2013	2012
Salaries & Wages etc	33,191,075.73	29,378,852.90
EPF	2,718,604.55	2,310,813.70
ETF	631,038.95	536,382.64
Medical	800,945.40	960,294.08
Total	37,341,664.63	33,186,343.32

Grants & Other Transfer Payment

Supplies & Consumables Used

Tools	4,357.50	15,522.50
Rain Guard	1,282,550.16	1,173,741.10
Stimulation	36,364.48	72,054.43
Tapping Utensils	139,173.09	72,760.52
Chemicals	596,975.76	783,702.66
packing Materials	47,667.86	31,777.86
Total	2,107,088.85	2,149,559.07

Depreciation & Amortization Expenses

Depreciation		
Fixed Assets	283,909.36	303,929.39
Repenting	558,895.36	517,241.80
Total	842,804.72	821,171.19

Maintenance of Property, Plant & Equipment

Supervisory Vehicle	687,146.92	729,539.75
Stationery & Communication	106,398.96	210,499.00
Bungalows	286,515.11	206,286.33
Lines	60,374.78	46,463.83
Miner Building Up-Keep	60,277.53	55,898.69
Fence & Boundaries	12,517.13	18,706.61
Weeding	78,444.70	65,631.00
Artificial Manure	342,516.59	428,408.47
Manure Application	21,216.88	20,810.10
Marking	1,700.00	1,400.00
Censes	2,865.00	2,101.10
Tapping Pennel Treatment	24,959.00	19,506.40
Storm Damage,	250.00	
Latex (Transports)	379,628.37	404,645.37
Tools(Transports)	1,236.07	
Power	1,113,776.22	851,775.17
Fuel	123,427.54	116,167.88
Factory Up-Keep	38,064.65	35,188.06
Machinery Up-keep	187,534.07	1,234,084.09
Factory Sundries	32,670.37	50,977.00
Transport of Produce	178,907.24	72,708.90
Water Supply	1,491.39	
President's Visit	847,890.50	
Total	4,589,809.02	4,570,797.75

Other Expenses

Contingencies	126,102.14	122,629.50
Levies, Subscription & Visiting	9,534.19	6,353.00
Welfare & Sports	43,794.36	58,624.51
Audit Fee	91,498.57	79,563.97
Expenditure Galewatta 1975.78	-	122,265.80
Total	270,929.26	389,436.78

Finance Costs

Legal	47,836.00	5,200.00
Commission Cash Transport/Insurance	594,378.57	422,434.19
Bank Charges	3,750.00	5,250.00
Total	645,964.57	432,884.19
Total Revenue expenditure	45,798,261.05	41,550,192.30

Rubber Research Institute of Sri Lanka
Note to the Accounts for the Year Ended 31/12/2013
Kuruwita Sub Station

Note 14 B

Wages, Salaries & Employee Benefits

Emolument	14,155,670.79	11,498,687.90	
EPF	1,381,317.88	2,339,202.24	
ETF	345,329.47	318,982.14	
Medical	152,824.09	172,543.27	
Overtime pay	314,082.22	442,179.46	
House rent	<u>2,160.00</u>	<u>1,080.00</u>	
Total		16,351,384.45	14,772,675.01

Supplies & Consumables Used

Fuel	555,542.94	889,149.70	
Stationery	417,981.19	245,725.49	
Manure	285,877.50	273,454.77	
Chemical etc	<u>52,797.83</u>	<u>90,595.52</u>	
Total		1,312,199.46	1,498,925.48

Depreciation

Fixed Assets	257,036.77	227,695.00	
Repenting	<u>82,640.13</u>	<u>86,989.60</u>	
Total		339,676.90	314,684.60

Other Expenses

Contingencies	1,500,878.85	993,987.29	
subscription & Visiting	18,757.44	1,065.00	
Welfare	19,666.15	51,467.58	
Audit fee	28,401.32	24,696.80	
Legal	<u>22,800.00</u>	<u>55,250.00</u>	
		1,590,503.76	1,126,466.67

Finance Costs

Commission on Cash	<u>161,570.54</u>	163,620.62	
Total		161,570.54	163,620.62
Grand Total		<u><u>19,755,335.11</u></u>	<u><u>17,876,372.38</u></u>

Rubber Research Institute of Sri Lanka
Note to the Accounts for the Year Ended 31/12/2013
Monaragala Sub Station

Note 14 C

	2013		2012	
Emolument	4,605,064.06		2,831,718.67	
EPF	541,146.00		374,175.80	
ETF	<u>69,946.72</u>	5,216,156.78	<u>57,132.99</u>	3,263,027.46
Supplies & Other Consumables used		228,596.53		244,157.53
Other Expenses		<u>1,819,292.06</u>		<u>2,032,236.80</u>
Total		<u><u>7,264,045.37</u></u>		<u><u>5,539,421.79</u></u>

Rubber Research Institute of Sri Lanka
Note to the Accounts for the Year Ended 31/12/2013
Polgahawela Sub Station

Note 14 C

	2013		2012	
Emolument	2,310,988.00		1,799,810.00	
EPF	324,824.16		278,440.79	
ETF	<u>44,294.26</u>	2,680,106.42	<u>37,967.14</u>	2,116,217.93
Supplies & Other Consumables used		28,540.00		114,065.00
Consumables Used				
Other Expenses		<u>763,206.97</u>		<u>214,395.85</u>
Total		<u><u>3,471,853.39</u></u>		<u><u>2,444,678.78</u></u>

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note-15 - TRAVELLING

Research Departments	2013	2012
	Travelling & Subsistence	
Plant Science	698,322.50	640,335.50
Plant Pathology	298,206.00	275,873.50
Genetics & Plant Breeding	381,607.50	378,767.75
Soils & Plant Nutrition	317,347.75	334,055.25
Raw Rubber & Chemical Analysis	42,182.00	45,238.88
Bio-Chemistry & Physiology	60,663.25	87,545.75
Electronic Laboratory	3,730.00	2,838.00
Adaptive Research Unit	97,483.60	70,070.25
Rubber Technology	121,589.50	109,325.00
RRPD & CE Dept	172,892.00	139,343.75
Bio Metry	39,689.50	37,281.00
Polymer Chemistry	82,227.00	52,965.00
Agriculture Economics	2,500.00	5,500.00
Sub Total	2,318,440.60	2,179,139.63
Other Departments		
Library & Publication Unit	35,205.00	23,775.00
Director's Office	25,032.50	34,925.10
Internal Audit	36,785.00	21,357.00
Board Office	544,148.00	511,604.42
Administration	149,979.50	150,395.00
Finance (Accounts)	102,054.00	90,845.50
Stores	47,875.00	47,175.00
Maintenance (Work Section)	1,423,343.10	1,325,701.75
RRI New Advisory Services Dept	1,884,118.10	1,667,272.33
Training Centre	10,910.60	6,340.00
Sub Total	4,259,450.80	3,879,391.10
Grand Total	6,577,891.40	6,058,530.73

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note -16 - SUPPLIERS AND CONSUMABLES

