Content

RUBBER RESEARCH INSTITUTE OF SRI LANKA

Introduction

The origin of rubber research in Sri Lanka goes back to 1909, when a group of planters in the Kalutara District got the service of a chemist to study the coagulation of rubber. This was later expanded to form a Rubber Research Scheme in 1913 and then named as the Rubber Research Institute of Ceylon (now Sri Lanka) in 1951showing that the Rubber Research Institute of Sri Lanka (RRISL) is the oldest Research Institute on rubber in the world. It has a proud record of service to the industry, in plant breeding, agro-management practices and the chemistry of raw rubber.

RRISL is the nodal agency in Sri Lanka having the statutory responsibility for research and development on all aspects of rubber cultivation, processing and product development for the benefit of the rubber industry. The institute carries out research on agronomy and biology of the crop, the chemistry of natural rubber and technologies of product manufacture together with environmental and socioeconomics aspects of all subsections. Further, the institute is committed towards technology transfer activities and training of extension personnel and other stakeholders. Accordingly, it has five biological research Departments. i.e. Plant Science, Genetics & Plant Breeding, Plant Pathology & Microbiology, Soils & Plant Nutrition and Biochemistry & Plant Physiology and four chemistry Departments i.e. Raw Rubber Processing Development & Chemical Engineering, Raw Rubber & Chemical Analysis, Polymer Chemistry and Raw Rubber Technology & Development and then Advisory Services Department for technology transfer together with Units for Adaptive Research, Biometry, Agricultural Economics and Audio Visual & Information Technology.

Organizational Structure and Arrangements

The organizational structure is summarized in Diagram 1- (page10).

Assignment of Responsibilities, Authority and Accountability

The Director as the Chief Executive Officer of the Institute is responsible for all the research and development activities, and administrative and financial affairs of the Institute under the general direction and control of the Rubber Research Board. The responsibility and authority for execution of the research, advisory and administrative plan of each department lies with the Head of the relevant department/section. The Deputy Directors are expected to assist the Director and Additional Director in discharging their executive functions in the relevant subjects.

Authority of the Organization

According to the Rubber Research Ordinance, a Rubber Research Board has been established for the purpose of furthering and developing the rubber industry. The Board governs a Rubber Research Institution with the view of managing, conducting, encouraging and promoting scientific research with respect to rubber cultivation, processing and product manufacture and also, dealing with all issues connected with the rubber industry. The areas covered are development of new clones, production of quality planting material, cultivation and management of rubber plantations, prevention and cure of diseases, pest control , harvesting rubber trees for latex, soil and moisture management, rubber based farming systems, expansion of rubber cultivation to new areas and impact assessment on rural livelihood, carbon sequestration & environmental impacts, raw rubber processing and conversion into marketable products, treatment of rubber factory effluents and providing of advisory services. This Ordinance has been amended from time to time; the most recent introduction has been the "Rubber Research Bill Part II of April 2003 with the amendment No. 28".

Our Clients

Management staff and workers of all Estates and Smallholders are important clients of the institute. Close links have been established between all these groups by constant interactions. The raw rubber and rubber product manufacturers, the consumers of raw rubber and raw rubber latex exporters are the other groups of institute's clients. Along with other sister organizations such as Rubber Development Department and Thurusaviya Fund, RRISL caters to the needs of the smallholders and assists them in selling latex to centrifuged latex factories or in producing quality smoked sheets. Emphasis is given for marketing of rubber and also to introducing new technologies to rubber growers and small scale industrialists.

THE VISION, MISSION STATEMENTS AND OBJECTIVES

Vision and Mission

"The institute's vision is to emerge as the center of excellence in providing high quality scientific technologies to the rubber industry". Its 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

The broad objective of the RRISL is to assist the Government of Sri Lanka (GoSL) in the sustainable development of the rubber industry by providing required technologies. Based on the policy for the Plantation sector, we expect the rubber industry in the country be competitive in the international arena capturing significant market share and also assuring decent living of plantation community in the country. Strategies proposed to be implemented are given below.

- Considering the existing level of popularity for rubber in the area, suitability and land availability for further expansion, two regions for rubber cultivation in the country are identified for focus oriented R&D activities.

    - ❖ A rubber triangle comprising Kalutara, Rathnapura and Kegalle districts is identified as a mega zone for rubber cultivation in the traditional rubber growing area. Since spare lands for further cultivation of rubber in this zone is limited, productivity increase is the focus in this zone. RRISL will provide sufficient technologies and suitable protocols targeting an average productivity of over 1500 kg/ha/-year by 2025 in this zone. To be competitive at international level, cost of production is expected to be kept below USD 2/kg for plantation companies. In line with other development programmes of GoSL, RRISL assist small & medium scale entrepreneurs to set up rubber industries in environmentally friendly manner by providing required technologies to do so.

    - ❖ In south-east region of the country, another mega zone for rubber comprising Monaragala,Ampara districts, is identified to expand the rubber cultivation for increased production. Whilst assisting GoSL to meet a target of 30,000 ha of rubber in this region, RRISL will provide improved protocols to maintain an average productivity level of 1500 kg/ha/year by 2025. Solar energy is promoted as the principal energy source for rubber industry in this zone. Also, rubber is promoted in this zone as a means of sequestering atmospheric CO_2 targeting carbon trading in voluntary market. Farming system approach is encouraged to increase land use efficiency and farmers' income further.

- In addition to above the two mega zones, RRISL is engaged in promoting rubber in Northern Province and in high elevation particularly in Nuwara Eliya District. RRISL will also assist to develop rubber industry in other regions of the country on demand basis.

- In order to meet the targets set in above approaches, agronomic research will be focused on developing sustainable and user-friendly agronomic practices and disease resistant, environmentally robust high yielding genotypes for improved productivity and greater level of farmer acceptance. Rubber technological research will cater mainly the small & medium entrepreneurs and develop products for high level of value addition and forniche markets. Also, information will be generated and required technologies developed to promote rubber as an environmental friendly industry. Further, impact guaranteed technology programmes are advocated mainly in mega zones in support of achieving set targets.

Research Departments/Units

Research departments & units of RRISL are to carry out research and development work and dissemination of outputs to the relevant sectors through extension network in view of meeting the objectives through the strategies mentioned. Considering the upstream and downstream segments of the industry, they are categorized into two as rubber agronomy and technology.

Agronomy

Agronomy departments conduct research and development activities on all aspects of the growth of the rubber tree and its productivity. Research activities on breeding clones for high yields, disease resistant, vigorous growth, tolerance to gaseous stimulation and increased timber production are given the highest priority. Also,reduction in cost of production with efficient uses of resources is the key focus in research. Further, research and development activities have been commenced on the expansion of rubber cultivation to nontraditional areas. The Advisory Services Department is catering to the needs of the smallholders. Whist Genetic & Plant Breeding Department is located at Nivithigalakale substation, Mathugama, other four biological research departments and three supporting units are functioning at Dartonfield, Agalawatta. The Advisory Services Department is located at Telawala Road, Ratmalana.

1. Genetics & Plant Breeding Department

Main objective of this department is to develop clones with high yield potential combined with desirable secondary characters. In order to achieve this, clones are produced by hand pollination and resulting new genotypes are tested first under small scale and then in collaboration with estates and also under smallholder conditions. Among the secondary characteristics; growth vigour, tolerance to diseases, resistance to wind damage & brown bast, high timber volume etc. are considered important. Research work is also conducted towards early identification of clonal characters using RADP techniques.

2. Plant Science Department

The broad objectives of this department are to identify and recommend cost effective techniques from plant production up to latex harvesting which would maximize the productivity. The quality of planting material is improved constantly. Planting techniques to improve the performance of the clearings and also methods of exploitation to cut down on cost of production (COP) are researched. Cultural practices during the immature phase along with intercropping are also looked at and recommendations are made where necessary. Plant physiological research is conducted to help increase the

productivity and tissue culture work is also continued with some progress. Apart from research and advisory work, this Department is also involved in activities to ensure high quality plant production for the sector through regular monitoring of all rubber nurseries.

3. Soils & Plant Nutrition Department

The main trust areas are research on improvement of soil fertility, increasing fertilizer use efficiency, soil& water conservation and weed control. This department also provides services such as site-specific fertilizer recommendation for mature rubber, land selection for planting rubber and chemical analysis of soil, plant and fertilizer samples.

4. Plant Pathology & Microbiology Department

Centre for planning, implementation and management of research on (a) all aspects of the maladies of the rubber plantations and (b) improvement of beneficial soil micro flora. Main research projects include screening of clones for disease resistance, testing pesticides, development of integrated pest management systems, biology and epidemiology of pests and surveillance of potential pathogens & disease out breaks.

5. Biochemistry & Plant Physiology Department

This department aims to meet the needs of stake-holders in the rubber industry particularly in the biochemical and physiological aspects. Ultimate focus is to build up a cleaner environment meeting the productivity goals in the present day context. Among the research programs, testing low intensity tapping systems with different methods of stimulation and developing convenient and reliable means of assessing rubber content in latex are in priority.

6. Advisory Services Department

The main objective is the technology transfer to the rubber smallholders in order to improve the adoption rate of recommended technologies to enhance productivity and profitability of the rubber growers.

7. Biometry Section

Providing statistical consultancy to other research departments of RRI, stakeholders and students, maintenance of databases on meteorological factors in the rubber growing areas, while providing data of the agro-meteorological station at Dartonfield to the national system are among the key services of the Biometry section. Development, modification and application of statistical techniques to suit the rubber sector and studies on environmental change are the main research focuses.

8. Adaptive Research Unit

This unit uses both ”Top-down” and “Bottom-up” approaches to refine the technologies available in the large scale plantation sector in favour of smallholders and plan the future research to cater the smallholder requirements, accordingly. Also this unit facilitates rubber cultivation in non-traditional areas. Among the research activities of the unit, developing protocols for rubber cultivation in nontraditional areas, assessing livelihood and

environmental impacts of rubber cultivation and evaluating rubber based farming systems and other agronomic practices whilst characterizing the socio economic conditions of smallholdings are in top priority.

9. Agriculture Economics Unit

This unit is mainly involved in two major research areas namely, a) Socio-economic studies in the rubber sector in relation to cultivation, processing and marketing and b) Impact evaluation of different policies implemented in the rubber sector.

Technology

The Technology Departments of the Institute carryout research and development work on raw rubber processing and rubber products, with the aim of developing new end products and also improving the quality of the products already being manufactured in the country to meet international standards. The departments concerned are situated at Telawala Road, Ratmalana and their functions are as follows.

1. Raw Rubber Process Development and Chemical Engineering

The main function of the department is to carry out research and development on raw rubber processing for the betterment and sustainability of the industry while protecting the environment. The department provides advice on trouble shooting, process development and quality improvement in the raw rubber processing industry. The department is also responsible for assisting the raw rubber industry in human resource development and human safety. Providing technical know–how and all other assistance in the management of waste water generated in raw rubber processing and rubber product manufacturing industries are also major functions of the department.

2. Polymer Chemistry

Major objectives of the department is to carry out Research and Development work on Polymers to optimize the quality and productivity of polymer manufacturing and processing industry. Modification of natural rubber, dry and latex form for improved quality, development of polymers including latex forms to suit the end user applications and identification and selection of additives to optimize process ability of polymer compounds are major Research and Development areas of the department.

3. Rubber Technology and Development Department

Major objective of the department is to carry out Research and Development work on all aspects of Rubber Technology in order to upgrade the rubber based product industries in Sri Lanka to acquire the global standards and thereby making Sri Lankan rubber products competitive in the international markets**.** Rubber compound development, both latex and dry rubber, physical testing of rubber products and compounds, assisting the small and medium scale prospective rubber product entrepreneurs in product development are among the major functions of the department.

4. Raw Rubber and Chemical Analysis Department

The main function of the department is to provide testing and analytical facilities for all forms of dry rubber and rubber latex and issuing of test certificates recognized by all parties concerned in the rubber trade. Research and development work related to chemical analysis and development of test methods related to testing of rubber and latex of all forms is the other major activity of the department.

