Natural Rubber : Agromanagement and Crop Processing
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Chapter 32

The Rubber Board : Constitution, functions and activities

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1. INTRODUCTION

The Indian Rubber Board was constituted under the Rubber (Production and Marketing) Act, enacted by the Indian Parliament in 1947. The major task entrusted with

the Board, at the time of its constitution, was promotion of the natural rubber (NR) industry under the guidance and control of the Government of India.

The Act which came into force on 19 April 1947, has undergone many changes over the past 50 years. The Rubber (Production and Marketing) Amendment Act of 1954 made certain changes in the constitution of the Board and amended the name as 'The Rubber Board'. The Act clearly defined the role of the Rubber Board in the development of the industry and the Board was assigned with the task of implementing various development schemes. The Act was later amended in 1960, and in 1994. The Rubber Rules, 1955, providing guidelines to carry out the purpose of the Rubber Act, also have undergone many changes in course of time.

2. CONSTITUTION

The Rubber Board functions under the Ministry of Commerce of the Government of India and has 26 members consisting of :

(1) A whole-time Chairman appointed by the Central Government

(2) Two members to represent the State of Tamil Nadu, one of whom shall be a person representing rubber producing interests

(3) Eight members to represent the State of Kerala, six of whom shall represent rubber producing interests, three of such six being persons representing the small growers

(4) Ten members to be nominated by the Central Government, of whom two shall represent the manufacturers and four labour

(5) Three members of Parliament of whom two shall be elected by the House of the People and one by the Council of States

(6) The Executive Director and the Rubber Production Commissioner of the Rubber Board appointed by the Central Government, as ex officio members.

The Board has a Secretary appointed by the Central Government. One of the members of the Board is elected as Vice-Chairman whose term of office is one year. The Board has seven subcommittees : Executive Committee, Research and Development Committee, Planting Committee, Market Development Committee, Labour Welfare Committee, Statistics and Import/Export Committee and Staff Affairs Committee, constituted to review the activities vis-a-vis functions, examine proposals and make recommendations to the Board. The Board and the subcommittees meet periodically.

3. FUNCTIONS

The Rubber Act lays down the following functions for the Rubber Board :

(1) It shall be the duty of the Board to promote, by such measures as it thinks fit, the development of the rubber industry

(2) Without prejudice to the generality of the foregoing provision, the measures referred to therein may provide for :

  (1) Undertaking, assisting or encouraging scientific, technological and economic research

(2) Training students in improved methods of planting, cultivation, manuring and spraying

(3) The supply of technical advice to rubber growers

(4) Improving the marketing of rubber

(5) The collection of statistics from owners of estates, dealers and manufacturers

(6) Securing better working conditions and the provisions and improvement of amenities and incentives for workers

(7) Carrying out any other duties which may be vested with the Board as per rules made under this Act

(3) It shall also be the duty of the Board :

(1) To advise the Central Government on all matters relating to the development of the rubber industry, including the import and export of rubber

(2) To advise the Central Government with regard to participation in any international conference or scheme relating to rubber

(3) To submit to the Central Government and such other authorities as may be prescribed, half-yearly reports on its activities and the working of this Act

(4) To prepare and furnish such other reports relating to the rubber industry as may be required by the Central Government from time to time (The Act, 1947)

4. ORGANIZATIONAL SET UP

The Chairman is the Principal Executive Officer and is responsible for the proper functioning of the Board, implementation of its decisions and the discharge of its duties under the Rubber Act. There are eight departments and the Chairman exercises administrative control over all the departments. The Central Office (Plate 75. a) is located at Kottayam town in Kerala state. The Departments of Administration, Rubber Production, Finance and Accounts, Statistics and Planning and Licensing and Excise Duty are also functioning at the Central Office. The Rubber Research Institute of India (RRII), the research arm of the Board, is located on a hillock in the eastern suburb of Kottayam, 6 km from the Central Office. The Departments of Rubber Processing and Product Development and Training and Technical Consultancy also function in the same campus.

The Administration Department headed by the Secretary attends to general administration and personnel administration, labour welfare, legal affairs, marketing and official language implementation.