Research Departments	2013	2012
Plant Science	279,146.34	107,231.04
Plant Pathology	283,787.21	171,023.62
Genetics & Plant Breeding	133,355.92	79,399.43
Soils & Plant Nutrition	50,029.03	91,993.34
Raw Rubber & Chemical Analysis	39,270.00	
Bio-Chemistry & Physiology	108,699.08	106,399.33
Electronic Laboratory	100.00	1,100.00
Adaptive Research Unit	87,339.86	60,961.20
Rubber Technology	21,130.67	12,308.00
RRPD & CE Dept	53,328.54	13,644.00
Bio Metry	429,129.38	36,353.80
Polymer Chemistry	9,962.50	1,566.75
Agriculture Economics	2,542.42	
SUB TOTAL	1,497,820.95	681,980.51
Other Departments		
Library & Publication Unit	975,989.02	675,227.95
Director's Office	77,872.90	79,216.22
Internal Audit	27,253.45	9,455.73
Board Office	817,058.56	630,799.30
Administration	738,256.73	532,905.16
Finance (Accounts)	324,706.06	240,444.01
Maintenance (Work Section)	177,701.49	225,148.46
RRI New Advisory Services Dept	1,031,713.13	815,132.51
Training Centre	948,095.90	781,640.15
Stores	30,625.59	5,275.08
SUB TOTAL	5,149,272.83	3,995,244.57
L.P gas for Bungalows	691,967.95	517,374.05
Fuel & Lubricants	9,565,207.31	8,600,996.79
Stationery and Office Requisites	691,542.30	1,062,179.90
Medical Expenses	703,481.91	651,283.70
SUB TOTAL	11,652,199.47	10,831,834.44
GRAND TOTAL	18,299,293.25	15,509,059.52

RUBBER RESEARCH BOARD OF SRI LANKA

Notes to the Accounts for the Year Ended 31/12/2013

Note-17

Depreciation of Non Current Assets

Category of Assets	Percen- tage	Rs.		Depreciation method
		2013	2012	
Buildings	3.5%	2,010,826.72	1,905,739.87	Redusing Balance method
Furniture, Fittings & Office Equipment	20%	2,991,647.15	2,087,945.82	"
Power & Water Supply	10%	281,764.10	186,564.64	"
Machinery & Tools	10%	198,702.07	209,780.07	"
Lab Apparatus	20%	13,138,105.13	11,129,416.59	"
Motor Vehicles	20%	7,543,996.37	4,025,427.11	"
Library Books	20%	539,073.72	507,279.55	"
Documentary Film	20%	116.61	145.76	"
Earth Slip Project	3.50%	3,629.94	3,761.59	"
Other assets	10%	557,547.48	328,282.11	"
Total		27,265,409.29	20,384,343.11	
Less:				
Dartonfield Estate		(283,909.36)	(303,929.39)	"
Kuruwita Estates		(257,036.77)	(227,695.00)	"
		26,724,463.16	19,852,718.72	
Less: Amortization		(5,184,294.00)	(1,039,566.99)	
		21,540,169.16	18,813,151.73	

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013

Note-18 - MAINTENANCE

	2013	2012
	Rs.	Rs.
Office & General Building Repair & Maintenance	6,300,588.70	2,853,784.91
Bungalows	1,375,728.75	1,649,193.56
Bungalow Premises & Compounds	9,053,143.54	7,230,137.19
Furniture, Fixtures & Fittings	71,850.00	84,550.00
Institute General Building Premises & Compounds	2,128,384.77	1,335,540.32
Maintenance of Bungalows Appliances		
RRI Ratmalana Building Premises Upkeep-Maintenance	205,718.20	153,983.78

OPERATIONAL EXPENDITURE VEHICLES.

Servicing of Vehicles	246,996.53	327,822.29
Diesel Taxes		
Repairs & Maintenance	6,272,386.60	6,607,060.55
Maintenance of Plant and Machinery.	55,845.66	39,620.59
Maintenance of Vehicles Tools		
	25,710,642.75	20,281,693.19

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013
ADMINISTRATION - GENERAL CHARGES - 2013

Note-19 -

CONTRACTUAL SERVICES

	2013	2012
	Rs.	Rs.
Legal Expenses	312,320.00	147,239.00
Audit Fees	380,492.67	350,641.55
IRRDB Germplasm Subscription	1,158,409.25	715,938.00
Entertainment Expenses	167,872.00	198,372.50
Insurance General Covers(Excluding vehicles)	1,910,742.03	861,548.02
Welfare and Recreation	150,578.25	160,768.45
Railway Concessionary Season Tickets	23,320.00	25,360.00
Conference/Seminars	1,113,981.42	3,265,466.50
Bank Charges	203,919.06	187,684.39
Security Charges - RRI	5,546,733.11	4,033,189.90
Parking Fees		230.00
Postage	129,054.78	127,860.30
Telephone	2,613,225.53	2,582,232.86
Advertisements	590,275.15	847,548.80
Transport & Handling Charges	66,978.23	4,044.05
Sundries & Utility Services	617,547.37	886,751.90
Exhibition		
Staff Training & Development	341,348.71	367,158.00
Fees For Interview Pannels	55,679.00	8,805.00
Provident Fund Expenses-RRI Component	51,222.58	41,489.91
Public Relations	7,588.95	14,923.88
Honorarium to Members Attending AFCOM	101,952.21	102,000.00
Police Escort Expenses	18,000.00	18,000.00
Fax Charges		
Inland Revenue Stamp Duty	90,950.00	108,300.00
Customs Duty/ clearing Charges	3,920.00	
Deyata Kirula Exhibition	295,862.69	212,850.52
Centenial Celebration Expenses		
Photo Copier Maintenance	172,704.00	181,795.04
Fees For Medical Expenditure		
Gratuity for the Year	7,766,359.03	23,859,214.72
Staff Disciplinary Inquiry Expenses		
Computer Package of Accounts		
Computer net Work	3,080.00	
Power Supply & Maintenance allied	10,867,251.10	8,972,087.97
Water Supply & Maintenance allied	507,423.45	832,928.03
Environmental Protection	7,997.57	4,389.52
Upkeep & Maintenance of Guest Houses (DF & KW)	1,839,878.07	1,732,761.57
Revenue Licences, Insurance Covers, Fitness fees &	501,401.80	1,220,035.38
External Vehicles Hired	323,994.13	327,670.02
Rent & Taxes	200,482.04	166,609.36
Payee Tax		
President Visit RRI	230,319.84	
	★ Note 19A	
	38,372,864.02	52,565,895.14

★Note 19 A

President Visit Received Funds	2,800,000.00
Less : Expenditure	(3,030,319.84)
	Rs (230,319.84)

RUBBER RESEARCH BOARD OF SRI LANKA
Notes to the Accounts for the Year Ended 31/12/2013
EXPENDITURE -RESEARCH AND DEVELOPMENT

Note -20 Research Departments

	Laboratory Working	Field Working 2013	Total	Laboratory Working	Field Working 2012	Total
Plant Science	128,889.25	3,790,588.38	3,919,477.63	577,002.20	2,801,766.86	3,378,769.06
Plant Pathology	534,060.47	538,442.17	1,072,502.64	737,771.43	825,239.88	1,563,011.31
Genetics & Plant Breeding	109,123.10	3,733,662.93	3,842,786.03	409,155.14	3,343,913.30	3,753,068.44
Soils & Plant Nutrition	666,059.98	985,545.34	1,651,605.32	1,019,851.83	513,600.29	1,533,452.12
Raw Rubber & Chemical Analysis	381,087.48	14,700.00	395,787.48	319,999.98	-	319,999.98
Bio-Chemistry & Physiology	62,293.12	204,856.74	267,149.86	52,863.40	450,582.01	503,445.41
Electronic Laboratory			-			-
Adaptive Research Unit	25,189.24	175,528.56	200,717.80	2,464.00	98,544.87	101,008.87
Rubber Technology	430,796.45	485,572.67	916,369.12	105,335.60	662,926.94	768,262.54
RRPD & CE Dept	236,502.83	545,257.55	781,760.38	246,769.14	520,294.96	767,064.10
Bio Metry		16,413.55	16,413.55		445,672.96	445,672.96
Polymer Chemistry	226,591.35	582,254.88	808,846.23	135,274.69	501,611.35	636,886.04
Modified Tapping Knives			-			-
Manufacturing Charges - Plant Sc.De. }		3,012,472.28	3,012,472.28		2,375,544.12	2,375,544.12
Tapping Marking Plates Expenses			-			-
TOTAL	2,800,593.27	14,085,295.05	16,885,888.32	3,606,487.41	12,539,697.54	16,146,184.95
Negenahira Navodaya		980,294.60	980,294.60		1,282,735.49	1,282,735.49
Northern Province Expenses		753,801.65	753,801.65		111,919.31	111,919.31
	2,800,593.27	15,819,391.30	18,619,984.57	3,606,487.41	13,934,352.34	17,540,839.75