Service Units

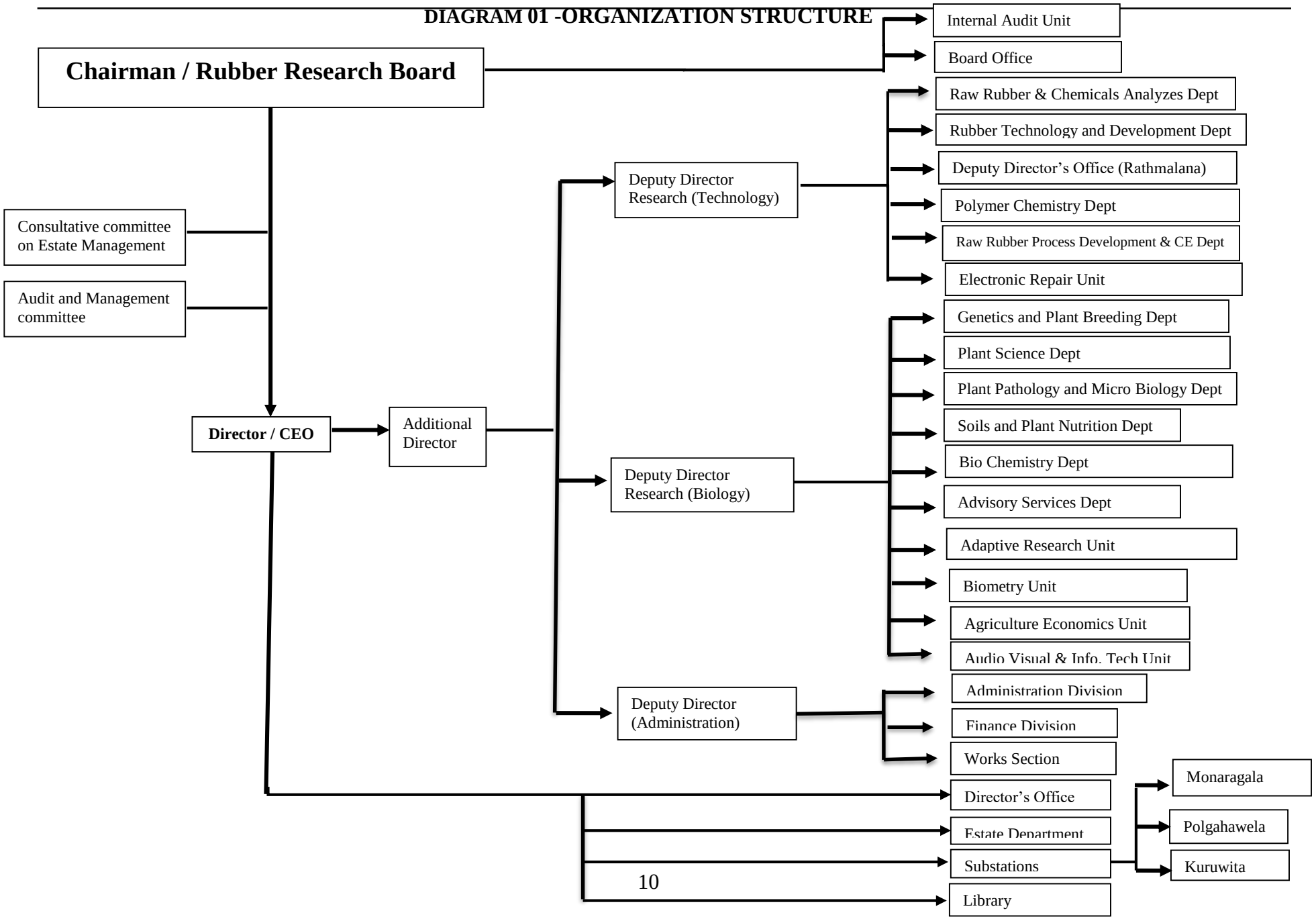
1. Audio Visual & Information Technology Unit

Provides audio visual aids including scientific photography for the research and extension activities. Administration and maintenance of the computer network of the institute including Ratmalana Offices, Technology departments and substations. Updating of the RRI website and supervising maintenance of the institutes' international telephone network and attendance recording machines. This unit also supports the functions of institute accounting software package.

2. Electronic Instruments Repair Unit

Undertakes the repairs of the electronic scientific instruments of the institute. However, currently this units has no staff.

DIAGRAM 01 -ORGANIZATION STRUCTURE



CURRENT RESOURCES AVAILABLE

Infrastructure

The Rubber Research Institute of Sri Lanka (RRISL) has about 2970m^2 of laboratory and office space at its Head Quarters in Agalawatta. Biological research departments and units are located in Agalawatta. In addition, Plant Breeding Department and the Training Center are located in Nivithigalakale substation, Mathugama. Technology Research Departments, Advisory Services Department and the Board Office situated at Ratmalana. Further, about 5313m^2 building space is available at substations located in Monaragala, Kuruwita and Polgahawela.

RRISL also owns approximately 492ha of lands at the Head Office Agalawatta, and its substations Nivithigalakale, Kuruwita, Polgahawela & Monaragala. In particular, Monaragala Substation is devoted to support the expansion process of the rubber cultivation in Monaragala District and in the Eastern and Northern Provinces.

Human Resources

Human resources are considered as the most important asset of any research organization and its qualification based profile is presented tables 1-4. Details of cadre positions is given in table 05. Around 32 scientists are engaged on research activities. Advisory Services Department has 05 Regional Extension offices and currently has only one Regional Officer. Total number of supporting staff for research is (Table 01).

HUMAN RESOURCE PROFILE BY DISCIPLINE ACROSS DIVISIONS
(As at 01st January2020 with only the highest level of qualifications)

01. Research & Extension Staff (only executive grades)

Discipline	Ph.D.	M.Phi.	M.Sc.	B.Sc.	Without Degree/Diploma	Total
Management	03	00	00	00	00	**03**
Genetics & Plant Breeding	02	00	00	02	00	**04**
Plant Science	01	01	00	02	00	**04**
Plant Pathology & Microbiology	01	00	01	00	00	**02**
Soils & Plant Nutrition	01	00	00	02	00	**03**
Biochemistry & Physiology	01	00	00	01	00	**02**
Polymer Chemistry	00	00	00	02	00	**02**

Raw Rubber and Chemical Analysis	01	01	00	00	00	**02**
Rubber Technology & Development	01	00	00	02	00	**03**
Raw Rubber Process Development & Chemical Engineering	00	00	00	01	00	**01**
Advisory Service	01	00	00	0	00	**01**
Biometry	01	00	00	01	00	**02**
Adaptive Research	01	00	00	01	00	**02**
Agricultural Economics	00	00	01	01	00	**02**
Estate	00	00	00	01	00	**00**
Grand Total	**14**	**02**	**02**	**16**	**00**	**34**

02. Research & Extension Support Staff (including staff grades)

Discipline	M.Sc.	B.Sc.	Diploma	Without Diploma/ Degree	Total
Genetics & Plant Breeding	00	03	01	02	**06**
Plant Science	00	08	03	02	**13**
Plant Pathology & Microbiology	00	03	02	00	**05**
Soils & Plant Nutrition	00	06	03	01	**10**
Biochemistry & Physiology	00	03	01	00	**04**
Advisory Service	00	12	05	03	**20**
Polymer Chemistry	00	04	01	00	**05**
Raw Rubber and Chemical Analysis	00	07	01	01	**09**
Rubber Technology & Development	01	05	02	00	**08**
Raw Rubber Process Dev. & Chemical Engineering	01	03	00	02	**06**
Biometry	00	01	01	00	**02**
Adaptive Research	00	00	02	00	**02**
Grand Total	**2**	**55**	**22**	**11**	**90**

03. Administrative Staff – Executives (non research)

Discipline	Degree	ICASL/CIMA/ ACCA/APFA	IRCA	Diploma	Without Dip./ Degree	Total
Administration	01	00	00	00	00	**01**
Accounts	01	01	00	00	00	**02**
Internal Audit	00	00	01	00	00	**01**
Audio Visual Aids Production	01	00	00	00	00	**01**
Works Section	01	00	00	00	00	**02**
Estate	01	00	00	00	00	**01**
Grand Total	**05**	**01**	**01**	**00**	**00**	**07**

04. Administrative Staff – Non Executives (including staff grades)

Discipline	Degree	RMP	Diploma	Without Diploma/ Degree	Total
Scientific Departments	01	00	00	14	**15**
Extension Department	00	00	00	05	**05**
Administration Department	02	01	00	12	**15**
Accounts Section	03	00	00	14	**17**
Internal Audit Unit	00	00	00	01	**01**
Library & Publication	01	00	01	02	**04**
Board Office	00	00	00	02	**02**
Works Section	02	00	03	03	**08**
Estate Department	00	00	01	06	**07**
Instrument Repair Unit	00	00	00	00	**00**
Polgahawela Sub-station	00	00	00	01	**01**
Monaragala Substation	00	00	00	04	**04**
Grand Total	**09**	**01**	**05**	**64**	**79**

CADRE INFORMATION AS AT 01st January 2020

Designation		Salary Code	Approved Cadre	Existing Cadre
Higher Management	Director	HM 2-3	01	00
	Additional Director	HM 2-1	01	01
	Deputy Director Research (Biology)	HM 1-3	01	01
	Deputy Director Research (Technology)	HM 1-3	01	01
	Deputy Director (Administration)	HM 1-2	01	00
	Head of Research Divisions	HM 1-3	10	05
	Principal Research Officer	HM 1-3	14	04
	Principal Advisory Officer	HM 1-3	01	00
	Senior Accountant	HM 1-2	01	01
	Senior Manager (Estates)	HM 1-1	01	01
Middle Management	Senior Research Officer	AR 2	19	03
	Senior Advisory Officer	AR 2	02	00
	Research Officer	AR 1	26	18
	Advisory Officer	AR 1	03	01
	Accountant	MM 1-2	01	01
	Resident Engineer	MM 1-2	01	01
	Senior Administrative Officer	MM 1-2	01	01
	Network Administrator	MM 1-2	01	01
	Internal Auditor	MM 1-2	01	01
	Manager (Estates)	MM 1-2	01	00
	Page Total		**88**	**41**

Designation		Salary Code	Approved Cadre	Existing Cadre
Tertiary Level	Registered Medical Practitioner	JM 1-2	01	01
	Accounting & Procurement Officer	JM 1-2	01	00
	Administrative Officer	JM 1-2	02	01
	Assistant Training Officer	JM 1-2	01	01
	Personal Assistant to Chairman	JM 1-2	01	01
	Personal Assistant to Director	JM 1-2	01	00
	Engineering Assistant	JM 1-2	01	01
	Librarian & Publication Officer	JM 1-2	01	01
	HR Development Officer	JM 1-2	01	00
	PRO/Welfare Officer	JM 1-2	01	00
	Development Officer	JM 1-2	01	00
	Experimental Officer	MA 4	30	24
	Audio Visual Aids Production Officer	MA 4	01	00
	Translator	MA 4	01	00
	Rubber Extension Officer	MA 4	22	19
Secondary Level	Technical Officer (Research & Development)	MA 2-2	51	46
	Technical Officer (Audio Visual)	MA 2-2	01	00
	Technical Officer (Instrumental)	MA 2-2	02	00
	Technical Officer (Computer Hardware)	MA 2-2	01	00
	Technological Officer (Civil)	MA 2-2	01	01
	Technological Officer (Electrical)	MA 2-2	01	00
	Technological Officer (Mechanical)	MA 2-2	01	01
	Library Assistant/Publication Assistant	MA 2-2	02	02
	Page Total		**126**	**99**

	Designation	Salary Code	Approved Cadre	Existing Cadre
Secondary Level	Management Assistant (Store-keeping)	MA 2-2	02	00
	Transport Officer	MA 2-2	01	01
	Management Assistant (Book-keeping)	MA 2-2	01	00
	Factory Officer	MA 2-2	01	00
	Assistant Factory Officer	MA 2-2	01	00
	Field Officer	MA 2-2	12	04
	Pharmacist	MA 2-2	01	00
	Work Supervisor (Civil)	MA 2-2	01	00
	Work Supervisor (Electrical)	MA 2-2	01	00
	Work Supervisor (Building)	MA 2-2	01	00
	Work Supervisor (Mechanical)	MA 2-2	01	00
	Work Supervisor (Workshop)	MA 2-2	01	00
	Work Supervisor (Motor Vehicles)	MA 2-2	01	00
	Store Keeper	MA 2-2	01	00
	Telephone Operator/Receptionist	MA 1-2	02	02
	Management Assistant (Clerical Typing)	MA 1-2	69	64
	Management Assistant (Accounting)			
	Management Assistant (Stenography)			
	Management Assistant (Auditing)			
	Management Assistant (Procurement)			
	Assistant Store-keeper, Cashier			
	Administrative Assistant	MA 1-2	01	00
	Page Total		**98**	**71**

	Designation	Salary Code	Approved Cadre	Existing Cadre
Primary Level	Driver	PL 3	30	23
	Electrician/Linesman	PL 3	04	04
	Carpenter	PL 3	04	03
	Mason	PL 3	04	03
	Plumber	PL 3	02	03
	Artist	PL 3	01	00
	Polisher/Painter	PL 3	01	00
	Mechanic	PL 3	01	00
	General Mechanic	PL 3	01	01
	Motor Mechanic	PL 3	02	01
	Refrigerator/Air Mechanic/Electrician	PL 3	01	01
	Tinker/Painter	PL 3	01	01
	Tinker/Welder	PL 3	01	01
	Blacksmith	PL 3	01	01
	Laboratory Attendant	PL 2	46	38
	Guest House Keeper/Circuit Bungalow Keeper	PL 2	02	00
	Junior Assistant Field Officer	PL 2	00	03
	Labourer	PL 1	01	01
	Engine Driver	PL 1	01	01
	Creche Attendant Office/Library/Stores/Club Attendant	PL 1	26	26
	Dispensary Attendant	PL 1	02	02
	Page Total		**132**	**113**

