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RUBBER PLANTATION INDUSTRY IN INDIA -AD 2000 & BEYOND

NATURAL RUBBER (NR), often referred as the nature's most versatile raw material, forms the raw material for an industry which produces about 35000 products in our country. The rubber industry in this country has a turn over of about Rs.7000 crores and it provides direct employment to about 3 ½ lakh people. This raw material is extracted from a tree, *Hevea brasiliensis*, introduced from the rain forests of Amazon by the British in the 19th century and later domesticated and nurtured as a plantation crop which now occupies a place of pride in the plantation sector in this country. 93 per cent of the production of NR in India is from the south-west coast of India in the states of Kerala and the Kanyakumari district of Tamilnadu. About 9 lakh growers are engaged directly in the production of this raw material and their share account for 85 per cent of the total rubber produced in this country. One of the striking features of the rubber plantation industry in this country is that the average size of a small holding in India is less than 0.5 hectares.

The pattern of consumption of NR and SR (Synthetic Rubber) world over is in favour of SR where SR accounts for 69 percent of the consumption and the NR 31. But consumption of rubber in India is skewed in favour of NR, accounting for 80 percent of the total consumption and the pattern also is likely to remain without much change in the years to come.

India's position among NR producers:

India consumes the entire quantity of rubber she produces and she has always been a net importer of NR. India ranks 4th in terms of production among the major NR production countries and accounts for 8.13 per cent of the world's production of NR, and in terms of area under rubber cultivation, India ranks 5th only (Please see table).

S1. No.	Country	Extent under rubber cultivation as per latest available information (⁰ 000 ha)	Production during 1994 (⁰ 000 tons)
1.	Thailand	1939.0	1720.8
2.	Indonesia	3241.0	1360.8
3.	Malaysia	1836.7	1100.6
4.	India	516.0	464.0
5.	China	603.2	335.0
6.	Nigeria	247.1	105.0
7.	Sri Lanka	162.0	103.8
8.	Viet Nam	250.0	88.0
9.	Brazil	197.0	28.0
10.	World	9835.0	5710.0

Growth of rubber plantation industry in India:

Rubber plantation sector in India has achieved spectacular growth in terms of expansion in area, increase in production and productivity. The area under rubber which was barely 75000 ha in 1950-51 rose to 516000 ha in 1994-95 and production which was 15830 tonnes increased to

*Souvenir, Indian Rubber Dealers' Federation, Kottayam,
Kottayam, 1996, pp. 57-59.*

507000 tonnes during the same period. India now ranks first among the major NR producing countries in terms of productivity of NR. The country witnessed 4 ½ times increase in productivity in about 4 ½ decades and one can confidently say that there have been only few parallels in other commodities in terms of growth in productivity vis-a-vis rubber. It is worth mentioning that the growth achieved has been in spite of various constraints rubber plantation sector in India confront, the major ones being

- suboptimal agro-climatic conditions compared to other NR producing countries.
- preponderance of small holdings-99.6 per cent of holdings being small (less than 20 ha)
- The increase in productivity could be achieved basically due to the following factors:
- Receptivity of growers to modern technology.
- Effective transfer of technology backed by strong R&D efforts.
- Remunerative price
- Imaginative policies and programmes of the Rubber Board and Gov.of India.

The technology adoption in rubber has been highly encouraging. During 1955-56 while about 80 per cent of the total area was under low yielding varieties, the planting during last year indicated that about 95 per cent of the area is with modern high yielding clone RR11 105.

Against a global annual average growth rate of 3.3 per cent in terms of production during the first 3 years of VIII plan, the country registered a growth in production to the tune of 8.8 per cent.