RUBBER RESEARCH BOARD OF SRI LANKA

Notes to the Accounts for the Year Ended 31/12/2013

Note -21 Other Operating Expenses

	2013	2012
Rent for Narampola & Kumarawatta	1,040,000.00	1,040,000.00
Telephone Messenger	254,989.76	305,246.12
Medical Centre Labour	414,661.03	398,606.90
Sanitation	863,796.30	677,592.81
Roads, Fences & Boundaries	2,370,311.97	1,694,710.34
Watchmen & Gate Watchers	5,861,801.10	4,110,089.47
Everporate Decated Expanses		
	10,805,560.16	8,226,245.64

RUBBER RESEARCH BOARD OF SRI LANKA
Dartonfield Group Estate Working Account for the Year Ended 2013

Note 22

	2013	2012
Sales of Rubber Kg 187807	66,974,556.89	70,413,834.34
<u>Add</u>		
2013.12.31 Stock (kg 13007)	4,120,513.00	9,918,610.00
	71,095,069.89	80,332,444.34
<u>Less</u>		
2013.01.01 Stock kg 25688	9,918,610.00	4,871,242.00
Rubber Sale Broker Charges	884,100.56	950,856.03
Gross Profit	60,292,359.33	74,510,346.31
<u>Add :-</u>		
Sundry Receipts	56,425.95	101,534.43
Sale of rice		5,900.00
Young Budding Plants Sale		2,100.00
Rubber Replant Subsidy	258,274.34	486,397.94
Up rooted Rubber Trees Sales	4,026,231.44	1,824,724.00
Tea Green Leaf Sale	1,371,571.54	1,299,164.02
Rain Guard Subsidy	1,485,755.00	7,198,258.27
	67,490,617.60	78,230,166.70
<u>Less :</u>		
<u>Expenses</u>		
Wages, Salaries and employee benefits (Note 14A)	37,341,664.63	33,186,343.32
Supplies and Other consumables used (Note 14A)	2,107,088.85	2,149,559.07
Depreciation and amortization expenses (Note 14A)	842,804.72	821,171.27
Maintenance of property, plant and equipment (Note 14A)	4,589,809.02	4,570,797.75
Other expenses (Note 14A)	270,929.26	389,436.78
Finance Costs	645,964.57	45,798,261.05
		432,884.19
		41,550,192.38
<u>Other Expenditure Projects</u>		
Tea Green Leaf Expenditure	904,893.29	871,254.04
Passion Fruit Area G/W	2,159.64	
Anthurium Expenditure		8,821.00
Cinnamon Expenditure	34,994.00	
Paddy Field Expenditure		8,563.75
1980/93 Rubber Field Ex.	196,462.87	1,138,509.80
Surplus for the period	Rs. 20,553,846.75	888,638.79
		35,791,335.53

Expenditure on Rubber Replanting Amounting Rs. 5,581,451.55

RUBBER RESEARCH BOARD OF SRI LANKA

Kuruwita Estate Working Account for the Year Ended 2013

Note 23

		2013		2012
Sales of Latex & Scrap (93192 kg & 18799 kg)			38,066,949.59	34,456,466.12
<u>Add :-</u>				
Sundry Receipts		224,706.55		355,187.83
Rubber Replanting Subsidy		694,529.11		738,783.26
Tea Income				138,135.92
Young Budding Nursery Income		52,181.22		85,536.98
Cinnamon Income		72,003.26	1,043,420.14	1,317,643.99
			39,110,369.73	35,774,110.11
Less :				
Expenses				
Wages, Salaries and employee benefits	(Note 14B)	16,351,384.45		14,772,675.01
Grants and other transfer payments				
Supplies and consumables used	(Note 14B)	1,312,199.46		1,498,925.48
Depreciation and amortization expenses	(Note 14B)	339,676.90		314,684.60
Other expenses	(Note 14B)	1,590,503.76		1,126,466.67
Finance Costs		161,570.54	19,755,335.11	163,620.62
Surplus for the Period		Rs	19,355,034.62	17,897,737.73

Expenditure on Rubber Replanting Amount is Rs. 1,187,733.42

RUBBER RESEARCH BOARD OF SRI LANKA

Kumarawatta Estate Working Account for the Year Ended 2013

Note 24

		2013	2012
Sales of Income		336,244.64	392,176.50
Rubber Re-Planting Subsidy		21,231.25	
<u>Less :-</u>			
Maintenance Cost	(Note 14C)	(7,264,045.37)	(5,539,421.79)
Loss for the Year		<u><u>(6,906,569.48)</u></u>	<u><u>(5,147,245.29)</u></u>

RUBBER RESEARCH BOARD OF SRI LANKA

Narampola Estate Working Account for the year ended 2013

Note 25

		2013	2012
Sales of Sundry Cros		22,090.00	39,156.08
Rubber Sales		320,056.20	
Rubber Re-Planting Subsidy		<u>39,230.06</u>	<u>46,582.85</u>
		381,376.26	85,738.93
<u>Less :-</u>			
Maintenance Cost	(Note 14C)	<u>(3,471,853.39)</u>	<u>(2,444,680.78)</u>
		<u><u>(3,090,477.13)</u></u>	<u><u>(2,358,941.85)</u></u>

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Inventories/ Stocks - RRI

Schedule 01

		2013	2012
		Rs.	Rs.
Stock - Dartonfield	-	4,120,513.00	9,918,610.00
Stationary		377,528.70	251,069.00
Stock - General		5,807,034.35	9,256,413.60
Total		10,305,076.05	19,426,092.60

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Schedule 02 - Kuruwita Estate Stock

<u>Fertilizer</u>	2013		2012	
	Qty.(kg)	Rs.	Qty.(kg)	Rs.
Urea	595.45 kg	13,100.01	62.5	1,374.60
M.O.P.	265.5 kg	5,844.89	67.5	1,485.00
H.E.R.P	550 kg	8,250.00		
T/200	340 kg	8,183.65		
Dolomite	59 kg	389.40	74	461.31
U/709	150 kg	3,600.00		
T/750	103 kg	2,523.50		
Di Amonia Phosphate	139 kg	3,749.52	274.9	7,415.16
Sulphate of Photash	166 kg	5,036.80	294.3	8,930.90
Sulphate of Amonia	179 kg	6,366.83	307.1	10,922.60
ERP	424 kg	6,134.24		
9.11.11.14	50 kg	1,216.00	50	1,216.00
Epson Soalt	277 kg	6,786.03	437	10,705.88
Etheral	8 ltis	6,959.94		
Glyfosate	1 ltis	1,095.00	4	2,578.12
Brunolium	10 ltis	6,851.25	35	23,979.38
Coir Broom	4 nos	600.00		
Equl Broom	3 nos	285.00	4	380.00
L.P.Gas	1 nos	2,438.00	1	2,288.00
Barbed wire	75 kg	14,314.20	625	119,285.00
E/Bulbs	9 nos	720.00	12	900.00
China Clay	400kg	5,585.17	705	8,118.24
Polythene	166kg	45,398.25		53,831.17
Tar	295kg	26,992.50		
Cement	1bag	910.00		
Marco-Fungicide	0.1 g	400.00	0.4	430.00
Dithene	0.2 g	195.71		
Tapping Knives	17 nos	10,030.00	42	24,605.00
Jack timber (Regale)	4 feet	586.67	31.5	4,620.00
Jack plank	136 feet	51,697.75	210	80,112.50
Jack Pole (3x4)	23.5 feet	8,063.44	80	27,450.00
Timber-Alostonia	70 feet	7,912.74	39	33,305.00
Kieserte			164.3	4,798.69
VPLC 885			50	1,200.00
T.S.P			13	10,065.12
Zine Sulphate			6	1,200.00
Sulpher				836.00
Billet			1.3	4,420.00
Marco-Fungicide				
Red Powder			10	1,000.00
Total		262,216.49		447,913.67