	Designation	Salary Code	Approved Cadre	Existing Cadre
Primary Level	Vehicle Attendant	PL 1	03	03
	Watcher	PL 1	10	10
	General Worker (Generator Operator)	PL 1	01	01
	Gardner	PL 1	02	02
	General Worker (Generator/Water Pump Operator)	PL 1	03	03
	General Worker (Masonary)	PL 1	01	01
	General Worker (Motor Vehicles)	PL 1	01	01
	General Worker (Painting/Polishing)	PL 1	01	01
	General Worker (Plumbing)	PL 1	01	01
	General Worker (Water Pump Operator)	PL 1	03	03
	Sanitary Attendant	PL 1	02	02
	General Worker (Carpentry)	PL 1	01	01
	General Worker (Electrical)]	PL 1	01	01
	General Worker (Cooking)	PL 1	01	01
	General Worker	PL 1	00	31
	Page Total Total		**31**	**62**
	Grand Total		**475**	**386**

RECRUITMENT SCHEDULE FOR SOME OF THE VACANCIES TO BE FILLED DURING THE YEAR 2019

No.	Designation	No. of Vacancies available	No. of Vacancies Scheduled to be filled	Time of recruitment Scheduled
01	Director	01	01	February
02	Principal Research Officer	10	01	March
03	Senior Research Officers	16	08	June
04	Senior Advisory Officers	02	02	June
05	Manager - Estate	01	01	June
06	Research Officers	12	10	March
07	Accounting & Procurement Officer	01	01	June
08	P.A. to Director	01	01	April
09	Translator	01	01	April
10	Pharmacist	01	01	June
11	Book - keeper	01	01	March
12	Rubber Extension Officers	07	07	June
13	Audio Visual Aids Production Officer	01	01	June
14	Technical Officer (R & D)	13	13	August
15	Technical Officer (Audio Visual)	01	01	April
16	Technical Officer (Computer Hardware)	01	01	April
17	Technical Officer (Instrumental)	02	02	April
18	Technological Officer (Electrical)	01	01	April
19	Factory Officer	01	01	June
20	Field Officers	07	07	June
21	Management Asst. (S.K.)	02	02	March
22	Drivers	06	06	March
23	Polisher/Painter	01	01	March
24	Mechanic	01	01	March
25	Motor Mechanic	01	01	March
26	Mason	01	01	March
27	Carpenter	01	01	March
28	Lab. Attendant	08	06	March
29	Guest House Keeper	02	02	April
	Total	**104**	**83**	

ACHIEVEMENTS DURING LAST FIVE YEARS

Rubber Research Institute of Sri Lanka has a proud record in all fields of rubber research with international recognition. Some achievements made during the last five years for the development of the rubber industry of the country are given below.

2019

1. Natural rubber latex foam was produced successfully using creamed latex for the benefit of Small and Medium Enterprises.

2. Natural rubber latex based non toxic adhesive was developed using a plant based preservative and tackifying agent at the request of a toy company and the formulation was transferred to the company.

3. Natural rubber based formulation suitable to produce protective caps for bicycles was developed.

4. A non – toxic, transparent natural rubber based compound for teats and teething rings was developed for a toy company.

5. Natural rubber/Ethylene – Propylene – Diene Monomer blend compound suitable for an automobile application was developed.

6. Novel nitrosamine free preservative system was developed for natural rubber latex.

7. Coir pith and elephant dung were found to be better sowing media than river sand for germination of rubber seeds.

8. Polybags of reduced sizes (from 15’ x 6’ to 15’ x 4) were found effective for raising budded rubber plants.

9. Antioxidant treatments were found to be effective in arresting tapping panel dryness of rubber trees.
10. A new microbial based medium was introduced for rapid skeletanization of rubber leaves.
11. Application frequency of mammalian pest repellant was identified as six months for the Intermediate zone.
12. Once in four days harvesting system was introduced successfully, to rubber smallholder sector.
13. Raw Rubber and Chemical Analysis Department was renovated according to international quality standards in view of achieving ISO 17025 Laboratory Accreditation, which is an urgent requirement for the rubber industry in Sri Lanka.
14. Mobile apps for technological solutions in the rubber industry was introduced.

2018

- Single application of newly developed fertilizer encapsulated coir bricks (ECB) was found to be sufficient achieving required growth rate in immature rubber plants under field conditions.

- Reusable porous fertilizer tube was developed for immature rubber plants, with maximize fertilizer use efficiency and minimize wastage.

- "Saka Sara" liquid organic fertilizer was developed by using freely available organic materials, green manure, farm yard manure, crop residues, locally available Eppawala Rock Phosphate (ERP) and Dolomite.

- Two soil maps relevant to rubber growing areas in Kalutara and Ratnapura districts were developed and ten different soil series were identified.

- Use of polythene and shade net as alternative weed management practices showed no weed regeneration around the base of immature plants up to 18 months.

- A protocol for local production of ethephon stimulant was developed.

- Natural rubber composites were developed with surface treated fibres of the pineapple crown as well as arica nut husk with the aim of developing green rubber composites. NR based composites were prepared using plant based non-modified and modified Moringa oleifera crude.

- Presidential merit award in the "Chemistry" category was received for the patented mechano-chemical reclaiming process (Oreclaim) for ground rubber tyre developed using a natural product.

- A mechano-chemical reclaiming process was developed for NR based carpet waste on the request of a large scale rubber product manufacturer and the technology was transferred to the company.

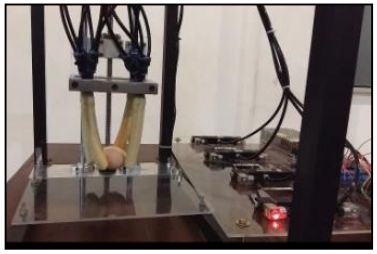
- A non-conductive NBR based compound was developed for grommet used in assembling of electric cables, SBR based compound for condenser end mount and wiring bunch bush and EPDM based compound for suction end mount on requests made by a private company engaged in assembling electrical components. Technology were transferred to the comp

2017

- Fertilizer encapsulated coir bricks was developed for maximize fertilizer use efficiency, with minimum wastage in rubber plantations.

- Prepared three soil maps relevant to rubber growing areas in Matara**,** Galle and Kegalle districts and identified fifteen different soil series.
- A non – toxic NR latex based adhesive for paper was developed and commercialized.

- A non – toxic NR latex based paint was developed for rubber toys.
- A synthetic rubber based compound for the sliding shoe of crawlers was developed at the request of the Road Development Authority.
- Natural Rubber latex foam suitable to manufacture ear plugs was produced at the request of an industrialist.
- Natural Rubber latex compounds suitable to parts for robot arms were developed for the research activities of University of Moratuwa.



- An epidemic of Cockchafer grub infestation was reported during the year from Elpitiya, Horana, Padukka and Avissawella areas and insecticide, imidocloprid was identified as a substitute for chlorphyrofos.

- New antagonistic fungi to use as biological control agents (specie to be identified) against white root disease fungus were identified from rubber growing soils.

- A novel method was developed to synthesize *in situ* filler incorporated natural rubber latex.

- New hybrid solar – biomass dryers for rubber sheet manufacturing was designed.
- New chemicals were recommended for the control of white root disease.

- Model rubber holdings, villages and processing centres were established.
- A new test method was developed to estimate dry rubber content of latex at the field as a replacement for metrolac.
- A natural rubber latex based adhesive with good storage stability was developed for shoes

2016

- The high performance, lighter weight prosthetic foot based on hybrid nanomaterial filled natural rubber composites developed in collaboration with Ranaviru Sevana received the NSF Technology Award – 2016.

- Identification of a suitable slow release fertilizer for rubber nursery plants to reduce overall fertilizer application cost by 90%.

- Environmental friendly, economically viable biofilm biofertilizer was developed using effective microbes associated with rubber rhizosphere.

- Natural rubber latex and coir based encapsulated fertilizer was developed for releasing nutrients over an extended period.
- A reclaiming process was developed for NBR glove waste using an environmental friendly, low cost, novel reclaiming agent.

2015

- A Merit Award was received by Dr (Mrs) Dilhara Edirisinghe from the Plastics and Rubber Institute of Sri Lanka for the significant contribution made towards the development and growth of the polymer industry of Sri Lanka.
- New weedicide “Glyfosinate ammonium” was identified instead of “Glyphosate”.
- Development of temperature and impact resistant tire paint for inner heal compound in solid tires.
- Development of abrasion resistant, crack resistant and wear resistant screen printing ink for natural rubber gloves and slippers.
- Natural rubber latex foam and cast films for ayurvedic applications were successfully produced by mixing *Aloe vera* with rubber.
- A light weight rubber ball with low resilience, high abrasion resistance and high hardness was produced using styrene-butadiene rubber for cricket training purpose.

- A natural rubber latex foam backing was developed for door mats manufactured out of coconut fibre.
- A rubber compound for oil seals was developed using nitrile latex compound waste.
- A hard, abrasion resistant coating for textile rollers was developed using a natural rubber based compound.
- Natural rubber latex based moulds suitable for producing different shapes and sizes of natural material based soap pieces were developed.
- Natural rubber based composites were produced using coconut shell powder for solid tyre treads.
- A paving material was developed with ground rubber tyre and bitumen.
- A floor tile was produced with a blend of natural rubber, low density polyethylene and recycled low density polyethylene.
- Single day drying system for different raw rubber types was developed.

Budget Estimate – 2020

Rs."000

Object Code	Category/Object Title	Sche.No.	2019	2020			Projections	
			Revised Budget Estimates	Budget Estimates for the year	Budget Estimates – 4 months	Approved allocation – 4 months- 140Mn	2021	2022
	Recurrent Expenditure							
	Personal Emoluments		**335,310**	**362,491**	**120,830**	**115,690**	**622,941**	**778,677**
1001	Salaries & wages	**1**	204,221	221,290	73,763	73,763	417,566	521,958
1002	Overtime & Holiday Payments		11,030	13,305	4,435	3,238	18,750	23,438
1003	Other Allowances	**2**	120,060	127,896	42,632	38,689	186,625	233,281
	Travelling Expenses		**8,850**	**10,175**	**3,867**	**2,823**	**14,499**	**18,124**
1101	Domestic		7,654	8,800	3,333	2,433	12,500	15,625
1102	Foreign		1,196	1,375	533	389	1,999	2,499
	Supplies		**15,547**	**17,875**	**5,958**	**4,532**	**25,391**	**31,738**
1201	Stationary & Office Requisites		2,392	2,750	917	669	3,906	4,883
1202	Fuel		8,371	9,625	3,208	2,342	13,672	17,090
1205	Other	**3**	4,784	5,500	1,833	1,521	7,813	9,766
							-	
	Maintenance Expenditure.		**16,175**	**14,850**	**4,950**	**4,182**	**21,094**	**26,367**
1301	Vehicles		4,784	5,500	1,833	1,500	7,813	9,766
1302	Plant, Machinery & Equipment		2,392	2,750	917	500	3,906	4,883

Budget Estimate – 2020

Rs."000

Object Code	Category/Object Title	Sche.No.	2019	2020			Projections	
			Revised Budget Estimates	Budget Estimates for the year	Budget Estimates – 4 months	Approved allocation – 4 months- 140Mn	2021	2022
1303	Building & Structures - Repairs & Maintenance		8,000	5,500	1,833	1,932	7,813	9,766
	Maintenance Roads		1,000	1,100	367	250	1,563	1,953
	Services		**66,118**	**65,815**	**21,272**	**16,423**	**99,891**	**121,395**
1401	Transport/Hiring Vehicles		3,266	3,000	1,000	300	3,750	4,688
1401	Lease Vehicles		8,610	3,600	1,200		4,500	5,625
1402	Postal and Communication		4,784	5,000	1,667	1,217	7,813	9,766
1403	Electricity and Water		6,472	9,000	3,000	2,190	12,500	15,625
1404	Rents and Local Taxes		1,196	1,375	458	335	1,953	2,441
1405	Other	**4**	41,790	43,840	13,947	12,382	69,375	83,250
	Total Recurrent Expenditure		**442,000**	**471,206**	**156,877**	**143,650**	**783,816**	**976,301**

