

DEVELOPMENT SCHEMES FOR RUBBER

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Rubber has been grown on plantation scale in India from the year 1902. Domestic use of rubber for manufacturing consumer and industrial goods started only in 1930s. Yet, for the last over four decades, the country had to content with the status of a net importer of natural rubber (NR). During 1960-61, the imports amounted to 48 percent of the total demand of 48,000 tonnes. By 1987-88, the share of imported rubber in the total 287,000 tonnes consumed could be brought down to 19 percent. For the last few years, the average growth in production is 8.1 percent while in consumption it was 8.2 percent.

The above figures might carry the impression that all is well for the future. The actual outlook, however, is far from that. The per capita use of rubber is one of the lowest in the world. It is poised to climb up swiftly in future. Experts are unanimous in their view that India along with China would offer the largest markets for rubber goods in the years to come. About 80 percent of the rubber used in India is of plantation origin. A large scale shift in favour of synthetics is not as yet in view because of its high cost of production, acute dearth of petrochemical feed stocks, likely surge in internal demand for heavy duty tyres and radial ply tyres both of which require use of NR and host of

other valid reasons. The projected demand for NR by 2000 AD is 575,000 tonnes—more than double of what it is today. In another decade from then, it could touch the 1 million tonne mark.

The big question is whether the country can match her production with demand. Self reliance in production is a must since the prices in world markets are flaring up and availability getting difficult. For a vital and strategic commodity like rubber, no country should depend on imports much more so in the case of India which has meagre potential for substitution with synthetics.

Towards Boosting Production

The strategy formulated for equating NR demand with supply is three pronged, namely,

- Maximum expansion of plantation area,
- Speedy replantation of old, uneconomic areas and
- Raising productivity of trees already on ground.

Though the strategy is clear and simple, its execution is beset with hurdles. Traditional rubber growing areas which have relatively the best agro-climatic conditions for rubber cultivation and production face acute pressure on land and offer no large scale scope for expansion. Non-traditional areas which have been painstakingly identi-

fied have extensive land potential but sorely lag behind in development infrastructure, adequate manpower requirements, proper management capabilities and conducive political atmosphere. To cap it all, there is a crippling indecision on whether lands that have been lying denuded or only sparsely vegetated for decades together could be released for rubber plantation development or have to be reserved for social forestry.

Replantation and productivity enhancement are to take place mainly in small and marginal holdings. It needs to be remembered here that 80 percent of the total 400,000 ha. area under rubber in the country is distributed in over 350,000 holdings with an average size of 0.90 ha. per holding and that 75 percent of the total production now comes as their contribution. About 50,000 hectares of plantations requiring immediate replantation are entirely within this sector. The productivity potential of the remaining mature plantations is in the region of 1,250 kg to 1,500 kg. per ha. per annum. But what is today achieved is only 975 kg. on an average. Large organised plantations taken alone are however producing more than 1,150 kg. per ha. per year.

Besides striving to create an overall awareness of the benefits of rubber cultivation in non-traditional areas, the Rubber Board is diligently spear-heading development activities to more and more

such areas. The activities are fairly advanced in Tripura, Assam, Meghalaya, Andaman & Nicobar Islands, Karnataka and Goa. They are also being spread to other target area, namely, Manipur, Mizoram, Nagaland, Arunachal Pradesh, West Bengal, Orissa, Madhya Pradesh, Andhra Pradesh and Maharashtra. It is planned to have, problems notwithstanding, 130,000 hectares newly planted with rubber during the VIII Five Year Plan period. Of this, 115,000 hectares would be in non-traditional areas alone. Goa and Maharashtra would have to contribute not less than 10,000 hectares over the five year period.

Replantation is proposed to be got undertaken in 50,000 ha. before the close of the VIII Plan. Almost the whole of this would be in traditional areas of Kerala and Tamilnadu with a small contribution from Karnataka.

The targets in regard to productivity is to reach a national average level of 1,250 kg. by the year 2000 and 1,500 kg. by 2010. This would be achieved largely through promotion of sustained group endeavours towards widespread adoption of modern technologies such as discriminatory fertiliser application based on soil and leaf testing, systematic plant protection operations, scientific tapping, production under rainguarding and chemical stimulation of yield on older trees.