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Schedule 03 - Stock Value - Dartonfield Estate

Item	2013		2012	
	Qty (Kg)	Value (Rs)	Qty (Kg)	Value (Rs)
Sodium Bi Sulphite	125kg	25,000.19	200kg	40,001.45
Maxi Crop	01 bot	340.00	01bot	340.00
Bulet	01 bot	384.00	01bot	384.00
Redoxy	2.5kg	14,422.00	2.5kg	14,422.00
Nexo Bleach	08kg	21,584.77		
Sodium Sulphite	50kg	10,649.81	145kg	30,686.59
Formic Acid	175kg	35,998.20	175kg	36,024.90
Brunolium	07lits	5,103.00	34lits	24,786.00
Policer	400ml	2,200.00	800ml	2,200.00
Urea	861kg	19,926.21	933kg	21,246.55
Kieserite	44kg	1,032.07	93kg	2,399.86
Cinnamon Manure	50kg	14,862.80	50kg	14,862.80
E.R.P.	02kg	29.49	42kg	554.76
Dolomite	28kg	182.55	12kg	77.91
N.P.K.12,14,14	10kg	250.85	48kg	1,206.25
M.O.P	791kg	18,284.20	860kg	19,536.23
H.E.R.P	608kg	10,504.20	725kg	12,525.57
Sulper	50kg	5,000.00	50kg	5,000.00
N.P.K.with H.E.R.P	154kg	3,941.14		
C.E.S	40kg	900.00		
D.A.P	40kg	900.00		
S.O.A	40kg	900.00		
S.O.P	40kg	900.00		
Poultry	01 roll	3,475.00	01roll	3,475.00
Weighing Scale	01no	225.00	01no	225.00
Clay Powder	220kg	11,699.07	200kg	3,500.00
Dust Mask	02nos	171.67	04nos	343.35
Bolt & Nut	16nos	112.00	06nos	112.00
Coir Brooms	07nos	634.30	13nos	1,146.44
Brass Screws	200nos	1,290.00	200nos	1,290.00
P.V.C.Pipe	1.5 length	6,885.00	1.5length	6,885.00
Visi Katy	01 no	137.50	02nos	275.00
Epoxy Thinner	04 lits	969.23	04lits	969.23
Clear Polythene	8.950 kg	2,148.00	8.950kg	2,148.00
Plain Sheet	01 no	1,331.25	01no	1,331.25
Tapping Knife	05 nos	2,976.47	07no	4,027.06
Marking Plate	05 nos	2,125.00	09nos	3,825.00
Bitumen (tar)	1440 kg	131,760.00	1800lits	173,390.01
Thinner	01 lit	256.97	60lits	1,538.71
Wire Nails	3.750kg	695.00	3.750kg	695.00
Auticomonsive Paint	02 lits	1,178.33		
Bend 4"	01 no	140.00	01no	140.00
Chain	01 no	2,700.00	01nos	2,700.00
Torch Battery	03 nos	179.14	03nos	174.00
Poly Bags	65000nos	193,700.00		
Value of Formic Acid	22.3 kg	4,675.66	19.4kg	7,487.48
Value of Sodium Bi Sulphite	10.4 kg	2,080.02	4.4kg	880.61
Value of Nexobleech	0.7 kg	1,679.32	7.1kg	19,523.11
Ethral			19lits	15,298.94
Mata			200gm	341.66
Weedol			40lits	23,744.00
Marco			400g	430.00
V.P.L.C.880			750kg	18,750.00
Brilliant Whitel			05lits	1,167.27
Golden Brown			08lits	6,140.00
PVC Socket 4"			05nos	475.00
Cement			05bags	4,383.33
White Paint			08lits	4,550.00
Fire Wood			02lits	1,178.33
Green Paint			08lits	4,796.00
Rain Guard Sealent			580kg	97,440.00
F/Starters			04nos	140.12
Fence Posts			133nos	63,895.68
Eckel Brooms			01nos	880.00
Polythene 300g x 24			1073.5kg	270,262.36
Red Powder			01kg	476.00
Total		566,519.41		976,684.81

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Schedule 04

Deposits

	<u>2013 Year</u>	<u>2012 Year</u>
	Rs.	Rs.
Telecom	6,000.00	6,000.00
Electricity	90,500.00	90,500.00
Post Master General	14,891.41	32,325.41
Sundry	2,005.00	2,005.00
M.P.C.S. Moratuwa	50,000.00	50,000.00
New Bambalapitiya Service Station	4,000.00	4,000.00
Ceylon Oxygen Co. Ltd.	113,316.00	113,316.00
Tender	2,000.00	2,000.00
Lanka Filling station-Narahenpita	15,000.00	15,000.00
Leo Freight Services(Pvt) Ltd	3,801.00	3,801.00
M.P.C.S. Matugama (Fuel)	74,500.00	74,500.00
Samaranayake Saha Samaranayake	50,000.00	50,000.00
	<u>426,013.41</u>	<u>443,447.41</u>

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

	2013	2012
Schedule 05		
Other Debtors		
Thurul Warnakula	936,278.34	936,278.34
D.E.D.E.I.N.Perera	350,000.65	350,000.65
	1,286,278.99	1,286,278.99
General Debtors		
General Debtors	21,471,556.96	19,994,385.66
Bond Debtors		
H .H. Thalgaswatta		74,402.56
B.P.Weera rathna		1,825,654.55
N.A.A.D.Wickramarathna		7,244.78
JAGSG Gunawardana		83,084.18
Samanthie P Herath		894,289.87
SMCE Silva		1,635,005.85
Nalinda P Wicramasinghe		10,643.54
MDRG Gunathilaka		2.00
MS Ranasinghe		500,600.00
G.V.L.Nilmini		1,884,612.81
	-	6,915,540.14
DEBTORS		
Provident Fund Control A/C RRI	4,441,589.77	7,314,716.40
Interest Receivable	10,019.17	12,568.50
NSF RG 2005/AG/14		
Bad & Doubtful Debtors	830,936.98	830,936.98
CARP Control Account	14,149.13	14,149.13
National Science Foundation	148,368.76	148,368.76
Medicinal Plant Project -2	219,701.03	219,701.03
Medicinal Plant Project -1	1,109.12	1,109.12
Rubber/Cane Cinnamon Project	14,466.24	14,466.24
CARP Project No 12/477/357	27,719.01	27,719.01
NRESA	5,400.00	5,400.00
Staff Fire Wood Issues		
Salaries Payable A/C	3,188.97	3,188.97
NSF Grant RG/2006/EPSP/01	116,007.83	116,007.83
Training Centre	980,412.61	980,412.61
NSF Grant	296,410.00	296,410.00
ANRPC	40,454.53	40,454.53
Sandee Project	5,294.02	5,294.02
CARP -12/607/457	30,454.20	30,454.20
Medical Fund Loan		
Nurseries	21,744.96	21,744.96
Handy Craft Project	65,495.25	65,495.25
RRI/TRI/CRI/Symposium		
Rubber Cocoa Cinnamon Project	7,000.00	7,000.00
Ministry of Science & Technology	41,687.50	41,687.50
NSF Grant RG/1010/AG/01		
NSF Grant RG/2005/AG/07		
NSF Grant RG/2008/AG/02	137,327.92	137,327.92
S.P.H.D.P	224,821.00	224,821.00
Humate Plus Experiment		
RRI/CRI/TRI Symposium	553,382.90	552,882.90
N.S.F.Grant RG.2010/AG/01	127,499.25	
N.S.F.Grant RG.2012/AG/06	16,696.43	
N.S.F.Grant RG.2012/AG/10	636,323.87	
International Work Shop on White Root Diseces	82,029.84	
Divineguma Note 03 vi ★	1,841,292.99	
	10,940,983.28	11,112,316.86
LOAN RECEIVABLES		
	2013	2012
Motor Car / Motor Car Repair Loan	473,750.00	537,500.00
Motor Cycle Loan	465,831.87	266,070.94
Personal/Distress/Study Loan	2,748,364.39	2,683,537.84
New Personal Loan	3,503,000.15	3,452,380.76
Staff Medical Fund Loan	26,846.70	3,777.84
	7,217,793.11	6,943,267.38
★Note 03 vi Funds Received to Divineguma Project	16,000,000.00	
Less : Expenditure	(17,841,292.99)	
	(1,841,292.99)	