Budget Estimate - 2020

Rs."000

Object Code	Category/Object Title	Sche.No.	2019	2020			Projections	
			Revised Budget Estimates	Budget Estimates for the year	Budget Estimates – 4 months	Approved allocation – 4 months- 140Mn	2021	2022
1001	***Salaries & Wages***	**1**	**204,221**	**221,290**	**73,763**	**73,763**	**417,566**	**518,582**
	Salaries & Wages		167,605	182,443	60,814	60,814	350,048	437,559
	EPF Contribution		30,514	32,372	10,791	10,791	56,100	67,320
	ETF Contribution		6,103	6,474	2,158	2,158	11,419	13,702
							-	-
1002	***Overtime & Holiday Payments***		**11,030**	**13,305**	**4,435**	**3,238**	**18,750**	**23,438**
	Overtime & Holiday Payments		11,030	13,305	4,435	3,238	18,750	23,438
1003	**Other Allowances**	**2**	**120,060**	**127,896**	**38,689**	**38,689**	**186,625**	**233,281**
	Cost of Living		35,819	35,100	11,700	11,700	55,575	69,469
	Rent and other Allowance		6,597	1,068	356	356	1,335	1,669
	Gratuity Payments		15,307	19,982	2,718	2,718	24,978	31,222
	Medical Benefits		38,268	43,202	14,401	14,401	62,500	78,125
	Research Allowances		5,740	7,500	2,500	2,500	9,375	11,719
	Professional allowance		3,816	3,540	1,180	1,180	4,785	5,981
	Transport & Fuel Allowances		8,266	12,626	4,209	4,209	18,762	23,453
	Telephone Allowance		6,245	4,878	1,626	1,626	9,315	11,644

Budget Estimate - 2020

Rs."000

Object Code	Category/Object Title	Sche.No.	2019	2020			Projections	
			Revised Budget Estimates	Budget Estimates for the year	Budget Estimates – 4 months	Approved allocation – 4 months- 140Mn	2021	2022
1205	**Other Supplies**	**3**	**4,784**	**5,500**	**2,083**	**1,521**	**7,813**	**9,766**
	Laboratory Working (Chemical etc.)						-	-
	Medical Expenditures		957	1,100	417	304	1,563	1,953
	Other Consumables		2,870	3,300	1,250	913	4,688	5,859
	L.P. Gas Expenditures		957	1,100	417	304	1,563	1,953
1405	**Other Services**	**4**	**41,790**	**43,840**	**13,947**	**12,382**	**69,375**	**86,719**
	Printing Charges/ Publications		1,531	1,760	587	428	2,500	3,125
	Insurance Expenditures		4,784	2,500	833	1,400	7,813	9,766
	Polghawela Sub Station Maintenance		1,200	1,650	550	402	2,344	2,930
	Moneragala Sub Station Maintenance		1,200	1,650	550	402	2,344	2,930
	IRRDB Contribution		1,044	2,750	917	669	3,906	4,883
	Publicity Expenditures		1,722	1,980	660	482	2,813	3,516
	Administrative & General Charges		6,697	7,000	2,333	1,500	10,938	13,672
	Welfare Expenditures		2,392	2,750	917	500	3,906	4,883
	Contractual services for Research Support		17,221	19,800	6,600	6,600	28,125	35,156
	Join Symposium (RRI/TRI/CRI/SRI)		4,000	2,000	-	-	4,688	5,859
	Revenue	**5**	**13,000**	**15,000**	**5,000**	**3,650**	**18,750**	**23,438**
	Other Income		13,000	15,000	5,000	3,650	18,750	23,438

Rs."000

Object Code	Category/Object Title	2019	2020		Projections	
		Revised Budget Estimates after 15.0% cut	Budget Estimates for the year	Approved allocation – 4 months (50mn Capital)	2021	2022
	CAPITAL EXPENDITURE					
	Rehabilitation and Improvement	**19,498**	**63,660**	**9,800**	**27,080**	**27,788**
	of Capital Assets					
2001	Buildings - Rehabilitation	14,890	31,650	5,800	20,000	20,000
2002	Plant, Machinery and Equipment	4,608	12,000	3,000	7,080	7,788
2005	Structures-Repairing of Internal Roads		6,550		-	-
	Maintenance of Buildings		13,460	1,000	-	-
	Acquisition of Capital Assets	**8,324**	**42,540**	**16,500**	**12,556**	**7,423**
					-	-
	Purchase of Motor Vehicles (Leasing Rental)		7,920	-	5,808	6,389
2102	Furniture and Office Equipment	4,608	11,995	1,500	5,748	6,323
2106	Other- Laboratory Equipment's	3,686	22,025	15,000	600	660
	Library Books	30	600		400	440

	Development Capital	**12,815**	**23,800**	**3,863**	**31,032**	**35,535**
2105	Lands and Land Improvements- Research & Dev.	848	700	233	2,400	2,640
	Monaragla Substation Nursery	2,765	4,000	1,330	6,756	7,432
	Establishment of Adaptive Research Trials(Polgahawela)		922	650	220	1,800
	Establishment of Research Trials(North East)	1,500	4,000	330	4,800	5,280
	Human Capital Development Programme	6,781	9,450	1,750	9,276	10,204
	Split Based PhD programme		5,000	-	6,000	8,000
	Research Projects	**20,000**	**20,000**	**6,667**	**20,000**	**20,000**
	Capital Project i- Germplasm Project		-	-		-
	Research and Development	20,000	20,000	6,667	20,000	20,000
	Special Capital Project	**39,813**	**50,000**	**13,170**	**50,000**	**36,000**
01	Project 1 (Carbon)	4,608	5,000	500	5,000	5,000
02	Project 2 (LIH)	17,003	25,000	6,000	25,000	25,000
03	Project 3 (Intercropping)	9,216	10,000	3,335	10,000	3,000
04	Project 4 (White root)	8,985	10,000	3,335	10,000	3,000
	Total Capital Expenditure	**100,450**	**200,000**	**50,000**	**140,668**	**126,746**
	Special Capital Projects - MPI	**33,385**	**30,535**	**10,178**	**19,435**	**-**
	Identification of the potential pest & Disease Problems	3,035	2,735	912	3,235	
	Developing a Model Estate at DF	27,300	26,300	8,767	15,200	
	Modification of Fertilizer Recommendation Hevea	3,050	1,500	500	1,000	
	Total Capital Expenditure with Special Capital Projects	**133,835**	**230,535**	**60,178**	**160,103**	**126,746**

* Multiplication and Evaluation of the Germplasm collection of Hevea obtained from 1981 IRRDB expedition to the Amazon.

Budget Estimate - 2020
Government Contribution

Rs."000

	2019	2020		Projections	
	Revised Budget Estimates after 15.0% cut	**Budget Estimates for the year**	**Approved allocation – 4 months (50mn Capital)**	**2021**	**2022**
Total Recurrent Expenditure	**442,000**	**471,206**	**143,650**	**783,816**	**976,301**
Less:					
Revenue	**12,000**	15,000	3,650	18,750	23,438
Government Contribution – Recurrent	**430,000**	456,206	140,000	765,066	952,863
Total Capital Expenditure	**133,835**	**230,535**	**60,178**	**160,103**	**126,746**
Revenue - Soil Folior Analysis	1,000				
Government Contribution - Capital - Treasury	99,450	200,000	50,000	140,668	126,746
Special Capital Projects – MPI	33,385	30,535	10,178	19,435	-
Total Budget	**575,835**	**701,741**	**203,828**	**943,919**	**1,103,047**

Budget Estimate – 2020

New Special Capital Projects **Rs."000**

	New Special Capital Projects	Dept.	2018 Budgeted	2019 Budgeted	2020 Budget		2021 Budget
					Estimate for the year	Jan. - April	
01	Approaching the voluntary carbon market with the rubber cultivation in Eastern and Uva Provinces for greener economy	ARU	5,000	4,608	4,300	0.50	4,300
02	Effective introduction of newly developed Low Intensity Harvesting (LIH) systems to address the current issues in rubber plantation industry	BC	20,000	17,003	15,350	6.00	15,763
03	Improvement of strategies to combat White Root Disease in rubber plantations	PP & MB	10,000	8,985	6,690	3.34	5,890
04	Intercropping diverse crop plants (medicinal, fruit crops and multipurpose crops) under rubber in nontraditional areas to ensure economically and environmentally sustainable land use practice for rubber cultivation	PS	10,000	9,216	8,100	3.34	5,100
	Total Contribution		**45,000**	**39,813**	**34,440**	**13.18**	**31,053**

ACTION PLAN 2020
RUBBER RESEARCH INSTITUTE OF SRI LANKA

Thrust Area

Recommendations on technologies and technology transfer to enhance productivity and profitability of rubber cultivation and rubber product manufacturing through research and development activities

Major research & development tasks in 2020

1. Identify the constraints and then develop technologies to expand rubber cultivation in Northern and Eastern regions.
2. Promote rubber cultivation targeting the poverty alleviation in peasant community in rural areas
3. Development and promotion of Low Frequency Harvesting systems among rubber growers.
4. Development of the Dartonfield estate as a model estate for demonstration purpose with latest technologies
5. Developing high performance natural rubber for value addition
6. Development of new clones with high yields, vigour and disease resistance
7. Improvement in land productivity of rubber through the training Programmes on key agronomic practices.
8. Promotion of SMEs in rubber product manufacture by conducting workshops.
9. Control white root disease incidence in rubber land.
10. Promotion of rubber cultivation as a means of mitigating climate change.
11. Introduction of new intercrops with high economic value for rubber lands.
12. Development of areas/ site specific fertilizer recommendation to maximize fertilizer use efficiency.
13. Carrying out research for the further improvement in the productivity of rubber cultivation.
14. Carrying out research to facilitate rubber associated product development.
15. Provide testing facilities for different forms of raw rubber and rubber products.
16. Assisting to develop and refine the statistical applications used in the rubber industry.
17. Screen new agrochemicals to facilitate rubber cultivation in the country.
18. Promotion of rubber as a cleaner industry in environmental management.
19. Be vigilant on new pest and disease threats to rubber cultivation.
20. Impact evaluation of different policies in the rubber sector.
21. Development of extension network for efficient technology transfer.

Allocation of funds for the January to April 2020 (Rs. Million)

Source of fund	Capital	Recurrent	Total
CF	**60.178**	**140**	**200.178**
GF	**-**	**3.65**	**3.650**
Grand Total	**60.178**	**143.65**	**203.828**

Procurement Plan – 2020

Dept./Line Agency/ Ministry	Procurement Category (Goods, Works & Services etc.)	Estimated Cost Rs.(Mn)	Source of finance name of Donor	Procurement method (CB, LIB, LNB, NCB and National shopping etc.)	Level of Authority	Priority status U- Urgent P- Priority N- Normal	Current Status procurement preparedness activities	Schedule Date of Commencement	Schedule date of completion	Financial Targets (Rs. Mn)		Remarks
										Q1	Q2 (April)	
Rubber Research Institute of Sri Lanka	**GOODS**											
	Furniture and Office Equipment		CF	National Competitive Bidding (NCB) / Restricted National Competitive Bidding (LNB) / Shopping as applicable in accordance with procurement guidelines for goods/ works and services	DPC(Minor)	P	Awaiting Necessary Approvals	01.01.2020	30.04.2020	-	-	
	Plant, Machinery & Equipment	3.00	CF		DPC(Minor)	P		01.01.2020	30.04.2020	2.25	0.75	
	Laboratory Equipment	15.00	CF		DPC(Major/Minor)	P		01.01.2020	30.04.2020	11.25	3.75	
	Purchases of Motor Vehicles	-	CF			P						
	Library Books		CF		DPC(Minor)	P				-	-	
	WORKS	-										
	Building Rehabilitation & Improvements Building	6.29	CF		DPC(Major/Minor)	P		01.01.2020	30.04.2020	4.72	1.57	
	Structures-Repairing of Internal Roads					P				-	-	
	Maintenance of Buildings	2.01	CF		DPC(Minor)	P		01.01.2020	30.04.2020	1.51	0.50	
	Research Projects	-										
	Research and Development	6.67	CF		DPC(Minor)	P		01.01.2020	30.04.2020	5.00	1.67	
	New Research projects	13.16	CF		DPC(Minor)	P		01.01.2020	30.04.2020	9.87	3.29	

	SERVICES	-										
	Lands and Land Improvements- R&D	0.23	CF		DPC(Minor)	P		01.01.2020	30.04.2020	0.18	0.06	
	Monaragala Substation Nursery	1.33	CF		DPC(Minor)	P		01.01.2020	30.04.2020	1.00	0.33	
	Establishment of Adaptive Research Trails, Polgahawela	0.22	CF		DPC(Minor)	P		01.01.2020	30.04.2020	0.16	0.05	
	Establishment of Research (Eastern and Northern) Provinces	0.33	CF		DPC(Minor)	P		01.01.2020	30.04.2020	0.25	0.08	
	Human Capital Development Project (Foreign/Local)	1.75	CF		DPC(Minor)	P		01.01.2020	30.04.2020	1.31	0.44	
	Split Based PhD programme	-	CF			P		01.01.2020	30.04.2020	-		
	Sub Total	**50.00**								**37.50**	**12.50**	
	Special Capital Projects- MPI											
	Identification of the potential Pest & Disease Problems	0.91	CF		DPC(Minor)	P		01.01.2020	30.04.2020	0.68	0.23	
	Developing a model Estate at DF	8.77	CF		DPC(Minor)	P		01.01.2020	30.04.2020	6.58	2.19	
		-	GF		DPC(Minor)	P				-	-	
	Modification of fertilizer Recommendation Hevea	0.50	CF		DPC(Minor)	P		01.01.2020	30.04.2020	0.38	0.13	
	Sub Total	10.18								**7.63**	**2.54**	
	Total	**60.18**								**45.13**	**15.04**	

Action Plan for capital expenditure - 2020 (January to April) Rs. Mn.