Support Services & Incentives

The Government of India, various State Governments and the Rubber Board are extending a wide range of policy support, marketing incentives, technical backing and financial help for ensuring

speedy development and modernisation of NR production. These are briefly dealt with below:

Price

The most relevant and abiding support that can be extended to any production is in regard to price. NR occupies a privileged position in this regard. Ever since Independence, the commodity has enjoyed internal price protection, market regulation and insulation from violent world market swings. Imports are allowed only on the basis of careful assessment of demand-supply gap and the imported rubber is allowed to be sold in domestic markets only at or above domestic rates. The internal price is fixed by the Government of India on the basis of determination of cost of production by independent agencies. A fair profit margin is allowed over this. The market is regulated through constant monitoring of all relevant factors, timely imports and releases of supplies procured from abroad and buffer stocking. The fair price fixed at present is Rs. 17.80 per kg. for fair average quality ex Kottayam/Cochin. The lower intervention price is Rs. 17.50. The price is reviewed periodically and it is allowed to move in tandem with the cost of production.

Taxation

Taxation policies are reviewed by Central and State Governments from time to time. Any impost that prove to be incompatible with the development flow are examined and modified to suit the requirements.

Research

India has a full-fledged central research institution in Rubber Research Institute of India

(RRII) under the Rubber Board undertaking comprehensive research on all aspects of rubber production, crop processing and end use technology. The institute has its central laboratories at Kottayam, Kerala and a number of regional research centres spread over all rubber growing States including the ones holding potential for future development. The institute maintains close ties with sister Institutes abroad through international Rubber Research and Development Board. It can be stated with satisfaction that almost all major problems relating to rubber are fully investigated and appropriate solutions worked out and passed on to growers through the Board's extension network.

High Yielding cultivars

Breeding and selection work carried out over the past several decades in various rubber producing countries have made available to us a wide ranging collection of high yielding cultivars. From the original unselected seedling material which had the production potential of 400 to 500 kg/ha/yr, we have now moved on to the use of high yielding clones propagated through budgrafting and capable of yielding around 3,000 kg/ha/yr. India's own clone RRII 105 which has received overwhelming acceptance of growers is an outstanding example of achievement in this direction. More improved cultivars are in the pipeline. Production and distribution of high yielding planting materials are undertaken through a large number of nurseries established over the length and breadth of all rubber growing areas. This is largely a contribution of free enterprise. The Rubber Board exercises quality and price moderation in the field through its own

share of about 20-percent of the total production. The planting materials from Board's nurseries are distributed to small growers at concessional prices and to large growers on no profit no loss basis.

Training and demonstration

The Board is undertaking varied training activities for entrepreneurs and workers through its department for training and rubber production. The fields of training cover management of estates, small holder cultivation and production, budgrafting and nursery techniques, tapping and allied activities, crop processing, grading and packing of raw rubber and rubber goods manufacturing technology. Most of the training is given on levy of moderate fees. However, training for workers in budgrafting and tapping are not only free but supported by suitable stipends and free unfurnished accommodation.

The Board is in the process of setting up a series of large Nucleus Rubber Estate and Training Centres (NRETC) for the benefit of rubber growers and workers in non-traditional areas. The first of these has already come up in Tripura and Andaman & Nicobar Islands. More are slated for establishment in Orissa, Meghalaya and Maharashtra (Konkan). The decisions in this regard are largely dictated by the availability of large blocks of suitable lands.

Establishment of a number of district centres, again in non-traditional areas, is on the cards. A beginning in this regard has been already made in Assam. Each district centre spread over 10 to 20 ha. would be a self contained extension, training, supplies and services complex. Goa

has excellent scope for one or two of such centres, if requisite land facilities are forthcoming.

Advisory & Extension Services

Board's advisory and extension services are rendered through its zonal offices, regional offices and field offices established in all important rubber growing centres. At present, there are two zonal offices, 33 regional offices and about 130 field offices. The extension officials are all graduates and post graduates in Botany or Agriculture and trained in service for their job. The services are rendered through correspondence, visits to individual plantations, group meetings, seminars, exhibitions etc. The services are entirely free of any charge.

Board also publishes a number of leaflets, journals and books for imparting technical and development information to growers. While the leaflets are distributed free of cost, a nominal subscription is charged for the journals. The books are priced publications. Audio visual aids are also being used for advisory/information services.