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Schedule 06 **Doubtful debtors**

Provision for bad & doubtful debts have not been made since year 2002. A balance of Rs.1,074,162.13 is appeared in the accounts for last 07 years. Arrangements will be made to write-off this this balance by obtaining the approval of the Rubber Research Board.

Rubber Research Board of Sri Lanka
Schedule to the Accounts for the Year 31/12/2013
Kuruwita Estate
Trade & Other Receivable

Schedule 07

	Rs. 2013	Rs. 2012
Check Roll	26,335.32	21,476.74
Staff Electricity		3,507.44
Festival Advance(Labour)	80,900.00	80,400.00
Festival Advance (Staff)		165.00
Motor Cycle Loan "	6,742.88	25,523.66
Postage	270.00	135.00
St.Joachime Estate	91,271.15	61,903.21
Sundry Debtors	9,176.49	
S.H.P.E.D.Programme		5,390.00
Sundry Debtors		17,626.49
Distress Loan	89,046.06	
Book Allowance		
Hewij Rubber Industries	3,026,822.56	3,440,201.23
Electricity Bills Receivables	4,438.72	
Payment in advance	6,000.00	
	3,341,003.18	3,656,328.77

Dartonfield Estate
Trade & Other Receivable

	Rs. 2013	Rs. 2012
Adaptive Research Unit		
Check Roll debtors	58,296.11	52,031.78
Deposit A/c	2,690.00	2,690.00
Electricity Receivable	482.01	952.24
J.D. & Sons	4,649,567.04	8,502,490.83
Labour Festival Advance (Sinhala)	179,100.00	189,450.00
National Institute of Plantation Management	66,066.14	66,066.14
Personal Loan	91,665.77	54,165.80
Postage Stamp	240.00	500.00
Pry Mounth Rubber Industries	6,100.00	6,100.00
Festival Advance - Staff	12,000.00	10,000.00
John Keels Ltd		
Tamil Festival Advance	283,500.00	273,600.00
Vogen Estate	134,663.36	86,925.84
Insurance Cash in Transits	15,641.60	
Rubber Development Dept		
Festival Advance Christmas	86,000.00	72,000.00
Tea Research Insititute		
Baur & Co. Ltd		547.50
	5,586,012.03	9,317,520.13

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013
CREDITORS 2013

Schedule 08

	2013	2012
	Rs.	Rs.
Creditors Ledger Control A/C (C L C)	28,319,658.26	13,721,518.77
<u>RECEIPTS IN ADVANCE</u>		
Provident Fund Account - RDD	2,291,868.82	1,879,234.75
Tender Deposits	1,646,152.84	1,468,152.84
Canteen Deposits	13,500.00	13,500.00
Contract Deposits	15,350.00	15,350.00
Abatement Payable	1,613,671.80	8,850.56
Workmen's Compensation -Insurance Corp:		
Ru: Ban: Intercropping Programme Ecology UK (D F I D)	542,618.53	542,618.53
Receipt-in -Advance A/C (J.I.C.A)	208,297.09	208,297.09
Plant Science Intercropping Unit (Essex U.K)	21,731.55	21,731.55
National Science Foundation NSF/RAP/2001/RRI/01	705.96	705.96
NSF - SIDA/98/EP01	95,014.85	95,014.85
Receipt in Adv(Welfare)	595.00	595.00
NSF - PG/99/C/7	5637.68	5637.68
Biometry Project - Climate Change on Rubber	16,338.28	16,338.28
Sundry		
NSF RG 2012/AG/06		926,999.00
NSF RG 2012/AG/10		710,384.10
NSF RG 2005/AG/08		
NSF RG 2005/AG/07	5,776.52	5,776.52
Centre for Poverty Analysis	1,841.25	1,841.25
Salaries Payable A/C		
NSF Grant RG/2006/SPR/06	356,001.00	331,501.00
RRI/TRI/CRI Symposium		
Lapsed Cheques A/C	166,425.75	165,338.68
Medical Fund Resurve RRI Staff	7,575.00	7,158.50
RDD Nursery - Gampaha	45,000.00	45,000.00
Receipt in Advance (stamp)	271,645.00	271,645.00
RDD (Salary Arrears)	92,837.57	92,837.57
RDD Staff Payments & Recoveries Control A/C	1,621.72	1,621.72
Receipt in Advance Insurance		
N.S.F.Grant RG/2010AG/01		13,518.25
International Work Shop on White Root Diseces		70,542.66
NSF Project RE/2008/AG/02		
Vitex Project	9,288.79	9,288.79
National Workers Congress	67,497.50	67,497.50
Moratuwa University	542,788.00	473,210.00
Staff Fire Wood A/C	9,688.24	9,195.74
R.D.D.Kegalle	23,318.75	23,318.75
Insurance Claim Received	19,285.71	19,285.71
N.S.F.Grant RG/2010AG/01		
Plantation Development Project	543,237.59	543,237.59
Humate Plus Experiments	22,101.50	22,101.50
Payee Tax	34,655.32	40,395.75
White roat Diseases Research Project Sweden Grant	874,276.26	951,546.51
Postgraduate Institute of Peradeniya	24,640.00	24,640.00
G.S.I.Mapping of Tea & Rubber Lands on Galle Dis.	155,000.00	155,000.00
N.S.F.Grant RG/2012/Tech/D04	4,366,944.46	
N.S.F.Grant RG/2012/Tech/D05	1,001,110.00	
Carbon Market Project	118,108.57	
I.R.R.D.B.Plant Breeding Workshop	294,552.18	
	43,846,357.34	22,980,427.95
Payable		
Payable	5,273.87	5,819.87

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Schedule 09 -Kuruwita - Payables

	<u>2013</u>	<u>2012</u>
Check Role Wagers	1,383,170.00	1,099,940.00
CEB	23,495.67	16,687.83
Sundry Creditors		31,883.00
Govnt Department & Estate Corporation		
Sri Lanka Telecom Ltd	21,155.62	
EPF Payable	388,812.46	325,027.83
EPF Payable	53,020.46	44,321.96
Unclaimed Wagers		
Holiday Pay	589,492.43	510,954.30
Attendance Bonus	63,350.00	56,350.00
Tax payable	2,456.06	
JSS		
RRI Recreation Club	670.00	670.00
Bank of Ceylon	8,500.00	
National Savings Bank	3,000.00	
Death Donation Welfare	2,137.45	2,208.45
Deposits	49,662.00	54,662.00
Receipt in Advance	16,167.94	19,549.74
RRI Provident Fund	25,243.37	30,464.69
Seetawaka Tinkers	11,600.00	16,500.00
Anuvira Auto Service	4,925.00	
Palanda Hardware	5,390.00	
Kuruwita M.P.C.S	55,468.90	33,978.60
S.L.N.S.S	19,080.00	37,160.00
Donations		23,000.00
Thrift Society	3,120.00	3,120.00
Agrovseve		
Dilini Hardware	15,550.00	
Vishwa Shakthi Welfare	15,750.00	43,800.00
Un paid coins A/C	38,095.26	35,196.98
Casual Staff Salary	18,449.13	20,321.75
Sri Lanka Telecom Ltd		4,128.75
Dialog Television Ltd	121.22	1,098.38
Total	2,817,882.97	2,411,024.26