S. No	Programme	Project	Activities	KPI NO	SDG NO		Targets 2020		Remarks
							Q1	Up to April	
1	Providing transport facility	Operational Lease for Purchase of five Double cabs	Purchase for Double Cabs	NA		F	-	-	Mr.K.A.D.K.Chathuranga,
						P	-	-	Tel 0342247426
2	Upgrading the modern technology of RRISL Services.	Purchase of Laboratory Equipment	Purchase of Laboratory Equipment for research departments	10		F	11.25	3.75	Dr.V.H.L.Rodrigo
						P	75%	25%	Tel 0342247426
		Purchase of Machinery & Equipment	Purchase of plant, machinery & equipment for Workshop, Audio visual unit & research departments			F	2.25	0.75	Mr.PriyanthaPeiris,
						P	75%	25%	Tel 0342247426
3	Providing the effective working environment	Purchase of Office Furniture & Office equipment	Purchase of Office Furniture & Office equipment for Re-furnishing of research departments			F	-	-	Mr. Sujith Hewage
						P			Tel 034 2247426
4	Maintenance the working environment with sufficient facilities	Maintenance of Buildings	Maintenance of Buildings	NA	8.8	F	1.51	0.50	Mr.
						P	75.00	25%	Tel 034 2247426
5	Providers the working environment with sufficient space	Rehabilitation & Improvements Building	Rehabilitation & Improvements Building for Workshop, Audio visual unit & research departments	NA	8.8	F	4.7175	1.57	Mr.
						P	75%	25%	Tel 034 2247426
6	Improving the HR by introducing the knowledge materials	Purchase of Books	Purchase of 45 Nos. Library Books	8	17.8	F	-	-	Librarian
						P	-	-	Tel 0342247426
7	Improving land productivity	Lands & Land improvements	Testing of new holdings in the field & promoting agriculture	11	1.4	F	0.17	0.06	Dr Samanthi HOD GNPB
						P	75%	25%	
8	Upgrading the nurseries	Monaragala Substation Nursery	Establishment of Monaragala Substation Nursery.	2,4	10.1	F	1.00	0.33	Dr .P Senevirathne DDR (B)
						P	75%	25%	Tel 0342247426

9	Maintenance of mature and in immature rubber fields	Polgahawela Substation Nursery	Establishment of Adaptive Research Trails, Polgahawela	4	9.4	**F**	0.17	0.06	Mr. P. A. Lakshman Senior Manager (Estate) Tel 0342247426
						P	75%	25%	
10	Poverty alleviation with rubber cultivation	Eastern and Northern rubber cultivation	Establishment of Adaptive Research trails (Eastern and Northern) Provinces	2	1.4	**F**	0.25	0.08	Dr (Mrs) E. S. Munasinghe, PRO Tel 0342247426
						P	75%	25%	
11	Human Capital Development Programme	Training of staff members (Foreign/Local)	Providing Continuous Professional Developments. (CPD)	8	17.8	**F**	1.31	0.44	Mr.D.M.S.Dissanayake SAO Tel 0342247426
						P	75%	25%	
12	Split Based PhD programme	Training of staff members Foreign/ Local	Training of two staff members (Foreign/ Local)	8	17.8	**F**	-	-	Mr.D.M.S.Dissanayake SAO Tel 0342247427
						P	-	-	
SUB TOTAL							**22.62**	**7.54**	
Research & Development						**F**	5.00	**1.67**	
New Research Projects							9.88	**3.29**	
Total							**37.50**	**12.50**	

DISTRIBUTION AMONG THE DIFFERENT DIVISSIONS – CAPITAL 2020 (January - April)

Departments	**Buildings - Rehabilitation**	**Other- Laboratory Equipment's**	**Furniture and Office Equipment**	**Maintenance of Buildings**	**Vehicles**	**Plant, Machinery and Equipment**	**Repairing of Internal Rds (DF)**	**Lands and Land Improvements- R& D**	**North East**	**Polgahawela**	**Monaragla**	**HRD Programme**	**Split Based PhD programme**	**Library Books**	**R &D**	**Special Capital Project**	**Total**
Board Office																	-
Director Office																	-
DDR(B)																	-
DD R(T)	2.30																**2.30**
Genetics & Plant Breeding										0.23							0.68
Soils & Plant Nutrition		11.00		0.23											0.54		**11.77**
Raw Rubber & Che. Analysis.				4.00													0.67
Bio-Chemistry															0.36	6.00	**6.36**
Electronic Repair																	-
Adaptive Research				0.10					0.33						0.22	0.50	**1.15**
Rubber Technology	0.15			0.14											0.72		**1.01**
Raw Rubber & Che. Eng.				0.13											0.67		**0.80**
Bio-Metry															0.12		**0.12**
Agricultural Economics															0.11		**0.11**
Plant Science				0.15											0.98	3.34	**4.46**

Plant Pathology	0.14			0.10											0.72	3.34	**4.30**
Polymer Chemistry	0.20			0.10											0.72		**1.02**
Administration Rathmalana																	**-**
Administration-D/F												1.75					**1.75**
Library																	**-**
Accounts & Procurement				0.06													**0.06**
Stores																	**-**
Internal Audit																	**-**
Works Section	3.50			1.00													**4.50**
Adv. Services & Tr. Centre															0.17		**0.17**
Audio Visual & IT Unit						3.00											**3.00**
Polgahawela Substation										0.22							**0.22**
Monaragala Substation											1.33						**1.33**
Total	**6.29**	**15.00**	**-**	**2.01**	**-**	**3.00**	**-**	**0.23**	**0.33**	**0.22**	**1.33**	**1.75**	**-**	**-**	**6.67**	**13.17**	**50.00**

Detailed Action Plan for Research & Development:-

Genetics & Plant Breeding Department

(Rs. Mn. 0.68)

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative %)		Remarks
								Q1	Up to April	
1	Breeding selection and evaluation of new genotypes to Increase the production and productivity of rubber by establishing mega zones	Breeding selection and evaluation of new genotypes using conventional strategies (1999- 2025) CF	Annual hand pollination programme Preliminary evaluation of HP mother plants Maintenance and re-establishment of bud wood nurseries and HP progenies. Preparation of experimental planting materials. Development of clone Museum Multilateral clone exchange programme Small scale evaluation of new genotypes (SSCTs) Evaluation of selected HP entries under estate collaborative level (ECTs) Evaluation of selected HP entries in collaborating with smallholders in traditional rubber growing areas (SRTs) Development of suitable clones for smallholders in non-traditional rubber growing areas to accelerate new planting and to expand the cultivation			**F**	**Rs. Mn 0.30**	0.25	0.30	Dr. (Mrs) S.P.Withanage, HOD 077 9171191
						P	Release 01 clones to the list of recommendations Add 05 genotypes to large scale trials Release 01 clone for smallholders Develop 02 yield indexes for clone evaluation (Present Level 67%)	67.5%	68%	

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative %)		Remarks
								Q1	Up to April	
			Development of classification Model for Sri Lankan Rubber clones based on seed morphology through Image Processing techniques							Dr.(Mrs) S.P.Withanage, HOD 077 9171191
		Use of Molecular biology strategies to Increase the production and productivity of rubber (2013- 2025) CF	Marker assisted selection for superior genotypes with REF gene/ REF promoter screening the 2011 HP progeny Screening of selected new genotypes for Corynespora resistance and Sequence the polymorphic genes Screening of selected genotypes for stress tolerance Prepare the plants and Optimize the RNA extraction and preliminary test of treatments to stress induction. Complete the screening of 2008 HP progeny with SSR markers and field screening Exogenous application of ascorbic acid on TPD affected trees to be continued			**F**	**Rs. Mn.0.38**	0.30	0.38	
						P	Characterize 01 genes Recommend 02 drought tolerant clones (Present Level 63%)	64%	65%	

Plant Science Department
(Rs. Mn. 0.98)

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1.		Improvement of nursery and propagation techniques, field establishment and immature upkeep 2013 - 2023 CF	Improving growth and abiotic stress tolerance improvement in rubber plants	02 & 04	13	**F**	**Rs. Mn. 0.26**	0.18	0.26	Dr.N.M.C. Nayanakantha, HOD 0774637169
			Employing different planting strategies and improved irrigation systems for rubber nurseries and immature field plants							
			Tissue culture and micropropagation of rubber							
			Planting at different densities to obtain maximum economic return from latex and timber							
			Evaluation of anatomical, physiological and molecular biological attributes of rubber clones for their suitability to grow under drought and heat stress conditions			**P**	Two chemicals and one plant extract (botanical) tested, two alternative sowing media for river sand recommended. Tissue culture of two crops initiated (Present Level 54%)	54.25%	54.5%	

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
2.	Improvement of quality of planting material 2003 - ongoing		Regular inspection of nurseries belong to Rubber Development Department	03 & 10	13 & 17	**F**	**Rs. Mn. 0.19**	0.15	0.19	Dr.N.M.C. Nayanakantha, HOD 0774637169
			Regular inspection of nurseries belong to Regional Plantation Companies (RPCs) & private owners			**P**	700, 000 plants certified (Present Level 14%)	14.25%	14.25%	
3.		Intercropping diverse crop species with rubber for land productivity improvement, additional income generation and environmental sustainability 2010 - 2025 CF	Establishing of intercrops in traditional areas	02 & 04	13	**F**	**Rs. Mn. 0.185**	0.14	0.185	
			Establishing of intercrops in non-traditional areas							
			Establishing of crops suitable for boundaries of rubber fields			**P**	Two new crops tested for their suitability to grow under rubber. (Present Level 46%)	46.5%	46.5%	
4.	Training and trouble shooting in planting, tapping and intercropping		Advisory visits on planting, tapping and intercropping	03 & 10	09 & 17	**F**	**Rs. Mn. 0.13**	0.1	0.13	
			Conduct training Programmes on bud grafting, planting, tapping and intercropping			**P**	Twenty advisory visits made, fifteen tapper training Programmes, five bud grafting and intercropping Programmes conducted (Present Level 27%)	28%	28.25%	

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
5.		Testing of different harvesting systems for sustainable utilization of bark and productivity improvement 2010 - 2025 CF	Application of low frequency harvesting techniques with stimulation to reduce cost of production.	04	12 & 13	**F**	**Rs. Mn. 0.215**	0.165	0.215	Dr.N.M.C. Nayanakantha, HOD 0774637169
			Testing of harvesting systems on growth, yield and bark consumption							
			Testing remedies to address tapping panel dryness problem; one of the major reasons for low productivity in rubber plantations			**P**	Two improved tapping techniques tested, One botanical formula and two chemicals tested for their alleviating effect on TPD incidence (Present Level 46.5%)	47%	47.25%	

Soil & Plant Nutrition Department
(Rs. Mn. 0.54)

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1	Research on improvement of soil fertility, increasing fertilizer use efficiency, methods of soil, water, nutrient conservation & weed control	Evaluate the effectiveness of environmental friendly agro-management practices for enhancing fertility in rubber soils (2018 – 2025) CF	1. Slow release fertilizer application for immature *Hevea* (0.043) 2.Biofilm bio fertilizer for immature rubber (0.032) 3. Investigation of the uses of organic manures as a soil amendment in red yellow podzolic soils (0.031) 4. Organic and inorganic mulching for weed control in immature rubber (0.0265) 5. Rehabilitation of degraded rubber lands by using environmental friendly agro management practices (0.016) 6. Application of fertilizer tubes for enhancing fertilizer use efficiency in rubber plantations (0.026) 7. Introduction of new IPNS for under girth plant of immature *Hevea* (0.0406) 8.Application of biochar for enhancing soil fertility under immature rubber (0.0239)	**4, 6**	**5**	**F**	**Rs. Mn. 0.239**	0.179	0.239	Dr. (Mrs). RasikaHettiarachchi, PRO/ 0778837388
						P	Improve degraded soil fertility in rubber lands by using environmental friendly economically viable practices. *(Present Level 30%)*	32%	33%	
		Introduction of new fertilizer mixtures for nontraditional rubber growing areas (2018 – 2021) CF	1.Investigation of the effectiveness of different fertility levels for immature rubber (0. 094)	**2, 4**	**5**	**F**	**Rs. Mn. 0.094**	0.0705	0.094	
						P	Optimize fertility levels in non -traditional areas. *(Present Level 50%)*	55%	60%	
		Evaluation of low cost portable NIR(wear Intra – Red) spectrometer to prediction of different leaf and soil parameters in immature sloppy rubber lands (2020 – 2022) CF	1.Pre treatment analysis of soil and plant samples (0.0141) 2.Identification of suitable NIR spectrometer to predict different leaf and soil parameters (0.0094)			**F**	**Rs. Mn.0.0235**	0.0174	0.0235	
						P	1 Immediate identification of fertility parameters 2 On the spot problem solving and advising *(Present Level 0%)*	2%	3%	