The RRII (Plate 75. b) is headed by the Director of Research. There are eight research divisions, namely Agronomy and Soils, Agricultural Economics, Biotechnology, Botany, Germplasm, Mycology and Plant Pathology, Plant Physiology and Exploitation and Rubber Chemistry, Physics and Technology. The Institute has a 255 ha Central Experiment Station at Chethackal, Ranni in Kerala, two *Hevea* Breeding Sub-stations at Nettana in Karnataka

and at Paraliar in Tamil Nadu and a Regional Research Station at Padiyoor in Kerala. It has established eight Regional Research Stations in the non-traditional areas in Tripura, Assam, Meghalaya, Mizoram, West Bengal, Orissa, Madhya Pradesh and Maharashtra. Research activities in the north-eastern region is coordinated by the North Eastern Research Complex at Agartala (Plate 75. c). Eight Regional Soil and Tissue Testing Laboratories are functioning under the RRII for giving on the spot fertilizer recommendations to the small growers. A well-stocked library and documentation centre (Plate 75. d), an art and photography unit, an agricultural meteorology unit, an instrumentation unit, a statistics and computer unit and a medical unit are also attached to the Institute.

The Rubber Production Department, headed by the Rubber Production Commissioner, is responsible for formulation and implementation of schemes for development of rubber plantations, rendering advisory, extension and training services for estates and smallholdings, production and supply of planting materials, supply of other requisites, establishment and maintenance of demonstration farms, *etc.* The work of the Department at the field level is managed by three Zonal Offices (Guwahati, Agartala and Bhubaneswar), two Nucleus Rubber Estate and Training Centres (Tripura and Andamans) and six Supervisory Offices, 40 Regional Offices, 170 Field Offices, 15 Regional Nurseries and 26 Tapper's Training Schools functioning at all important rubber growing centres in the country. It also implements the plantation development component of the World Bank-assisted Rubber Project.

The Department of Processing and Product Development is headed by the Director (P&PD). It has four divisions: (1) Engineering, (2) Quality Control, (3) Factory Management and (4) Rubber Processing and Market Development. The Department offers technical assistance to set up rubber processing units and to maintain quality of processed rubber in addition to operating the Board's Pilot Crumb Rubber Factory (Plate 75. e), Radiation Vulcanized Natural Rubber Latex Pilot Plant and the Pilot Latex Processing Centre.

The Statistics and Planning Department headed by the Joint Director (S&P) gathers basic statistics from growers, processors, manufacturers and dealers and compiles, analyses and disseminates the information. It monitors supply, demand, stock, price, *etc.* of raw rubber and gives review reports to the Board and the Government and also prepares the plan proposals.

The Department of Training and Technical Consultancy, headed by the Director (T&TC) imparts specialized training in various aspects of rubber cultivation, primary processing and product manufacture besides providing assistance to new entrepreneurs for setting up small-scale rubber products manufacturing units.

The Finance and Accounts Department handles budget and budgetary control, annual accounts and audit, preparation of financial statements and cost studies.

The Department of Licensing and Excise Duty attends to excise duty (cess) collection, market intelligence, licensing for dealing in rubber and for acquisition of rubber for manufacturing purposes. The Board's Liaison Offices in New Delhi, Mumbai, Calcutta, Bangalore, Ahmedabad, Kanpur, Jalundhar and Chennai also function under this Department.

5. FUNDS

The Board maintains two funds, the General Fund and the Pool Fund.

5.1 General Fund

Cess on rubber is a duty of excise on the quantum of raw rubber produced in the country. The rate of cess in force from September 1998 is Rs.1.50 per kg. It is collected by the Board and remitted to the Consolidated Fund of India after retaining two per cent as collection charges. The Central Government makes grants to the Board through appropriations as approved by the Indian Parliament, to be utilized for the purpose of the Rubber Act. Amounts thus received by the Board form major portion of the receipts to the general fund. Other forms of collections to the General Fund include licence fees, proceeds from sale of rubber produced in Board's research or demonstration farms, proceeds from sale of planting materials raised in Board's nurseries, fees for services and miscellaneous receipts. This fund is utilized to meet the cost of measures and functions under the Rubber Act and Rules.

5.2 Pool Fund

Amounts generated from sale of rubber imported or purchased from internal market, transfers from General Fund with previous approval of the Central Government and cash realizations on implementation of schemes for the small growers constitute the Pool Fund. The Pool Fund is applied only for the rehabilitation of the small growers. Measures like replanting with high yielding materials and planting new areas with rubber in the smallholding sector are financed from the Pool Fund.