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013
Dartonfield Estate
Schedule 10 - Payables

	Rs. 2013	Rs. 2012
Attendance Bonus	250,107.99	243,444.32
Buddhist Society	200.00	575.00
Check Roll	4,706,957.94	3,943,845.62
Commission on Cash Transport	34,560.00	31,033.75
Samaranayaka & Samaranayaka	28,096.50	9,602.00
Ceylon Electricity Board	1,025.63	4,840.12
C.W.C.		1,524.00
C.S.C.& W.U.	120.00	480.00
C.P.M.S.U.	1,300.00	7,400.00
E.P.F.	1,055,102.43	911,991.43
E.T.F.	172,331.32	148,349.84
Holiday Pay	2,086,610.07	1,759,058.64
Horticulture Society	20.00	80.00
Insurance Corporation of Sri Lanka		428.40
Janatha Fertilizer Enterprises	298,577.50	298,577.50
Kovil Fund - Dartonfield	13,000.00	47,000.00
Kovil Fund - Galewatta	8,200.00	4,800.00
Kalyani Ttrading (Pvt)Ltd	8,215.00	8,745.00
L.J.E.W.U.	544.00	3,264.00
L.E.W.U.	15.00	60.00
New Mahinda Stores	11,655.00	11,166.00
National Savings Bank	24,900.00	2,200.00
New Paper Agent	1,080.00	3,110.00
RRI Welfare Society Colombo	10,225.00	33,640.00
Refundable Deposits	42,796.00	42,796.00
RRI Club	489.00	4,404.00
Staff Provident fund	139,904.92	152,321.67
S.L.N.S.S.	25,320.00	68,960.00
C.E.S.U		
Thrift Society	2,038.00	10,248.00
Transport Agent	12,146.25	
Unpaid Wagers	131,171.86	120,772.80
Welfare Society - N' Kele	10,400.00	
Welfare Society - Dartonfield	60.00	60.00
Welfare Society - H.O	28,298.49	63,308.00
Wijegunawardana & Sons	294,446.00	7,335.00
Agalawatta Auto Service	1,390.00	10,820.00
Agalawatta Motors	6,835.00	2,700.00
Institute Medical Fund	485.00	
Profit Bonus - 2012	793,297.93	1,685,225.64
Jagath Stores		855.00
Welfare Society Wishwa Shakthi	20,000.00	
Sundry Creditors	22,080.00	33,587.00
Medical Officer Payment		
State Mortgage Bank	77,830.00	33,012.00
B.O.C.Loan Recoveries	3,720.00	3,720.00
Chanlo Hardware		45,357.00
Chemanex Ltd	47,980.80	
Co-operative Society	64,125.00	
National Housing Development Authority	5,972.21	
Poly pac socio	231,445.00	
	10,675,074.84	9,760,697.73

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Accrued Expenses

Schedule 11

09-i RRI	2013	2012
Unknown Balance	-	-
Overtime 2008 December	66,456.63	66,456.63
Overtime 2013 December	568,444.58	517,039.53
Travelling & Subsistence 2013 Dec	391,440.47	323,926.35
Rental - Kumarawatta 2006 - 400,000/-		
2007 - 400,000/-		
2008 - 400,000/-		
2009 - 400,000/-		
2010 - 400,000/-		
2011 - 400,000/-		
2012 - 400,000/-		
2013 - 400,000/-	3,200,000.00	2,800,000.00
Rental - Narampola 2006 - 640,000/-		
2007 - 640,000/-		
2008 - 640,000/-		
2009 - 640,000/-		
2010 - 640,000/-		
2011 - 640,000/-	-	-
2012 - 640,000/-		
2013 - 640,000/-	5,120,000.00	4,480,000.00
	9,346,341.68	8,187,422.51
Kuruwita Estate (09-ii)		
Commission on Cash Carrying AES	10,479.89	
Lower Fees LT Case	10,000.00	
	20,479.89	-
Dartonfield Estate (09-iii)		
Overtime, Travell. & Subsis. - Dec'2013	87,672.39	84,786.98
Labour Charges - December 2013	149,187.50	154,440.00
Workers welfare		1,420.00
Meals supply to Tappers		3,940.00
Tea Supply to police officers		100.00
Sharpening Tapping Knives		1,800.00
	236,859.89	246,486.98
Grand Total	9,603,681.46	8,433,909.49

(Inter Transaction Accounts - Current A/C)

	RRI	K/W	D/F	Total
Dartonfield	(23,270,544.60)		23,270,544.60	-
Kuruwita	(3,934,352.66)	3,934,352.66		-
RRI	(27,204,897.26)	3,934,352.66	23,270,544.60	-

RUBBER RESEARCH BOARD OF SRI LANKA
Schedule to the Accounts for the Year Ended 31/12/2013

Schedule 12 Other Capital Grants	OTHER CAPITAL GRANTS - 2013			Value as at
	Value as at 01.01.2013 Rs.	Additions During Year Rs.	Depreciations on Grants Rs.	31.12.2013 Rs.
Accumulated Fund				
O.D.A. Grant	5,606.79			5,606.79
Government Grant	1,802,183.90		246,086.62	1,556,097.28
Australian Grant	165,221.00			165,221.00
World Bank Grant	4,739,779.82			4,739,779.82
UNDP Grant	2,571,866.95			2,571,866.95
UNICEF Grant	10,000.00			10,000.00
CRI /TRI Grant	334,058.64			334,058.64
NARESA Grant	1,345,912.39			1,345,912.39
UNDP Research Grant	2,510,441.46			2,510,441.46
Tea Board Grant	445,343.40			445,343.40
SRRP I Grant	16,571.29		3,946.77	12,624.52
ARP Project	4,683,382.65		105,327.01	4,578,055.64
CARP Grant	54,738.94			54,738.94
ARP II Capital Grant				-
Medicinal Plant Project Grant	18,076.59		2,452.13	15,624.46
Reserve Capital				-
NERESA Grant	5,600.00			5,600.00
SRRP II - Grant	7,899,647.66		255,255.93	7,644,391.73
Treasury Grant (Capital)	21,675,881.84		4,330,000.00	17,345,881.84
N.S.F. Grant	687,894.63	470,450.00	212,737.29	945,607.34
D.F.I.D. Grant	61,441.91		12,289.98	49,151.93
Staff Grant Comfort room	10,464.25		191.32	10,272.93
European Union Grant	11,647.81		1,953.91	9,693.90
Centre for Poverty	2,713.40		492.37	2,221.03
Environment Project Phase II	4,309.09		819.39	3,489.70
Cess Fund Capital				-
Climate Change Project	4,164.04		718.88	3,445.16
3rd Symposium Grant	60,112.00		12,022.40	48,089.60
Agricultural Research	12,542,595.30			12,542,595.30
	61,669,655.75	470,450.00	5,184,294.00	56,955,811.75



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கணக்காய்வாளர் தலைமை அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය
எனது இல.
My No.

LP/J/RRB/01/13/FA/01

ඔබේ අංකය
உமது இல.
Your No.

දිනය
திகதி
Date

22 April 2015

The Chairman,

Rubber Research Board of Sri Lanka.

Report of the Auditor General on the Financial Statements of the Rubber Research Board of Sri Lanka for the year ended 31 December 2013 in terms of Section 14 (2) (c) of the Finance Act, No. 38 of 1971.