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
		Evaluation of different weed control methods (2020 – 2021) CF	Bio Efficacy evaluation of different chemicals (0.01175)		**5**	**F**	**Rs. Mn.0.01175**	0.0078	0.01175	Dr. (Mrs). RasikaHettiarachchi, PRO/ 0778837388 0778837388
						P	Identification of effective weed control methods Development of new recommendation *(Present Level 0%)*	8%	10%	
		Micronutrient requirement of different Hevea grown soils and their effectiveness on Hevea plants (2020 – 2022) CF	Measure the micro nutrients levels of different rubber growing soils(0.01175		**5**	**F**	**Rs. Mn.0.01175**	0.0078	0.01175	
						P	Practice reliable methods for micronutrient determination & evaluate the effectiveness of micronutrient on rubber plants PL 0%	2%	3%	
	Annual Services	Issuing certification for land suitability, site specific fertilizer applications and analyzing fertilizer samples (2018 – 2025) CF	1. Provide site specific fertilizer recommendation for mature rubber clearings (0.064) 2.Select most suitable lands for rubber cultivation in traditional as well as non traditional areas (0.032) 3.Provide analytical reports to stakeholders on fertilizer, soil, water and plant samples (0.064)	**6**	**5**	**F**	**Rs. Mn. 0.160**	0.072	0.160	
						P	1.Issuing site specific fertilizer recommendation reports & total extent of survey land (45 reports & 5000ha of extent) 2.Land suitability reports & total extent of survey land (5 reports & 250 ha of extent) 3.Analytical reports & parameters analyze (150 reports & 4000parameters) *(Present Level 30%)*	32%	33%	

Plant Pathology & Micro Biology Department
(Rs. Mn. 0.72)

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Rem.
								Q1	Up to April	
01		Screening of chemicals to control diseases and clones to identify disease resistant clones PP/01 2017 - 2026 CF	Screening of chemicals against economically important nursery diseases Screening of the chemicals against white root disease & brown root disease Screening of the clones against economically important leaf & bark diseases Screening of the clones against economically important leaf & bark diseases - Pestalotiopsis	05	09	**F**	**Rs. Mn 0.0.18**	0.1	0.18	Dr.(Mrs) T. H. P. S. Fernando, HOD - 071-8579364
						P	Revision of chemical recommendations – 02 Introduction of annual disease severity levels of different clones against Oidium, Phytophthora and Corynespora Effective fungicide against Pestalotiopsis disease (Present Level 20%)	23%	24%	
02		Studies on the biology and molecular biology of pests PP/02 2017 - 2026 CF ****End date extended from 2021 to 2026 due to a new disease***	Studies on the biology / epidemiology and molecular biology of foliar, stem and root pathogens White root disease, Brown root disease and Pestalotiopsis leaf fall disease	04		**F**	**Rs. Mn 0.0.18**	0.1	0.18	
						P	Publications on the biology of pathogens 04 Publications on the molecular biology of pathogens 02 (Present Level 20%)	42%	43%	

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
03		Studies on beneficial microbiology to explore methods to promote small scale cottage industries and to strengthen the microbiological testings PP / 03 2017 - 2026 CF	Isolation of beneficial micro-organisms from different environments Maintenance of the culture collection Testing for the applicability of these micro-organisms in different industries	04		**F**	**Rs. Mn 0.0.18**	0.1	0.18	
						P	Commercialization of a bio pesticide – 01 Expansion of beneficial culture collection and identification of growth promoting rhizobacteria from rubber growing soils (Present Level 20%)	23%	24%	
04		Surveillance of potential pests and disease outbreaks to avoid unwanted sudden disease epidemics Advisory & Training Programmes PP / 04 2017 - 2021	Surveillance of new diseases & alternative hosts in main rubber growing areas Traditional rubber growing areas Non-traditional rubber growing areas Advisory services to solve complicated disease problems Training Programmes on disease identification and management Establishment of demonstration plots for white root disease	05 08 10		**F**	**Rs. Mn 0.0.18**	0.1	0.18	
						P	Record of new diseases Record of new alternative hosts for the existing diseases Tracing any disease outbreaks to avoid sudden disease epidemics Training Programmes - 08 Advisory visits to solve all the requested complicated problems Demonstration plots – 10 (Present Level 20%)	45%	46%	

Biochemistry & Physiology Department
(Rs. Mn. 0.36)

S. No.	Programme	Project	Activities	KPI No	SGD No		Annual target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
	low intensity harvesting to Improve sustainability of rubber farming	Research, development and commercial introduction of low intensity harvesting strategies (2018 – 2022) CF	Developing a week end harvesting system	1 3 4 8 9 11		**F**	**Rs. Mn.0.06**	0.05	0.06	Contact person Dr (Ms) KVVS Kudaligama
			Developing a d4 based double cut system			**P**	Level of development % (Present Level 34%)	38	42	
			Commercial scale introduction of LIH systems				Level of introduction% (Present Level 40%)	45	48	
	Improve the sustainability of rubber farming in Sri Lanka	Research and development on biochemical and physiological aspects to improve the sustainability of rubber farming (2016 – 2019) CF	Research & development on rubber plant/tree	2 3 4 11		**F**	**Rs. Mn.0.30**	0.20	0.30	
						P	Level of clonal testing% Agro-ecological zones covered% (Present Level 45%)	60	61	
			Research & development on rubber latex to identify best genotypes that produce quality raw rubber during screening process.				Level of developing a new method % (Present Level 40%)	41	42	
			Research & development on rubber wood				Level of identification% (Present Level 24%)	35	37	
			Development of a protocol for local production of ethephon stimulant			**F**	***1.5 Rs.Mn (funds received from NSF)***	0.3	0.4	
						P	Level of development% (Present Level 40%)	45	50	

Adaptive Research Unit
(Rs. Mn. 0.22)

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01	Adaptive research for rubber smallholders	Expansion of rubber cultivation (2003–2023)	**Phase I** Development of suitable protocols to cultivate rubber in Dry Zone Assessments on socioeconomic impact of rubber cultivation in Eastern Province Conducting feasibility studies for rubber cultivation in new areas **Phase II** Identification of agronomic and socio-economic feasibility for rubber cultivation in new areas Identification of suitable farming models for selected areas Validation of identified farming models in selected areas	2	1a 1.2	**F**	**Rs. Mn.0.08**	0.06	0.08	Dr.(Mrs.) Enoka Munasinghe, PRO 0772642469
						P	**Phase I** Protocols for the rubber cultivation in dry zone developed Socioeconomic impact of rubber cultivation in Eastern Province assessed New areas suitable for rubber cultivation identified *(Present Level 80%)* **Phase II** Agronomic and socio-economic feasibility for rubber cultivation identified in five new areas (30%) Farming models suitable for three new areas identified (10%) Identified farming models validated (5%) *(Present Level 0%)*	83% 1%	85% 2%	
	Adaptive research for rubber smallholdings	Increase the land productivity through the technology adoption (2016-2020)	Testing the adaptability of new animal repellent under smallholder conditions Identifying on farm behaviour of smallholder rubber farmers in traditional rubber growing areas Bee keeping in rubber plantations	3	12.2	**F**	**Rs. Mn.0.08**	0.06	0.08	
						P	Application frequency of new animal repellent for the intermediate zone identified On farm productivity and variability among smallholder rubber farmers in Kegalle district identified Willingness to accept bee keeping by rubber smallholders identified *(Present Level 80%)*	87%	90%	

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
	Adaptive research for rubber smallholdings	Socioeconomic improvement in plantation workers (2020-2023)	Identification of gender issues among plantation workers Assessment on education level and child protection among plantation community children. Problems and perspectives of younger generation in plantation communities	8	1,2,4,5,8,10	**F**	**Rs. Mn.0.06**	0.05	0.06	
						P	Gender issues in plantation community identified Education level and child protection among plantation community children assessed Problems and perspectives among plantation community younger generation identified *(Present Level 0%)*	2%	3%	

Biometry Section
(Rs. Mn. 0.12)

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01	Improving the reliability of interpretations through appropriate statistical methods (2020) CF		1. Research support for other research departments 2. Development, modification and application of appropriate statistical methods for agronomic, socio-economic and industrial experiments in the rubber sector	**NA**	**NA**	**F**	**Rs. Mn.0.02**	0.015	0.02	Dr (Mrs) WasanaWijesuriya, Principal Research Officer Contacts: 077 2954819, wijesuriyawasana@gmail.com
						P	Support for scientists in experimentation, data analysis & interpretation – Approx. 50 research trials/surveys Improvement of interpretations through development, modification and application of appropriate statistical methods – 2 applications & subsequent publications *(Present Level 0%)*	13.5%	15%	
02	Improving the knowledge base on climate, climate change & variability for better decision making in rubber growing areas (2020) CF		1. Maintenance of the database on meteorological data in rubber growing areas 2. Analysis of extreme event 3. Identification of drought impacts using latest indices 4. Forecasting of drought indices 5. Spatial analysis of droughts using GIS 6. Developments in Meteorological stations owned by RRISL	**2,3**	**13**	**F**	**Rs. Mn.0.10**	0.075	0.10	
						P	Dissemination of research outputs to the scientists for better decision making, information for policy makers – 2 publications Improvements in 4 meteorological observations *(Present Level 0%)*	13%	15%	

Agricultural Economics Unit
(Rs. Mn. 0.11)

S. No.	Programme	Activities	KPI No	SDG No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
							Q1	Up to April	
	Analysis on Socio-economic implications & sustainability issues of rubber cultivation with Different policies implemented in the rubber sector	Trend analysis of Rubber Industry 2019-2024	2,3,4,11	3	**F**	**Rs. Mn. 0.02**	0.015	0.02	Sankalpa J K S, P G N Ishani Contact No: 342247383
					P	Rubber industry growth indicators including Rate of Growth, Revenue generation, International Trade indicators *(Present Level 25%)*	27%	28%	
		Analysis of Poverty reduction through Rubber-based farming systems 2017-2023	2,3,4,11	3	**F**	**Rs. Mn. 0.3**	0.0225	0.03	
					P	Poverty indicators of small holder rubber farmers in different rubber growing districts and sustainability indicators *(Present Level 40%)*	43%	45%	
		Sustainability Analysis of Rubber Based Farming Systems 2019-2024	2,3,4,11		**F**	**Rs. Mn. 0.03**	0.0225	0.03	
					P	Sustainability indicators of rubber based farming systems *(Present Level 15%)*	15.5%	16%	
		Analysis of plantation sector policy changes 2017-2022	10	11	**F**	**Rs. Mn. 0.02**	0.015	0.02	
					P	Provision of policy recommendation to the industry *(Present Level 37%)*	42%	44%	
	Rubber Industry data management	Update data bases on rubber industry and Analysis on Rubber end products manufacturing sector and other Economic Evaluations. 2018-2023	10, 2, 3	11, 3	**F**	**Rs. Mn. 0.01**	0.0075	0.01	
					P	Recommendation made by the analysis, Data bases were made available to the industry *(Present Level 20%)*	27.5%	29%	

Advisory Service Department
(Rs. Mn. 0.17)

S. No:	Programme	Project	Activities	KPI No	SDG No.		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1	Increase the Production & Productivity of rubber through technology transfer to the rubber sector 1)Strategic technology transfer approaches to improve the productivity of the smallholder sector			08 , 10	5	**F**	Rs. Mn. 0.17	0.1275	0.17	Dr. Anura Dissanayake, Head 071 4398897
			Establishment of model rubber holdings	No. of farmers and estates successfully adopted key recommendations in identified areas		**P**	100 Holdings	24%	25%	
			Establishment of model villages				05 Villages			
			Establishment of model processing centers				20 Centers			
			Establishment of demonstration plots for Rain Guards				20 Holdings			
			Establishment of demonstration plots for Inter Cropping	No. of established model lands, model villages and demonstrations			20 Holdings			
			Establishment of new processing centers				10 Centers			
2	2)Transfer of technologies developed by the RRISL to improve the productivity of estate sector		Establishment of model clearings	No. of clearings successfully adopted key recommendations in identified areas			20 clearings			
			Establishment of demonstration plots (Rain guard, Intercrop)	No. of established demonstration plots and model clearings.			20 demonstration plots			

S. No	Programme	Project	Activities	KPI No	SDG No.		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
3	3) Improvement for advisory services		Important issues identified	No. of decisions conveyed to extension managers			100 Holdings 25 estates			Dr. Anura Dissanayake, Head 071 4398897
			Group advisory for selected estates				20 estates			
4	4)Human resource development of all stake holders of the rubber sector		Upgrading of knowledge & skill development on agronomic & Marketing aspect	No. of farmers, estate managers, estate field staff and workers successfully trained			250 rubber farmers 500 estate managers, estate field staff and workers			
			Introduce of New Tappers	No. of successfully conducted awareness and training Programmes			200 new tappers			
			Introduction of village youth as Para extension service providers				25 village youth and 50 estate youth			
5	5)Development of effective extension network in the rubber sector		Effective extension networks developed Possible avenues developed for productivity improvement	No. of field surveys and PRA studies conducted No. of GIS maps developed No. of centers established			Establishment of 03 Technology transfer centers Establishment of a Techno-Park			