6. ACTIVITIES

The activities of the Board can broadly be classified under regulatory, research, development, collection of statistics and planning, labour welfare and collaboration with international organizations.

6.1 Regulatory

In India, natural rubber (NR) is a commodity with regulated transactions. Its production, sale and consumption have to be carried out under valid licences.

6.1.1 Licence for new planting or replanting

For fresh planting or replanting of rubber, a licence has been prescribed under the Rubber Rules. The Development Officer in charge of the Regional Office having jurisdiction over the concerned area issues the licence separately for new planting and replanting. Each licence specifies the area of new planting or replanting and is valid for the calendar year of issue or part thereof. It is obligatory on the part of each licensee to use only high yielding planting materials as approved by the Board. Every licence holder has the obligation to furnish to the Board details of the area newly planted or replanted.

6.1.2 Registration of estates

Every owner of rubber plantation has the obligation to register his name in the books of the Board. Owner includes any agent, a mortgagee in possession and a lessee of an estate. Registration is granted assigning a registration number after verification of

the applicant's title to the land, location, extent planted, the year of planting and variety of planting materials used. Registration is normally effected talukwise. Separate registration is given to estate owned by the same person in different taluks unless such estate is contiguous and lying as one unit. Registration once made continues in force until it is cancelled. The registration of an estate can be transferred in whole or in part to a successor in title or to any person who has otherwise acquired the title.

Under the Rubber Act and Rules, owners of rubber plantations are classified into two groups, *viz.* small growers and large growers. Small grower is defined as owner whose rubber plantation does not exceed 20.23 ha (50 acres) in area.

Every small grower when required to do so and every large grower has to furnish to the Rubber Board monthly returns giving the particulars of rubber produced, stock held or disposed of and annual return giving particulars of the area under rubber, production of rubber, manuring, plant protection and labour employed in the prescribed form. Since the number of smallholdings has now crossed manageable proportion (Rubber Board, 1997), census is conducted to estimate the area under rubber and the annual production from that sector.

6.1.3 General licence

The Rubber Act stipulates that no person shall sell or otherwise dispose of, and no person shall buy or otherwise acquire rubber, except under and in accordance with the terms of a general or special licence issued by the Board (The Act, 1947). The Board has by due notification issued a general licence to all registered rubber growers to sell or otherwise dispose of rubber and another general licence to all manufacturers to acquire rubber not exceeding 68.03 kg (150 lb) per year. For quantities exceeding this, a special licence has to be obtained.

6.1.4 Dealer's licence

Every person, other than a processor, who wants special licence to purchase, sell or otherwise deal in rubber is granted the licence if the Board is satisfied with the suitability of the applicant, after remittance of the prescribed fee. Every licensed dealer should submit to the Board true and correct monthly returns in the prescribed forms giving the particulars of rubber acquired, stock held or disposed of.

6.1.5 Processor's licence

Every person who wants to acquire rubber for processing or to sell the rubber so processed or otherwise, should obtain a special licence from the Board. The Board may issue a licence if it is satisfied with the economic feasibility of the processing venture, the suitability of the applicant and the proposed site, availability of raw materials, possession of technical know-how, arrangement for technical specification of the processed rubber and remittance of prescribed fee. The processors of solid block rubber and concentrated latex should grade and market the produce in conformity with the standards specified by the Bureau of Indian Standards from time to time. Every processor should furnish to the Board monthly returns in the prescribed form giving particulars of rubber used out of own production or by acquisition, stock held, and the quantity disposed of.

6.1.6 Manufacturer's licence

A person who desires to manufacture any article in the making of which rubber is used has to obtain a manufacturer's licence from the Rubber Board. This licence is issued for acquiring a specific quantity of rubber. He can obtain the licence by submitting the application in the prescribed form along with the licence fee and service charge. Every manufacturer should furnish to the Board monthly returns in the prescribed form providing particulars of rubber acquired, stock held, consumed or disposed of and an annual return in the prescribed form, giving particulars of consumption of various kinds of rubber in relation to the end products.

6.1.7 Interstate transport

Transport of rubber across state boundaries is regulated through a declaration made by the transporter in the manner laid down in the Rubber Rules. Regulation of transport helps to ensure movement of rubber only to licensed traders or manufacturers and that the whole quantum transacted is accounted for levy of cess.