Group activities

As in the case of all agriculturists, rubber small holders are a highly disorganised weak lot. However, rubber cultivation, production and marketing require fairly high levels of management in agro-economic practices, inputs procurement, crop exploitation, post harvest technology and marketing. The Board has therefore been advocating group approach from the side of small growers. From mid-1960 s, co-operatives efforts were promoted amongst them as a result of which there are now nearly 40 rubber marketing co-ope-

ratives and a Rubber Marketing Federation as an apex body. Amongst them, various activities such as rubber marketing, group processing of technically specified rubber, production of fertiliser mixtures, procurement and distribution of other material inputs, aerial spraying etc. are being undertaken. It is however noticed that large co-operatives which have whole districts or taluks as operating areas, function in a highly centralised fashion with the result that rubber growers who are in villages do not get easy access to the co-operatives supplies and services. The overhead expenses of these also tend to go exorbitantly high owing to elaborate establishments. The Board is therefore now promoting small hamlet based organisations called rubber producer's societies (RPSs). These are registered under Societies Registration Act. The membership in each is limited to between 50 to 200 and the operating area is roughly within a radius of 3 kilometres. Each society has a fully democratic set up and is devoid of salaried employees. Collective self-help is practised in its full implications. Each RPS undertakes comprehensive services for its members at a nominal cost. Technical support is provided through nomination of Board's local Field Officer to its director board. He interacts closely with members at frequently held general body meetings. Materials inputs, machinery and equipments meant for collective use are supplied by the Rubber Board at slightly reduced rates. There are today over 650 RPSs successfully functioning amongst 65,000 growers. Their number and services would be steadily expanded until almost the entire small holder community is fully taken care of.

Financial assistance

The Board extends financial assistance to rubber growers in order to motivate them to expand rubber cultivation, modernise cultivation, production and processing, promote organised marketing etc. Financial incentives are provided for the following purposes:

- Reduce the burden of heavy capital expenditure.
- Popularise new technologies and production aids.
- Help organised self help services.
- Train workers and ensure their welfare.

Scheme-wise particulars are briefly given below:

i) Rubber Plantation Development Scheme:

Aimed at acceleration of newplanting and replanting, this was introduced first in 1980-81. Now the II Phase is operating from 1985-86. The following are the forms of assistance offered:-

- a) Capital assistance at the rate of Rs. 5,000 per ha, disbursed in 6 to 7 annual instalments at the close of each year after work is inspected and certified.
- b) Additional assistance for use of polybagged budded plants of advanced growth @ Rs. 6/- per plant established successfully in the field subject to a maximum of Rs. 2,700 per ha.
- c) Interest subsidy @ 3 per cent on bank loans availed under NABARD's refinancing scheme for the entire cost of cultivation and maintenance upto maturity (Rs. 30,000 per ha).

- d) Free technical support at all stages of planting, maintenance and production.

The minimum area eligible for consideration under the scheme in any one year is 0.20 ha for newplanting and 0.10 ha for replanting. There is no maximum fixed for non-traditional areas. The land to be planted should be owned or legally held on long term by the applicant. There are certain limitations in regard to presence of other trees in the planted area and for inter cropping

This is a very popular scheme. As against a target for planting 60,000 ha under the scheme during VI Plan period, nearly 72,000 hectares were actually planted. During the current VI Plan period, the target is 40,000 ha. Even now, this has been far exceeded.

The total amount paid as financial assistance since 1980-81 comes to about Rs. 11 crores. Participation in each year's planting is by about 20,000 growers. Therefore, a total of about 140,000 growers receive payments from the Board each year.

ii) Distribution of Pueraria seeds.

Seeds of Pueraria phaseoloides used as cover crop in rubber plantations are procured in bulk, packed in small consumer packs and distributed to growers through Regional Offices with 25 per cent concession in price.

iii) Assistance for purchase of hand operated rubber sheeting rollers by small growers.

A set of rollers required for producing raw rubber sheets before smoke curing and marketing costs about Rs.7,000/-. Small growers are assisted to the extent of Rs. 1,500/- each. It has been proposed that

rollers might be physically distributed at the reduced rates in non-traditional areas hereafter.

iv) Subsidy for construction of small smoke houses.

Small smoke houses of 85 kg. or larger capacity are required by small growers for proper smoke curing of raw rubber sheets. The cost of construction of this is about Rs.10,000/-. Subsidy offered is Rs. 4,000/- per grower on completion of work and commissioning.

v) Popularising use of low volume power sprayers/ dusters amongst small growers.