The audit of financial statements of the Rubber Research Board of Sri Lanka for the year ended 31 December 2013 comprising the statement of financial position as at 31 December 2013 and the statement of financial performance, statement of changes in equity and cash flow statement for the year then ended and a summary of significant accounting policies and other explanatory information was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13 (1) of the Finance Act, No. 38 of 1971 and Section 8(2) of Rubber Research Ordinance (Chapter 439) as amended by the Act No. 11 of 1956. My comments and observations which I consider should be published with the Annual Report of the Board in terms of Section 14 (2) (c) of the Finance Act appear in this report. A detailed report in terms of Section 13 (7) (a) of the Finance Act was issued to the Chairman of the Board on 18 March 2015.

1.2 Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Public Sector Accounting Standards and for such internal control as the management determines is necessary to enable the preparation of financial statements that are free from material misstatements, whether due to fraud or error.



1.3 Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Sri Lanka Auditing Standards consistent with International Standards of Supreme Audit Institutions (ISSAI-1000-1810). Those Standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Board's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of financial statements. Sub - sections (3) and (4) of Section 13 of the Finance Act, No. 38 of 1971 give discretionary power to the Auditor General to determine the scope and the extent of the audit.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion

1.4 Basis for Qualified Opinion

My opinion is qualified based on the matters described in paragraph 2.2 of this report.



2. Financial Statements

2.1 Qualified Opinion

In my opinion, except for the effects of the matters described in paragraph 2.2 of this report, the financial statements give a true and fair view of the financial position of the Rubber Research Board of Sri Lanka as at 31 December 2013 and its financial performance and cash flows for the year then ended in accordance with Sri Lanka Public Sector Accounting Standards.

2.2 Comments on the Financial Statements

2.2.1 Sri Lanka Public Sector Accounting Standards

Financial statements of Dartonfield and Kuruwita Estates owned by the Board had not been prepared in conformity with the Format in Standard 01.

2.2.2 Accounting Deficiencies

The following observations are made.

- (a) Although the audit fees up to the year 2010 had been paid by the Board as at 31 December 2012, action had not been taken to include the overprovision amounting to Rs. 981,102 allocated since then, in the income of the year under review.
- (b) Provision for Retirement gratuity amounting to Rs. 491,400 had not been made for 15 employees who had been drawing daily wages since the year 2006.
- (c) Stocks worth of Rs. 7,013,298 had been accounted on book values without being verified by the end of the year under review.
- (d) A fire that broke out on 24 January 2014 had totally destroyed the stock of rubber, smoke house, drying tower and the radiator system of the Dartonfield rubber factory. Although it was estimated that repairing the factory would cost Rs. 4,600,000, it was not disclosed in the accounts as events after Balance Sheet date.



2.2.3 Lack of Evidence for Audit

Information such as agreements related to miscellaneous project grants amounting to Rs. 13,460,425 stated in the accounts as other capital grants, capital goods received as grants and their values, dates of receipts of those grants, dates of completion of projects, dates of commencing amortization and rates of amortization, was not made available to audit.

2.3 Accounts Receivable and Payable

The following observations are made.

- (a) Action had not been taken to recover balances that remained outstanding for more than 05 years amounting to Rs. 15,186,913 related to 667 debtors included in the normal and other debtor balances amounting to Rs. 22,757,836 by the end of the year under review.
- (b) Action had not been taken even during the year under review to settle an advance amounting to Rs. 5,214,500 given to the Department of Consultancy Services in the year 1985 by the Board for the construction of a building.
- (c) A sum of Rs. 1,747,981 receivable from the Rubber Development Department from the year 2000 up to the end of the year under review with regard to the employees attached to the said department holding the membership of Employees Provident Fund of the Board, had not been recovered.
- (d) A sum of Rs. 712,426 receivable from the Ministry of Plantations since the year 2000 for the training of graduates, had been continuously stated in the financial statements. However, action had not been taken to recover that amount.
- (e) Out of the project debtor balances totaling Rs. 10,940,983 that remained outstanding for more than 07 years, it was not established that 22 balances amounting to Rs. 3,776,532 were being recovered.



- (f) Action had not been taken to settle the balances amounting to Rs. 411,013 that remained recoverable for more than 08 years from 11 institutes, included in the receivable balance totaling Rs. 426,013.
- (g) Accounts payable totaling Rs. 15,526,699 had included a sum of Rs. 298,577 that remained payable to Janatha Fertilizer Company since the year 2002 had not been settled even up to 08 December 2014, and it was observed that the relevant bills were not in the possession of the Board.
- (h) Creditor balances of Rs. 627,318 that remained outstanding for 2-5 years and payable to 43 institutes, and Rs. 5,788,450 that remained outstanding for more than 5 years and payable to 139 institutes, had been shown in the accounts continuously. However, action had not been taken to settle those balances.
- (i) Action had not been taken to include the overtime amounting to Rs. 66,457 with respect to the year 2008. Instead, it had been shown in the accounts as payable.

2.4 Non-compliance with Laws, Rules, Regulations and Management Decisions.

The following instances of non - compliance were observed.

<u>Reference to Laws, Rules and Regulations</u>	<u>Non compliance</u>
Financial Regulations of the Democratic Socialist Republic of Sri Lanka	
(a) Financial Regulation 371(2)	(I) Ad hoc sub imprests totaling Rs. 48,000 obtained by 02 officers , had been retained in hand for a period ranging from 13 days to 02 months , and the total amount had been re-deposited. (II) Settlement of ad hoc sub imprests totaling Rs. 158,000 obtained by 12 officers had been delayed for a period ranging from 3 – 10 months.



- | | |
|----------------------------------|---|
| (b) Financial Regulation
396 | Action had not been taken in accordance with Financial Regulations on cheques exceeding 06 months valued at Rs. 166,426 and not submitted to the bank after being issued. |
| (c) Financial Regulation
1646 | Summaries of running charts relating to pool vehicles had not been prepared. |

3. Financial Review

3.1 Financial Results

The operating result of the Board for the year under review had been a deficit of Rs.84,950,295 as compared with the deficit of Rs.68,627,910 for the preceding year. The financial result for the year under review as compared with preceding year indicated a deterioration of Rs.16,322,385 and represented 24 per cent. The increase of the salaries and wages of the Board by 7 per cent as compared with the preceding year, the decrease of the profits of the Dartonfield Estate by 42 per cent , and the increase of the losses of Kumarawatta and Narampola Estates by 34 per cent and 31 per cent respectively had attributed for this situation.

3.2 Analytical Financial Review

The following observations are made.

- (a) Except for the expenses incurred on the estates in the year under review, the total expenditure of the Board amounted to Rs. 320,648,346 , which was an increase of 2.56 per cent as compared with the total expenditure of the preceding year amounting to Rs. 312,621,408.
- (b) The overall profit of the Dartonfield and Kuruwita Estates was Rs. 39,908,882. The decrease of the profit for year under review was 25.7 per cent as it was Rs. 53,689,073 for the preceding year. The overall loss of the Kuramarawata and Naramapola Estates amounted to Rs. 9,997,046 , and the increase of the loss for the year under review was 33.2 per cent as the loss for the preceding year amounted to Rs. 7,506,187. In considering the overall profit earned from the 04 Estates in the year under review amounted to Rs.29,911,836 and that amounted to Rs.46,187,887 in the preceding year. As such, the decrease of profit for the



year under review was 35.2 per cent. The decrease of the sale prices of rubber by 9 per cent as compared with the preceding year, the unfavorable weather conditions, and the higher salaries of employees had attributed the decrease in the profit.

3.3 Legal Cases Instituted By or Against the Board

Three persons had filed 3 cases against the Board claiming compensation for termination of their services.