6.1.8 Control on import and export

Import and export of NR are regulated by the Central Government on the basis of policies adopted and decisions taken from time to time. As per the present Export and Import (Exim) Policy of 1997-2002, there is no restriction on export of any grade of NR but its free import is not permitted.

The Rubber Board regularly collects statistics from various sources and makes projections and forecasts of future supply and requirements and advises the Government on quantum to be imported or exported. When domestic production falls short of domestic consumption, the Board advises to import, against Public Notice, to the extent of deficit. Trading houses which export rubber products are entitled to import rubber under Special Import Licence (SIL). Imports under Public Notice and the SIL attracts customs duty. Exporters of rubber goods can import rubber without duty to the extent needed for production of goods for export under the Duty Entitlement Pass Book (DEPB) Scheme.

If domestic industry is not able to fully consume the rubber produced internally, recommendation for export of rubber is made. All intending exporters may obtain a Registration-cum-Membership Certificate (RCMC) from the Rubber Board.

6.1.9 Control on price

The Central Government pursues a policy of maintaining remunerative price for rubber related to the cost of production. NR price in India was brought under statutory control in 1942, which marked the beginning of the Government intervention in the market. In the past, the Government used to fix minimum and maximum price of rubber. The minimum price was operative from May 1942 to August 1981 (except for a short gap from October 1946 to November 1947), but the maximum price only during December 1947 to December 1963 and from October 1967 to November 1968. Both minimum and maximum prices were also operative from February 1986 to January 1991 and only the minimum price since then, which currently is the benchmark price.

6.2 Research

Scientific research has a vital role to play in the commercial exploitation of an agricultural commodity like NR with multidimensional industrial uses. In order to evolve agricultural technologies best-suited to Indian conditions, the Rubber Board developed its own research facilities by establishing the Rubber Research Institute of India (RRII) in 1955. The broad research priorities are improvement in productivity of NR, reduction in cost of production, improvement in quality competitiveness by modernizing post-harvest technology and development of location-specific cultural operations, exploitation techniques and plant protection methods.

6.2.1 Areas of research

The thrust areas of research work undertaken by the RRII are :

(1) Agronomy and Soils : Investigations on the nutritional requirements of rubber, irrigation, intercropping, cover crop management, weed control and the study of the rubber growing soils.

(2) Agricultural Economics : Studies relating to economic aspects of NR cultivation, processing, marketing and end uses, studies on different aspects of ancillary sources of income and by-products and assessment of economic feasibility of new recommendations.

(3) Biotechnology : Development of tissue culture and other culture systems for propagation and crop improvement of *Hevea*.

(4) Botany : Breeding, evaluation and selection of high yielding clones, propagation techniques, planting methods, anatomical studies and cytogenetic investigations.

(5) Germplasm : Introduction, conservation and evaluation of *Hevea* germplasm.

(6) Plant Pathology : Investigations on the diseases and pests of rubber and associated cover crops and their control.

(7) Plant Physiology and Exploitation : Identification of characteristics related to yield, physiology of latex flow and yield stimulation.

(8) Rubber Chemistry, Physics and Technology : Improvement in primary processing of rubber, its chemical modification, rubber product manufacture and quality control of processed rubber.

6.2.2 Major contributions

Sustained research and adoption of the new technology by the rubber growing community have been instrumental in India's achievement of the highest productivity (Rubber Board, 1999) among the NR producing countries. The RRII has been successful in evolving through breeding, the outstanding rubber clone RRII 105 and releasing it for commercial cultivation. The clone has gained very wide acceptance and has touched average commercial yield of 2400 kg per ha (Rubber Board, 1998) and 15 other clones with very high yield potential are in the experimental stage (Licy *et al.*, 1997). Systematic research has evolved appropriate agrotechnology for rubber production and helped in developing agromanagement techniques and rubber-based farming systems for sustainable agriculture

both in traditional and in non-traditional areas. The Institute has been successful in maintaining the indigenously developed and introduced cultivars and a good number of wild genotypes in germplasm conservatories. The RRII has developed efficient and competitive measures for management of all diseases and pests in rubber plantations. Location-specific and clone-specific exploitation systems have been identified. Popularization of discriminatory fertilizer recommendation system for rubber and the development of Diagnosis and Recommendation Integrated System (DRIS) are noteworthy. Other notable contributions include development of protocols for tissue culture propagation of high yielding clones and for somatic embryogenesis, efficient utilization of ancillary products, environment-friendly waste management, identification of alternative latex coagulants, improved drying system, technology development for production of modified forms of NR and formulation and process aids for different rubber products.