Raw Rubber Process Development & Chemical Engineering

(Rs. Mn. 0.67)

S. No	Programme	Project	Activities	KPI No	SDG No	Target/ Output		Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1	Raw Rubber Process Development	(i). Development of Novel manufacturing Technologies for raw rubber manufacture (2017-2023) CF	(i) Manufacture of value added grade of raw rubber	4	8.5 9.4	(i) One Commercial viable method for Low protein contained raw rubber	**F**	0.24	0.32	Dr. Susantha Siriwardena Mr. Yohan Sudusinghe
			(ii) Development of mechanized RSS Manufacturing process			(ii.) One pilot scale mechanized manufacturing process for RSS	**P**	58.5%	60%	
			(iii). Swift set smoke house for sheet rubber			(iii) Adaptation of one swift set smoke house (10 kg capacity)				
			(iv) Introduction of a novel preservative system for latex preservation			(iv) one user friendly REACH complied Low ammonia preservative system *(Present level 58%)*				
2	Raw rubber blends and composites	(i).Preparation and characterization of Skim rubber/Plastics (2018– 2021) DF		4,7	9.4		**F**	4	-	Dr. SusanthaSiriwardena Mr. Yohan Sudusinghe
						i. Processing conditions for Skim/Plastic dynamically vulcanized blends ii. Mechanical properties of vulcanized blends *(Present level 50%)*	**P**	60%	-	

S. No	Programme	Project	Activities	KPI No	SDG No	Target/ Output		Quarterly Target for 2020 (Cumulative) Q1	Quarterly Target for 2020 (Cumulative) Up to April	Remarks
3	Continuous improvement of treatment and reuse of waste generated in raw rubber manufacturing facilities	(i). Assessment of efficiency of present anaerobic-aerobic rubber effluent treatment system and its modification to suit to smallholder sector * (2020-2022)	1. Prepare a report on efficiency of present anaerobic- aerobic rubber treatment system introduce by RRISL 2. Modify the present system to suit small holder	4,7	9.b 12.2	i. Report on efficiency of present rubber effluent treatment system available in raw rubber manufacturing industry. ii. Pilot scale treatment plant for small holder sector	**F**	-	-	Dr. Susantha Siriwardena Mr.Yohan Sudusingha
							p	10%	-	
		(ii) Suitability of Disposal of treated rubber effluent water for irrigation purposes. (2020-2022) CF	1.design of the study experiment 2. Evaluation of short term effect on soil environment and growth of rubber tree			i)Experimental design ii)Recommendation on treated water disposal in rubber lands	**F**	0.1125	0.15	
							P	9%	10%	
4	Client Assisted Programme CF		(i). Trouble shooting (ii). Adversary services (iii). Extension services (iv). Testing (v). Training programs (vi). Mini research projects	8, 12	9.2 9.b	i. 25 Trouble shootings ii. 15 advisory services iii. 15 extension services iv. 250 sample testing v. 20 training programs vi. Five mini research projects	**F**	0.15	0.20	Mr. Yohan Sudusinghe
							P	23%	25%	

***** This project was submitted to Ministry of Plantation and Industries for funding as a special project for 2020 and the final approval has not been received yet from the Government.

Raw Rubber & Chemical Analysis Department
(Rs. Mn. 0.67)

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01	Promoting manufacture of quality raw rubber and rubber products	Quality improvement & quality assurance of latex, raw rubber and rubber processing chemicals (2018) CF	(i)Issuing quality certificates for all forms of dry rubber field latex, Centrifuged latex and Rubber processing chemicals. (ii) Sampling , inspection services (iv)Trouble shooting (v) Training programs	4, 7	6.4 7.2 12.4 9.4 9.b	**F**	**Rs.Mn.1.58**	0.225	0.30	Mrs. A. P. Attanayake, SRO/ 0772930553 Mr.A.M.K.S.P. Adhikari, RO/ 0783582
						P	(i) Issuing 1500 test reports (ii) Providing 10 sampling services on customer request (iv) 15 trouble shooting activities (v) 6 Training Programmes	28%	30 %	

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
02	Promoting manufacture of quality raw rubber and rubber products	(ii) Quality improvement & quality assurance of latex, raw rubber and rubber processing chemicals (Continue)	(i) Introduction of new test methods for raw rubber chemical analysis (ii) Introduction of new chemical for rubber processing (iii)Quality variations of raw rubber produced in non- traditional areas (iv)Characterization of raw rubber properties of newly recommended rubber clones. (v) Raw Rubber & Latex quality related projects 1.Variation of latex & raw rubber properties with gaseous stimulation 2.Study on factors affect on delamination of multilayer films dipped from natural rubber latex 3.Identification of non rubber components in natural rubber latex 4.Quantification of NR content by TGA(collaborative project with PC department)	12,8	8.5 9.4 8.2	**F**	**Rs.Mn.1.12**	0.105	0.14	Mrs. A. P. Attanayake, SRO/ 0772930553 Mr.A.M.K.S.PAdhikari,RO/ 0783582
						P	(i) Introduction of One new test method/modification of existing methods to determine soap quantity in centrifuged latex. (ii)Introduction of one new chemical to reduce phenolic discolouration. (iii) Complete Ampara area (iv) Complete 5 new clones (v) 4 projects to be conducted	29%	30 %	

Rubber Technology & Development Department

(Rs. Mn. 0.72)

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01	Promoting cleaner production and green technologies in rubber product manufacture	(a). Development of novel recycling processes for latex /dry rubber based compound /product waste (2019-2021)	(i).Identification of a novel chemical / chemicals for reclaiming of rubber waste. (ii) Preparation of reclaimed rubber. (iii). Evaluation of properties. (iv).Optimization of processing conditions and chemical dosage to meet the requirements.	4, 7	12.2 (b) 12.4	**F**	**Rs. Mn.0.10**	0.075	0.10	Dr. Dilhara Edirisinghe, Head Mr. W.D.M. Sampath, RO
						P	Development of one reclaiming process for rubber waste. *(Present Level 35%)*	43%	45%	
		(b). Development of rubber composites with waste materials for different applications (2019-2021)	i) Selection of a waste material. (ii) Preparation of rubber composites with the selected waste material. (iii) Evaluation of properties. (iv) Improvement of properties, if required.	4, 7	12.2 (b)	**F**	**Rs. Mn.0.14**	0.105	0.14	
						P	Development of one rubber composite with a waste material. *(Present Level 30%)*	37%	40%	
		(c). Synthesis of natural nano-fibers and development of rubber composites with nano-fibers (2020-2021)	(i) Identification of a suitable fiber type. (ii)Synthesis of nano-fiber. (iii)Preparation of natural rubber composites with nano-fiber. (iv)Evaluation of properties. (v)Comparison of properties of composites with those of carbon black filled composites. (vi)Identification of a suitable product according to properties. (vii)Conducting a pilot scale trial in collaboration with the industry.			**F**	**Rs. Mn.0.11**	0.0825	0.11	
						P	Synthesis of a natural nano-fiber *(Present Level 0%)*	9%	10%	

S. No.	Programme	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
02	Rubber product development to explore new markets	(1) Development of rubber composites with coconut husk materials for special applications (2019-2020)	(i) Identification of a rubber product. (ii) Development of rubber composites with a coconut husk material. (iii) Evaluation of properties. (iii) Improvement of properties, if necessary. (iv) Transfer of technology specially to small and medium scale entrepreneurs.	4, 7	8.1 8.2	**F**	**Rs. Mn.0.10**	0.075	0.10	Dr. Dilhara Edirisinghe, Head Mr. W.D.M. Sampath, RO
						P	Manufacture of one rubber product with a coconut husk material for a special application. *(Present Level 35%)*	63%	65%	
		(b) Development of cellular rubber products with latex / dry rubber for special applications. (2019-2021)	(i) Identification of a cellular rubber product. (ii) Manufacture of cellular rubber product. (iii) Evaluation of performance. (iv) Improvement of performance, if necessary. (v) Transfer of technology to the industry.			**F**	**Rs. Mn.0.12**	0.09	0.12	
						P	Manufacture of a cellular rubber product for a special application. *(Present Level 35%)*	47%	50%	
03	Client requested programs		(i) Development of latex / dry rubber based compounds / products (ii)Testing raw rubber, rubber compounds and products according to international standards. (iii) Conducting training programs, especially for SMEs. (iv) Industrial trouble shooting.	4, 7 12	8.1 8.2 8.5 9.4	**F**	**Rs. Mn.0.15**	0.1125	0.15	
						P	(i) Development of three rubber compounds / products. (ii) Conducting 500 physical / mechanical tests on raw rubber, rubber compounds and products. (iii) Conducting 20 training programs. (iv) Conducting 10 trouble shootings.	23.5%	25 %	

Polymer Chemistry Department

(Rs. Mn. 0.72)

S. No	Programme	Project	Activities	KPI No	SDG No	Target/ Output		Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1.	Modification of polymer latices	Development of a nitrosamine safe accelerator system for sulfur vulcanization of dry rubber compounds (2017-2020) CF	Development of property correlations for nitrosamine safe binary accelerator systems in sulfur vulcanized natural rubber	4	8.2 9.4	**Rs. Mn. 0.35**	**F**	0.2625	0.35	Mrs. I.H.K. Samarasinghe
						Establishment of property correlations for new systems No. of new systems *(Present Level 50%)*	**P**	63.5%	65%	
		In-situ filler reinforced natural rubber latex (2017-2020) CF	Further research and development to improve the novel method for preparation of in-situ filler reinforced natural rubber latex	4	8.2 12.2	**Rs. Mn. 0.12**	**F**	0.09	0.12	Mr. Y. R. Somarathna
						One novel method for preparation of reinforced natural rubber lattices *(Present Level 75%)*	**P**	78%	80%	
		Introduction of new preservative system for NR field latex – Stage II (2019-2021) DF	Development of nitrosamine free preservative system using a novel preservative agent	4	9.2 9.4	**Rs. Mn. 0.15**	**F**	0.1125	0.15	Mr. Y. R. Somarathna Mrs. I.H.K. Samarasinghe Dr. Susantha Siriwardena
						Novel preservative system for natural rubber latex *(Present Level 20%)*	**P**	23%	30%	
2.	Client Assistant Programme CF		(i). Trouble shooting (ii). Adversary services (iii). Extension services (iv). Testing (v). Training programs (vi). Mini research projects	8, 12	9.2 9.b	**Rs. Mn. 0.25**	**F**	0.1875	0.25	Mrs. I.H.K. Samarasinghe Mr. Y.R. Somarathna
						i. 20 Trouble shootings ii. 05 advisory services iii. 500 sample testing	**P**	24%	25%	

SPECIAL PROJECTS

Plant Science Department

Intercropping diverse crop plants under rubber in nontraditional areas

(Rs. Mn. 3.33)

S. No.	Programme	Project	Activities	KPI No	SDC No		Target/ Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1.	Land productivity improvement in small & medium holder rubber fields	Intercropping diverse crop plants (medicinal, fruit crops and multipurpose crops) under rubber in non traditional areas to ensure economically and environmentally sustainable land use practice for rubber cultivation	Infrastructure development	02 & 04	13	**F**	**Rs. Mn. 3.33**	3.0	3.33	Dr.N.M.C. Nayanakantha, HOD 0774637169
			Planting material production/ purchasing							
			Provide irrigation facilities							
			Establishment of rubber fields with different intercrops			**P**	1.Tissue culture and micropropagation of rubber, some medicinal and other crop plants commenced and continued. 2. Four farmer fields (ca 2.5 ha) in Moneragala, Ampara, Vavuniya and Kilinochchi established with rubber and diverse intercrops such as medicinal plants, fruit crops, vegetable crops and drumstick (Moringa) 3. Growth and physiological data of rubber and various intercrops recorded,. 4. Availability of data of yields of different intercrops	29%	32%	
			Tissue culture and micropropagation of medicinal and other crop plants							
			Harvesting of different intercrops							
			Recording of growth and physiological data							

Plant Pathology & Microbiology Department
Improvement of strategies to Combat White Root Disease in rubber plantations
(Rs. Mn. 4.0)

S. No.	Programme	Project	Activities	KPI No	SGD No		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01		Improvement of strategies to manage white root disease in rubber plantations pp/01 (2018 – 2022) CF	To recruit the temporary research staff x 1 To recruit the temporary technical officers x 2 Training the recruited staff on the plant protection activities To get an exposure of the research & technical staff regarding white root disease management in the other rubber growing countries To train the research & technical staff and the growers of the new findings to manage white root disease Purchase of Scientific equipment & rehabilitation of pathology laboratory Development of the infrastructure of the diagnostic laboratory Research to investigate any possible gaps of knowledge White root disease survey (To demarcate/ demonstrate the recommendation) Demonstration ,plots (8 plots from Estate/ small holder farmers collaboratively) Identification of cash crop to utilize the unproductive bare white root disease Preparation of posters/ leaflets and manual to diagnose and control the disease	05 08	09	**F**	**Rs. Mn. 4.0**	3.0	4.0	**Dr.(Mrs) T. H. P. S. Fernando, HOD 077 1980378**
						P	• Demonstration plots • Estate level 08 • Small holding 08 • Publication 2 • Leaflet 01 • Posters 10 • Studies on the biology of the pathogen population • Molecular biology of collected cultures	45%	46%	

Biochemistry & Physiology Department
Effective introduction of newly developed Low Intensity Harvesting (LIH) systems to address the current issues in rubber plantation industry
(Rs. Mn. 6.0)

S. No.	Programme	Project	Activities	KPI No.	SDG No.		Target/output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1	Competitive management of rubber plantations	Effective introduction of newly developed LIH systems 2018 – 2022 CF	Acquisition of project staff 1-Research Assistants, 1-Technical Assistants & 2- Labourers	3, 8 , 10, 11	8.5, 10.1 , 12.2	**F**	**Rs.Mn. 6.0**	4.0	6.0	Dr.(Mrs). KVVS Kudaligama, PRO 0772640413
			Acquisition of goods and services Vehicle, Chemicals, consumables, agrochemicals, etc.			**P**	01 knowledge dissemination Programmes for REOs in Southern province. 15 awareness Programmes for rubber smallholders in Southern province. Establishment of 20 demonstration fields. Monitoring of 500ha of demonstration fields established. Balance work of establishment of latex diagnosis facilities. Get the assistance of service providers on contract for supporting the R&D work. Training of RRISL staff for providing latex diagnosis facilities to cater the needs.	45%	45%	
			Knowledge dissemination for Extension personals & growers. Propaganda on LIH							
			Establishment & maintenance of demonstration and experimental plots. Research on low intensity harvesting strategies							
			Providing latex diagnosis facilities. Knowledge upgrading, identification and rectification of technological gaps from laboratory to grower.							