4. Operating Review

4.1 Performance

The production of latex per hectare of the Dartonfield Estate as compared with the year 2012 had decreased by 63 kilogrammes in the year under review whereas, the production of latex per hectare of the Kuruwita Estate had increased by 08 kilogrammes.

4.2 Management Inefficiencies

The following observations are made.

(a) A sum of Rs. 12 million had been allocated for the Board in order to distribute plants of rubber among the owners of small rubber estates in the year under review under the "Divi Neguma" national development program. Plants of rubber had been purchased and distributed in 5 districts namely, Hambanthota, Ampara, Mulativu, Vauniya, and Monaragala. The following observations are made in this regard.

- (i) A sum of Rs. 5,353,051 had been overspent including amounts of Rs. 956,700 and Rs. 4,396,351 for purchasing and transportation of plants respectively by exceeding the provisions amounting to Rs. 12 million allocated for the program in the year under review.
- (ii) Plants of rubber valued at Rs. 12,956,700 had been purchased in the year under review without being adhered to the Government procurement procedure.



03)

- (iii) Cost for transporting plants had exceeded 25 per cent of the overall expense due to reasons such as, failure to purchase plants from nurseries closer to areas where the plants are distributed, disagreement with the minimum number of plants to be transported at a time, and failure to follow proper guidelines to calculate distances of transport and number of turns. The transport cost per plant was approximately Rs. 20
 - (iv) Plants of rubber valued at Rs. 1,001,440 had been destroyed due to unsafe transportation, and action had not been taken to recover the loss from the transporters.
 - (v) It was observed at a sample check on payment vouchers for purchasing and transportation of rubber plants that a sum of Rs 9,220,452 had been paid through 23 payment vouchers without a formal approval.
- (b) As smoke house and drying tower of the Dartonfield rubber factory that had been totally destroyed due to a fire broken out on 24 January 2014 , and a sum of Rs. 4,600,000 had been estimated to be spent on reconstruction, had been insured for a value as low as it's historical book value amounting to Rs. 936,000, the insurance indemnity received had been limited only to Rs. 702,518. An unskilled Management Assistant and a disabled Office Assistant had been appointed to the factory in place of the retired Factory Officer. It was revealed that the fire had broken out due to their lack of technical know-how and negligence. However, the Board had not taken necessary action to conduct a formal inquiry against the officers responsible.
- (c) As contributions to the Employee Provident Fund totaling Rs. 40,511,901 for the period from January to December in the year under review with respect to 04 estates owned by the Board had been made after a delay ranging from 18 days to 05 months, a sum of Rs. 437,662 had to be paid to the EPF as surcharges.
- (d) The Board had filed a case at the District Court, Mathugama, claiming compensation amounting to Rs. 730,000 against a person who had not returned a lorry owned by the institute after taking it away for the construction of the chassis. Though accused had pleaded guilty following the verdict. Action had not been taken to recover the amount even up to 08 December 2014.



(e) Contrary to the provisions in paragraph 3.4 of the Procurement Circular No. NPA 08 dated 25 January 2006, paint valued at Rs. 1,109,115 had been purchased in 09 instances from 10 January 2013 to 13 September 2013 in the name of an another registered buyer, instead of being in the name of the Board, and the VAT amounting to Rs. 118,833 had also been paid under the name of the same buyer.

4.3 Commencement of Projects on Lands not properly vested

The Committee on Public Accounts had directed on 02 October 2012 that the ownership of the Kumarawatta and Narampola Estates be taken over before the end of February 2013. Nevertheless, the Board had not taken over those estates even up to December 2014. A sum of Rs. 8,320,000 had been allocated as a hypothetical rental since the year 2006 for those estates. National Budget Department had been requested for a sum of Rs. 27,250,000 in order to take over the ownership.

4.4 Weaknesses of Contract Administration

The Following observations are made.

- (a) A private institute had been awarded the contract for the construction of the auditorium of the Board on 28 September 2011 at a cost of Rs. 28,838,759, and the construction should have been completed within 270 days. The construction was still underway even by September 2013. The Board could not recover demarrages as conditions on demarrages had not been included in the agreement. A sidewall had to be built for the safety of the building as the construction had been carryout without testing the suitability of the land. Construction of the sidewall had also been awarded to the contractor by incurring an additional expense of Rs. 2,007,487.
- (b) Despite the estimated value of Rs. 3,548,580 for the installation of air conditioner and electric lamps at the auditorium, an agreement for a sum of Rs. 4,199,456 had been entered into with the aforesaid institute.

- (c) A fresh estimate had been obtained from another institute after the contract being awarded by stating that the installation of electric lamps at the main auditorium had been unclear as per the initial estimate, and according to the new estimate, the expenditure for the said work amounted to Rs. 3,747,845.00. It had later been decided to carry out only selected activities valued at Rs. 1,301,160 from the estimate.

4.5 Utilization of Vehicles

The following observations are made.

- (a) Losses amounting to Rs. 1,392,269 had incurred in the year under review due to 05 vehicle accidents. Action had not been taken to recover losses amounting to Rs. 185,372 that had not been covered under insurance, from the responsible parties. Instead, the loss was borne by the Board.
- (b) Fuel consumption of vehicles had not been regularly tested and recorded in log books.

4.6 Idle and Underutilized Assets

Six motor vehicles had remained parked at the premises of the board over a long period without being repaired.

4.7 Personnel Administration

The following observations are made.

- (a) The approved cadre of the Board was 470 whereas, the actual cadre was 355. Twenty one approved number of posts of senior management related to operational activities , 27 posts of middle level management, 56 posts of junior management , and 11 posts of primary level, had remained vacant.
- (b) Although it is the mission of the Board to promote the rubber industry by providing the training and consultancy services cultivators, and the manufacturers of rubber items with the state-of-the-art technology identified through economically productive, and environmentally-friendly and sustainable inventions, attention had not been adequately drawn on the research staff which was the main mechanism of achieving the said mission.



Even by December 2014, sixty seven posts vital for the research activities, including 08 posts of Heads of Research Division, 07 posts of Principal Research Officers 12 posts of Senior Research Officers 14 posts of Research Officers 23 posts of technical research officers and 03 posts of Instructors remained vacant over several years.

(c) Many weaknesses in administration such as, frequent amendment of recruitment and promotion procedure in a manner favorable to predetermined persons, failure to implement exam inactive procedure with transparency , officers at lower grades overriding their immediate superiors and involving with exchange of official letters, and direct involvement of officers at higher grades with lower rankers irrespective of relevant divisional heads, had been observed to be hampering the accomplishment of objectives of the institute.

5. Accountability and Good Governance

5.1 Presentation of Financial Statements

Annual accounts should be presented to audit within 60 days after the lapse of the financial year as per Circular No. PED/12 dated 02 June 2003. However, accounts of the Board had been presented to audit after a delay of 05 months and 13 days.

5.2 Corporate Plan

A Corporate Plan for the years 2013 to 2017 had been prepared. However, the financial information of the preceding years, and financial values of physical goals expected to be achieved within 05 years had not been included therein.

5.3 Budgetary Control

The utilization of estimated expenditure under 03 Objects of the year under review had exceeded the estimated expenditure in the ranges of 5 per cent to 62 per cent. Even though the capital expenditure for the year under review had been estimated at Rs. 60 million, the actual expenditure amounted only to Rs. 44.4 million. Therefore, the budget prepared by the Board for the year under review had not been made use of as an effective instrument of management control.



6. Systems and Controls

Deficiencies in systems and controls observed during the course of audit were brought to the notice of the Chairman from time to time. Special attention is needed in respect of the following areas of control.

- (a) Budgetary Control
- (b) Fixed Assets Control
- (c) Stock Control
- (d) Accounting
- (e) Administration of research work

W.P.C. Wickramaratne

Acting Auditor General