6.3 Development

The Rubber Board has been implementing schemes for (1) improving productivity of the existing plantations and reducing cost of production, (2) increasing total production through expansion of rubber cultivation, (3) modernization of crop processing and (4) improving the marketing of smallholders' crop.

6.3.1 Rubber Plantation Development Scheme

Separate schemes were implemented to promote replanting and new planting of rubber. A replanting subsidy scheme was in operation from 1957 to 1979, under which 53605 ha of senile rubber plantations were replanted with high yielding clones adopting scientific cultivation practices, the achievement being about 62 per cent of the target (Rubber Board, 1980). Three other schemes (Upkeep Loan Scheme, New Planting Loan Scheme and Revised Loan Scheme) were also introduced during 1962-79 to modernize the smallholding sector which covered an area of 3857 ha. A one-year pilot scheme implemented in 1979 resulted in new planting of 6532 ha (Rubber Board, 1999).

The Rubber Plantation Development Scheme offering financial assistance for both replanting and new planting was launched in 1980. The scheme covered both small growers (up to 20 ha) and large growers. During the first phase of the scheme (1980-84) the financial incentive for the smallholder sector was 66.6 per cent more compared to that for the large growers (Rs. 5000 and Rs. 3000 per ha respectively). Small growers possessing rubber area below 6 ha were provided special assistance to meet partially the cost of planting materials and fertilizer. Credit from commercial banks was also available, for which interest was subsidized for the smallholders to the extent of three per cent by the Rubber Board.

During the second phase (1985-89) of the scheme, the subsidy (Rs. 5000 per ha) was limited to growers of 5 ha or less in traditional area, but without restriction for growers in the non-traditional regions where the agrotechnology of rubber farming had not become popular. All growers were made eligible for credit finance from banks and for the three per cent subsidy on interest. Planting material subsidy was also granted at the rate of Rs.6 per plant for using plants of advanced growth like polybag plants (limited to 450 plants per ha).

The third phase of the scheme covered three years (1990-92), with the same rates of assistance. The fourth phase is under implementation from 1993, concurrent with the World Bank-assisted (International Development Assistance) Rubber Project. The financial incentive was raised to Rs. 8000 per ha and in the traditional region it is limited to 2 ha for growers whose individual rubber area does not exceed 5 ha. In view of the increase in planting cost, the financial incentives were revised in 1997. Small growers possessing rubber area of 5 ha and below in the traditional region (Kerala and Tamil Nadu) now receive planting grant of Rs. 18000 per ha, for extending/replanting the rubber area up to 2 ha. Financial assistance at this rate is available also to large growers in non-traditional region for area up to 20 ha. Smallholders in the non-traditional region are given planting grant at an enhanced rate of Rs. 22000 per ha for expanding the plantation or replanting it up to 5 ha. Karnataka state is classified under non-traditional region considering the climatic constraints prevalent in most of the potential areas in the state.

Incentive for use of advanced planting materials is continued at the same rate of Rs. 6 per plant. Growers belonging to scheduled caste/tribe are eligible for the assistance at Rs. 8 per plant. With the use of advanced planting materials, it is expected that rubber trees attain tappability even by the sixth year. The payment is released based on adoption of various technologies recommended by the Board and also plants attaining the specified girth. The minimum qualifying girth is 15, 20, 28, 36 and 43 cm for the third to the seventh year respectively. The schemes are result linked, but liberal. Incentives under the fourth phase is met out of the World Bank grant to the Rubber Board.

The total area replanted/new planted under the Rubber Plantation Development Scheme under the four phases is 271504 ha; 72740 ha under phase I, 77147 ha under phase II, 45547 ha under phase III and 76070 ha (up to March 1999) under phase IV (Rubber Board, 1998). Phase I and phase II were of five-year periods while phase III was for three years. Phase IV started in 1993 has covered six years. Significantly high productivity has been achieved in the holdings which have been participating in RPD schemes (Mathew, 1989).