Required for easy and effective application of fungicides for control of leaf diseases, these machines cost over Rs. 16,000/ in case of sprayer cum duster and over Rs. 13,000/- for sprayer per piece. Assistance available from the Board are as follows:

	Machine	Bene- ficiary	Assi- stance Rs.
1	Sprayer cum duster	Growers' organisation.	8,000
		Individuals	4,000
2	Sprayer	Growers' organisation.	6,500
		Individuals	3,250

Individuals are paid the amount only after purchase and certification. RPSs are provided facilities to obtain the machines at the reduced price. The Board pays its share to the suppliers later.

vi) Boundary protection.

Rubber plantations have to be fully protected from human, cattle and other animal trespass. Fencing, stone hedging etc are adopted for

this. The costs are high. To assist small growers in non-traditional areas in this, the Board is granting a subsidy to growers belonging to communities other than SC/ST and free supply of barbed wire and 'U' nails to those of SC/ST communities. The subsidy rates are as follow:

Size of plantation	Per ha Subsidy (Rs.)
Upto 1 ha	3,500
Above 1 ha & upto 2 ha	2,600
Above 2 ha & upto 5 ha	1,800

vii) Irrigation

In non-traditional areas, the prolonged drought conditions pose a serious hazard to young rubber. The yield of mature rubber is also adversely affected. To encourage growers to adopt Irrigation as a regular practice, the Board is giving a capital subsidy of Rs. 2,500 per ha. of irrigated plantation, subject to a maximum of Rs. 50,000 to any one grower for developing water source and pumping and distribution arrangements.

viii) Bee-keeping.

Production of honey from rubber plantations would enhance the economic status of rubber grower and add to his attraction to rubber cultivation. The total capital cost for setting up a unit of 4 hives and accessories is Rs. 1,750/-. To encourage growers in this regard, financial assistance amounting to 70 percent of the above cost is given to general category growers and 80 percent to SC/ST growers' after installation and operation are inspected and certified. The hives can be progressively multiplied over the years by the growers at own costs. The assistance is given only through a sponsoring agency which has the capability of procuring/manufacturing and supplying bee-hives and accessories to member growers, provide them bee colonies, train them in bee keeping and assist them in marketing of honey.

ix) Insurance.

The Board has made arrangements with M/S. National

Insurance Co.Ltd., to provide comprehensive insurance cover for rubber plantations of all ages. The Board is the Master Policy holder in this regard. Individual growers are given policy certificates by the Board. In the event of loss/damage of trees, the claims would be investigated by the Board, due compensation obtained and passed on to the grower. As the entire field services and most of the administrative work are undertaken by the Board free of charges the growers get benefit of considerable reduction of premium rates.

Conclusion

The above list is not exhaustive. To sum up, it is to be stated that perhaps no crop in the world receives as much support, protection and assistance as rubber in India. This is appropriate in view of the importance we should attach to increasing NR production in the country and to making it modernised and efficient. ☐

ANRPC study on rubber based industries

A two-member team nominated by the Kuala Lumpur based Association of Natural Rubber Producing Countries (ANRPC) consisting of Mr. Charles Young of UK as Marketing Expert and Dr R K Matthen of India as Technology Expert, visited India in April 1989 to conduct a study on the status of our rubber industry. The 13th Assembly of the ANRPC held in Bangalore in August 1988 had approved a project on development of rubber based industries in the member countries.

The team visited many rubber manufacturing units in the country and held discussions with representative organisations in the manufacturing sector like the ATMA and the AIRIA and also with Governmental agencies like the Ministry of Commerce, Ministry of Industrial Development, DGTD, CAPEXIL and the Rubber Board to review India's pattern of rubber use, identify potential for new rubber based industries taking into account both technology and market factors and assess comparative advantages of local production. The minimum viable investment levels for export promotion as well as the areas of collaboration among ANRPC members in the field of technical and market cooperation were also explored.

The study was funded by the Asian Development Bank. The team has to study the rubber manufacturing conditions of all the ANRPC members and make suggestions for modernising the manufacturing sectors. India, Indonesia, Malaysia, Papua New Guinea, Singapore, Sri Lanka and Thailand are members of the ANRPC. The team is expected to present the study report to the ANRPC Secretariat by July 1989.