Adaptive Research Unit
Developing an approach for voluntary carbon market with rubber
(Rs. Mn. 0.50)

S. No.	Program	Project	Activities	KPI No	SDG No		Target/output (with units)	Quarterly Target (Cumulative %)		Remarks
								Q1	Up to April	
	Rubber cultivation for greener economy	Approaching the voluntary carbon market with rubber cultivation (2018–2022) CF	*Site identification;* * Mapping of new (2019 planting) rubber smallholdings in collaboration with STaRR Project	2 & 11	13.1 & 13.2	F	**Rs.Mn. 0.5**	0.37	0.5	Dr. (Mrs). Enoka Munasinghe, PRO 0772642469
						P	Overall (Present Level 25%) ***Activity breakdown;***	28%	30%	
							* Identified GPS locations of new (2019 planting) rubber smallholdings (80%)	83%	85%	
			Developing PD; *Tracking previous vegetation with satellite images * Estimation of potential carbon credits * Developing PD				* Developed PD for rubber cultivation in nontraditional areas (60%)	70%	75%	
			Carbon footprint; * Estimation of carbon footprints of relevant organizations * Purchasing equipment & other consumables				* Carbon footprint of relevant organizations identified (35%)	40%	45%	
			Project monitoring & reporting; * Assessing the growth of plants in sample sites * Validation & Registration of carbon credits *Promoting project outputs among industrialists and smallholders				* Issuance of VCU by obtaining VCS (5%) * Rubber product manufacturing sector is encouraged to operate with carbon neutral policy (15%) * Relevant organizations made carbon neutral for the project period and named as Climate Smart Organizations (15%) * Mind setting of people for climate change mitigation options (25%)	18%	20%	

MPI PROJECTS

Soil & Plant Nutrition Department

Modification of fertilizer recommendation systems of *Hevea* with reference to plant, soil and field parameters - (2019- Rs. Mn. 3.05)

(Rs. Mn. 0.50)

S. No	Programme	Project	Activities	KPI No.	SDG No.		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
1	Modification of fertilizer recommendation systems of Hevea with reference to plant, soil and field parameters	Improving soil fertility and fertilizer use efficiency to increase the production and productivity of rubber PL 85%	1.Assessment of post analysis 1.1.Assess analytical parameters 1.2 Develop a new protocol for fertilizer recommendation 1.3 Develop new fertilizer recommendation 1.4 Enhance analytical facilities in laboratory	**2, 4**	**5**	**F**	**Rs.Mn. 0.50**	0.38	0.50	Dr. (Mrs). RasikaHettiarachchi, PRO 0778837388
						P	1. Analyze 1000 Parameters & enhance facility at the laboratory	89%	89%	
							2. Develop 1 or 2 fertilizer recommendations	89%	89%	

Plant Pathology & Micro Biology Department

Identification of the potential pest and disease problems of rubber in non-traditional areas to develop improved management strategies

(Rs. Mn. 0.912)

S. No	Programme	Project	Activities	KPI No.	SDG No.		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01	Plant protection of rubber cultivations	Identification of the potential pest and disease problems of rubber in non-traditional areas to develop improved management strategies (2016 – 2020)	1. Evaluation of clones against diseases in non-traditional rubber growing areas. 2. Isolation of pathogens related to rubber and intercrops and studying the symptoms and preparation of illustrations and printing the leaflets. 3. Clonal screening programme. 4. Identification of isolated cultures& improve diagnostic facility. 6. Designing of posters / handouts / leaflets / to be used in training Programmes.	5, 2	5	**F**	**Rs.Mn. 0.912**	0.68	0.912	**Dr.(Mrs) T. H. P. S. Fernando, HOD 077 1980378**
						P	1. Evaluation of 50 rubber clones in Padiyathalawa RDD premises for the clonal screening trial. 2. Isolate the relevant pathogens from intercrops. Identification of the pathogens. 3. Establishment of reference cultivations in traditional rubber growing areas. 4. Improvement of the diagnostic laboratory. Produce training materials. (posters - 50 handouts – 3000 leaflets – 2000) Training relevant staff - 03 (PP & MB Department/TO & EO of RRI / ASD)	85%	85%	

Dartonfield Estate
Developing a model Estate for Rubber at Dartonfield to Demonstrate How to Meet the Global Competitiveness In Plantation Industry with locally Available Technologies
(Rs. Mn. 8.77)

S. No	Programme	Project	Activities	KPI No.	SDG No.		Target/Output (with units)	Quarterly Target for 2020 (Cumulative)		Remarks
								Q1	Up to April	
01.	Archive Global competitiveness in rubber plantation industry	Developing a model Estate for Rubber at Dartonfield to Demonstrate How to Meet the Global Competitiveness In Plantation Industry with locally Available Technologies	Replanting low productive lands	**03 & 09**	**8.1, 8.2 & 12.2**	**F**	**Rs.Mn. 8.77** *GF Rs. Mn. 0* *CF Rs. Mn. 8.77*	6.58	8.77	Estate Manager (Dartonfield) Mr. P. A. Lakshman
						P	Total hectares to be replanted after Surveying last year (2019) = 34.90 hec. Planted in 2019 = 11.71 hec. ***Balance to be replanted = 23.19 hec.*** **Scheduled extent to be replanted In 2020 = 8.76 hec.**	29 %	30%	

Treasury Allocations Requirements for the January to April 2020

Month	Recurrent - Rs. Million 140			Capital - RS. Million 50			Total Recurrent and Capital Allocation
	Salaries - 118.50 Mn	Other Recurrent- 21.50 Mn	Total- 140 Mn	Research - 23.70 Mn	Other Assets - 26.30 Mn	Total – 50.00 Mn	Rs. Million 190.00
January	29,630	5,370	35,000	500	-	500	35,500
February	29,630	5,370	35,000	1,500	-	1,500	36,500
March	29,630	5,370	35,000	15,000	13,150	28,150	63,150
April	29,630	5,370	35,000	6,700	13,150	19,850	54,850
Total	**118,520**	**21,480**	**140,000**	**23,700**	**26,300**	**50,000**	**190,000**

INTERNAL AUDIT PLAN FOR THE YEAR – 2020

Serial No	Area (Audit Criteria)	Risk Rating %	Audit Attention	Sub area	Objective of the Activity	Internal Audit Activity	Audit Attention for sub area	Time frame for Internal Audit Operation				Resource to be used (man power)	Work assessment
								Q 1st	Q 2nd	Q 3rd	Q 4th		
01	**Financial division**	1%	70%	**1.1Income** 1.1.1 Treasury grant for Capital	Finding arithmetical, and accounting error	Sample checking	1%	0	0	0	1%	1day.	Mr. W. Thilakarathne With My self
		10%		1.1.2 Sundry Income			1%	0	0	0	1%	1 day	
				1.1.3 Treasury grant for recurrent			1%	0	0	0	1%	1day	
				1.1.4 Cash received from Debtors	Finding frauds, Errors and any other violations		6%	0	0	4%	2%	5 days	
		10%		**1.2 Expenditure** 1.2.1Purchasing	Finding frauds, Errors and any other violations		15 %	0	5%	5%	5%	20 days	
				1.2.2 Unclaimed balances	Determining adequacy of internal control system and	Sample checking	5%	0	1%	2%	3%	4days	
				1.2.3Any other Financial Activities	implementing new improvements like		1%	0	0	0%	1%	1 day	
		80%		1.2.4 capital Expenditure	preventive action, etc		40%	0	0	30%	10%	35days	
						total						68 days	

Serial No	Area (Audit Criteria)	Risk Rating %	Audit Attention	Sub area	Objective of the Activity	Internal Audit Activity	Audit Attention for sub area	Time frame for Internal Audit Operation				Resource to be used (man power)	Work assessment
								Q 1st	Q 2nd	Q 3rd	Q 4th		
02	**Estate division**		8%	**2.1 Rubber & Intercrop Sales**									
				2.1.1 Dartonfield Group (Galewatte Nivititalakelle Dartonfield)	Finding frauds, Errors and any other violations	Sample Checking	4%	1%	2%	1%	0	6days	Mr. W. Thilakarathne With My self
				2.1.2Polgahawela									
				2.1.3 Monaragala			2%	0	1%	0	1%	4days	
				2.1.4 Kuruvita	Determining adequacy of internal control system and		2%	0	0	2%	0	2days	
							2%	1%	0	1%	0	4dyas	
03	**Factory**		10%	3.1 Rubber Sale		Full amount							
				3.2 Rubber Productivity	Finding frauds, Errors and any other violations		5%	1%	0	1%	3%	7days	
				3.3 Rubber stock			2%	0	0	0	2%	3days	
						Total						4days	
							3%	0	0	0	3%	30 days	

Serial No	Area (Audit Criteria)	Risk Rating %	Audit Attention	Sub area	Objective of the Activity	Internal Audit Activity	Audit Attention for sub	Time frame for Internal Audit Operation				Resource to be used (man power)	Work assessment
								Q 1st	Q 2nd	Q 3rd	Q 4th		
08	Special payments –	30%	5%	Gratuity-release	Finding arithmetical, and accounting error	Full amount	100%	Full amount	Full amount	Full amount	Full amount	130	Mr. W. Thilakarathne With My self
			5%	Scholar ships-surety bonds Research allowance etc.	Finding violations ,arithmetical, and accounting error	Full amount	100%	Full amount	Full amount	Full amount	Full amount	9	My self
09	Special events	60%	1%	Inquire handing &sub Audit	Finding violations through case study	Full amount	100%	Full amount	Full amount	Full amount	Full amount	6	My self
			100%	**Total**								**243 days**	

Annual Human Resource Development Plan -2020

Officer Category	No. officers available	Proposed number of events for knowledge update	Subject area	Type of Training	Allocated funds for the year (Rs.Mn.)	Tentative time and period
Top management						
Chairman/ Director/ Additional Director/ Deputy Directors	05	06	To be decided (e.g. IRRDB annual meeting and conference, International workshops/seminars etc.)	Foreign	2.4	May/August/October (Five days in each)
Research and Technical staff						
Senior/Principal Research officers	12	02-Biology 01-Technology	IRRDB conference/other international conference	Foreign	1.75	September - October (three days)/as and when suitable conference is organized
Research officers (AR1)	16	02-Biology 01-Technology	IRRDB Fellowship program	Foreign - IRRDB conference Hosting country	1.00	September - October (Two weeks)
Experimental officers /Technical officers	81	04 – On seniority basis	Advanced technologies in rubber agronomy/Technology	Foreign-To be decided	3	February - November
Lab Attendants	40	05	Good laboratory practices	Local	0.1	May - December
Administrative staff						
HM and MM	07	01	Modern administrative and finance practices	Foreign	0.2	March - November (1-2 weeks)
Junior manager level	07	01	Modern Administrative practices	Foreign	0.2	April
Management assistants	80	01	Office management practices	Foreign	0.2	May -July
Supporting staff						
PL grades	138	5	In accordance with the assigned duties	Local	0.4	To be decided
Other						
Qualified or nominated staff for ERD coordinated programs	-	Depends	Decided on availability	Foreign	1.2	As and when organized
Group or miscellaneous training & meetings	-	Technology Update Scientific Committee Meeting Research Meeting (15)		Local	1.0	As and when organized