6.3.2 World Bank-assisted Rubber Project

The Rubber Board has been implementing a World Bank-assisted Rubber Project effective from January 1994 with the main objective of expanding and strengthening the rubber plantation sector to increase production by smallholders, improve processing and increase on- and off-farm employment. The project mainly covers Kerala and Tamil Nadu in the traditional sector and Tripura in the non-traditional sector. The main components of the project are (1) replanting in traditional areas (30500 ha) (2) new planting in traditional and non-traditional areas (45000 ha) (3) productivity enhancement in 100000 ha of smallholdings in traditional areas (4) establishment/upgradation of rubber and rubber wood processing facilities (5) institutional strengthening of Rubber Board and (6) development of participating women and tribal population, particularly in Tripura. The IDA credit finances about 68 per cent of the total estimated project cost.

6.3.3 Supply of planting materials and cover crops

The Board publishes every year a list of clones approved for planting and takes appropriate steps to ensure that the materials are available to growers in adequate quantum at reasonable prices. It maintains eight nurseries (total extent 47.36 ha) in the traditional region and another eight (total area 28.81 ha) in the non-traditional regions (Plate 75. f). The planting materials are distributed mainly to small growers at concessional rates. Large growers are given supplies to a limited extent at cost price. The Board is also implementing a Sponsored Nursery Scheme whereby cooperative institutions are encouraged to maintain nurseries to supply materials of high quality to the small growers at reasonable price.

Rubber growers are encouraged to establish suitable ground cover in the plantations from the initial year for improving the soil structure and fertility, suppressing weed growth, preventing soil erosion and keeping down the soil temperature in summer. Seeds of the leguminous cover crops is supplied through the Board's Regional Offices, in conveniently sized packets. Subsidy in price, to the extent of 20 per cent of the cost, is allowed to smallholders.

6.3.4 Improvement of crop processing and presentation

Small growers in India generally market their crop as sheet rubber, the quality of which needs improvement in general. In order to improve the quality, the Board subsidizes the cost of hand-operated sheeting rollers of standard specifications and provides financial and technical assistance for establishing small smoke houses in individual holdings. To popularize modern methods of processing amongst small growers, cooperative societies are assisted to set up facilities for production of technically specified rubber, centrifuged latex and pale latex crepe.

6.3.5 Rubber Producers' Societies

The Rubber Board devised a novel method of helping small growers to organize themselves at grass-roots level and jointly work to acquire up to date know-how in improvement of productive efficiency, group processing and competitive marketing. For this purpose, voluntary associations of growers are registered as charitable societies known as Rubber Producers' Societies (RPS). The RPS operates in small compact areas of 2 to 3 km radius with membership ranging from 50 to 200. The members adopt group approach to raise nurseries and supply planting materials, procure and supply farm inputs, absorb modern farming technology, establish common processing facilities and assist in crop marketing.

6.3.6 Marketing of smallholders' rubber

Since 1960, the Rubber Board has actively been encouraging formation of cooperative societies for organized marketing of smallholders' rubber giving assistance in share capital formation. The entry of the cooperative sector in the primary market was expected to control the dominance of the intermediaries for the benefit of the smallholdings sector (George and Chandy, 1996). Rubber processing and rubber trading companies have been promoted in rural areas to integrate and strengthen the activities of the RPS. Seven processing and 11 trading companies with share participation of the Rubber Board and the RPS have been established to improve the market for small grower's rubber.

6.3.7 Technical advice to growers

Rubber Board has been promoting the production of NR through advisory, extension and communication services to growers free of cost. The field service units, set up throughout the important rubber growing centres, attend to implementation of plantation development and input distribution schemes and advise the growers on seasonal operations and scientific cultural practices. These units also undertake mass contact activities such as village-level group discussions, seminars, study classes, exhibitions and annual campaign meetings on selected topics. The mobile laboratories of the RRII render on-the-spot discriminatory fertilizer advice to small growers at nominal cost.

Demonstration and discussion on scientific methods of tapping, panel protection, rainguarding and chemical yield stimulation are also arranged. The Tappers Training Schools (Plate 75. g) at different plantation centres offer regular training to small growers and their sponsored tappers in tapping and primary processing of the crop.

Growers are encouraged to elicit technical and other information through correspondence. Technical and general information is also given through publication of free advisory leaflets, subsidized journals, articles in news dailies, broadcast of talks, interviews and lessons over the radio and screening of instructional films.