Projected demand of NR in 2000 and beyond:

As mentioned earlier in spite of achieving rather an enviable growth rate the country has always been in short of NR necessitating imports. With the current level of growth in industry the projections are that the country will require huge quantities of NR. India is one of lowest in terms of per capital consumption of rubber which at present is only about 620 grammes. This, when compared to developed countries like USA and Japan with 10 to 14 kg of rubber, is far too low and shows the prospects the rubber industry hold in this country particularly considering that India is a developing economy. A modest estimate of the Rubber Board indicates that by the year 2000 we will require 700,000 tonnes of NR and by 2010 this will go up to 1.2 million tonnes. With the current pace of development in the plantation sector, the maximum we can look forward to is a production of 650,000 tonnes by 2000 and 900,000 tonnes by 2010. If India is to achieve self-sufficiency in NR production, concerted efforts have to be taken and a multi-pronged strategy will have to be adopted.

Looking at the global scenario of production of NR an overall shortage is predictable taking into consideration the growth in the industrial sector. Relying on imports would not only end up in drain of valuable foreign exchange but also will not assure steady supply of raw material to our industry. Efforts are therefore required to strive for achieving self-sufficiency which of course though not impossible but is definitely difficult. If we have to achieve a production level of 12,00,000 tonnes by 2010 our area under tapping should be 6.67 lakh hectares assuming a productivity of 1800 kg per hectare. This would mean that between 1996 and 2003 we should plant another 2.15 lakh hectares which is really an uphill task.

Strategies to increase production:

Even to achieve production level of 650,000 tonnes in 2000 we should have an area of 420,000 ha under tapping in 2000 (the present area is 373,000 ha) and achieve a productivity of 1550 kg per hectare. If self-reliance in NR has to be achieved by 2010, the total area under tapping should be 667,000 ha with a productivity of 1800 kg per ha per year. Achieving the above is no doubt an uphill task. Following strategies have been adopted by the Board to move towards the goal of achieving self-sufficiency:

- Enhancing productivity
- Replanting old and uneconomic plantations
- Expansion of area.

Productivity:

The productivity level at present is 1265 kg, which is the highest among the major NR producing countries. This does not leave much room for complacency as the yield achievable with the present high yielding clone has the capability to produce about 2.5 to 3 tonnes under best management conditions. However, the average productivity of 1265 kg indicates a gap which can be regarded as a technology gap. If this gap is bridged with the current levels of technology itself the productivity can be enhanced which will increase the production. To increase productivity the following four areas are focussed:

- Adopt discriminatory fertiliser recommendation.
- Scientific disease and pest management.
- Better exploitation systems:
 - adopt d /3 tapping system
 - adopt CUT (Controlled Upward Tapping)
 - use stimulants
 - rain guarding.
- Better soil and water conservation measures.

Replanting:

A survey conducted by the Rubber Board indicates that the 25 per cent of the total tapped area in the country is having yield of less than 750 kg per ha and about 54.7 per cent of the area is having less than the national average productivity whereas about 23.6 per cent of holdings have a production level of more than 750 kg. Those holdings with less than 750 kg are mostly with old and uneconomic trees.

Area expansion:

About 20 per cent of the cultivated area in Kerala is under rubber and it is the third largest crop now next only to rice and coconut. With the mounting pressure on land further expansion of area in the traditional region may not be easy. The focus therefore is planting in non-traditional regions. At present the contribution of NT region accounts only for 2.95 per cent of the total production and 10.6 per cent of the area (Please see table)

State /UT	Area (ha)	Production (Tonnes)
Karnataka	14955	9700
Tripura	19252	2966
Assam	10122	315
Meghalaya	4550	167
Nagaland	1450	11
Manipur	1253	96
Mizoram	979	57
A&N Islands	960	462
Goa	936	120
Others	426	15
Total:	54883	13909

Exploratory surveys of the Rubber Board indicate that about 1.2 million hectares is available in the country outside the region which can be considered as suitable for rubber cultivation of which 4.5 lakh hectares is in north-east alone. About 37000 ha is already under in the NE region. The expansion of area in this region however, may not be faster due to various constraints. To overcome these, specific schemes are being designed which have multifarious benefits, social economic and ecological for accelerating a sustainable development in this region.