6.3.8 Training and technical consultancy

Specialized training in various aspects of rubber production and processing provides trained manpower for the plantation and manufacturing sectors. Regular training programmes are arranged separately for smallholders and estate personnel on cultivation of rubber, cultural practices, plant protection and crop processing.

'Sasthradarsan', a one-day familiarization training programme at the RRII, is also arranged free of cost to enable rubber smallholders gain first hand knowledge about the research and development programmes undertaken to improve cultural practices, plant protection and crop processing.

Problems in the production processes raised by the participants are examined for identification of solutions. Consultancy services are provided to the rubber goods manufacturing units through project identification, market survey, preparation of project feasibility report and assistance in trial runs. Existing units draw assistance for improving quality of products, reducing cost of production, products diversification and identifying export markets. A full-fledged training centre is under establishment close to the RRII for conducting integrated training courses for rubber producers, processors, traders and rubber goods manufacturers.

6.3.9 Special assistance for weaker sections

The Board provides special assistance for the weaker sections among the growers belonging to tribal and scheduled caste communities. The special assistance includes : (1) cash subsidy at enhanced rate (Rs. 22000 per ha spread over the 6 to 7-year immaturity period) (2) supply of high quality planting materials free of cost, (3) reimbursement of cost of planting material (Rs. 8 per plant limited to Rs. 4000 per ha), (4) fertilizer at 50 per cent subsidized cost during the first three years (limited to Rs.1000 per ha), (5) subsidy

for boundary protection (Rs. 2200 to Rs. 4000 per ha depending on holding size) and (6) fee concession of 50 per cent in training programmes.

6.3.10 Board's publications

The Board publishes books, periodicals and pamphlets to disseminate scientific methods of rubber cultivation and crop processing, to publicize various schemes and to build up awareness on the status of the industry (Plate 75. h).

The major publications include 'Rubber' (monthly in Malayalam), 'Rubber Malar' (monthly in Tamil), 'Rubber Sambandh' (monthly in Bengali), 'Rubber Samachar' (quarterly in Hindi), 'Rubber Varthe' (bimonthly in Kannada), 'Rubber Statistical News' (monthly in English), 'Indian Rubber Statistics' (annual in English), 'Rubber Growers' Companion' (annual in English), 'Directory of Rubber Goods Manufacturers in India' (English), 'Rubber Wood : Production and Utilization' (book in English), 'Directory of Rubber Products Exporters' (English), 'Plant and Soil Analysis' (book in English), 'Rubber Board Bulletin' (quarterly in English), 'Rubber Research Institute of India Annual Report' (English), and the 'Indian Journal of Natural Rubber Research' (half-yearly, international scientific journal in English). A large number of technical and advisory pamphlets are also brought out in English and local languages. Scientists and technical officers have published over 2000 papers in leading national and international journals and popular periodicals.

The Board published the Handbook of Natural Rubber Production in India (a manual in English covering all aspects of NR production and post-harvest technology) in 1980. This book 'Natural Rubber : Agromanagement and Crop Processing' is published to incorporate all relevant information up to date.

6.4 Collection of statistics and planning

The Rubber Board collects basic statistics from rubber growers, dealers, processors and manufacturers and monitor periodically the demand and supply of rubber. The Board prepares perspective plans and works out strategies for augmenting domestic production, monitors developments in the international scene and renders advice to the Government of India on international developments and the steps to be taken for rubber development in the country.

6.5 Labour welfare scheme

Under provisions of the Rubber Act, the Rubber Board implements labour welfare measures to secure better working conditions and provisions for the improvement of amenities and incentives for rubber plantation workers in the organized and the unorganized sectors. The welfare measures include stipend and scholarship schemes for education of workers' children, group insurance-cum-deposit scheme, subsidy scheme for construction of own houses, assistance for sanitary facilities and scheme for medical attendance.

6.6 International collaborations

Research and development in NR transcend national boundaries and are today undertaken with global perspective and understanding amongst planners, decision makers, scientists and development workers. Many spheres require active collaboration at bilateral

and/or multilateral levels. India is a member of the International Rubber Study Group (IRSG), the Association of Natural Rubber Producing Countries (ANRPC) and the International Rubber Research and Development Board (IRRDB). These bodies foster cooperation in rubber research and development and try to improve the service of NR to the humanity in terms of technological properties and supply at reasonable price. The RRII has research/academic linkages with several universities and research institutions and is a recognized centre for advanced studies.

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