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SHOULD WE GROW RUBBER IN THE NORTH-EAST?

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About 96% of India's rubber is grown in the narrow belt on the south-western coast in Kerala and the Kanyakumari District of Tamilnadu. This year, the production is expected to be 2,20,000 tonnes and the consumption about 2,55,000 tonnes. What about the future?

demand for rubber originates ...n the production of various rubber goods. Thousands of products are manufactured using rubber. The present pattern of use of rubber is as follows:–

Auto tyres and tubes	– 52%
Cycle tyres and tubes	– 12%
Tread rubber	– 5%
Foot wear	– 11%
Belts & hoses	– 6%
Latex Foam	– 4%
Others	– 10%
	100%

The consumption of rubber in the country is increasing rapidly and steadily. At the time of independence, the synthetic and natural rubber consumption together was 17,000 tonnes. By 1969–70 it went up to 1,17,000 ...nnes and by 1979–80 it tou...ched 2,08,000 tonnes. The average annual compound growth rate during the decade was 6%. During the eighties, the growth rate so far has been 6.6%. Please see the table below:-

Year	Natural Rubber consumed	Synthetic Rubber consumed
1947	17,000	Nil
1970-71	87,237	33,160
1980-81	173,630	47,057
1981–82	188,420	52,650
1982–83	195,545	55,250
1983–84	209,480	62,300
1984-85	217,510	65,400
1985–86	235 440	70,035
1986–87	255,000*	72,000*

(*Estimates)

Projections of demand for rubber have been made in the recent past by several agencies - the Sub-Group on Rubber of the Working Group on Plantation Crops of the Planning Commission, the Sub-Group on Plastics, Elastomers and Engineering Plastics, the National Council of Applied Economic Research, the Rubber Board, the various Associations of Rubber Growers and the Associations of the tyre and non-tyre manufacturing industries. After studying the latest data and after re-assessing the assumptions made by all of them, I feel that it would be realistic to project the demand in the next few years as given below:

Year	Natural Rubber	Synthetic Rubber
1986–87	255,000	72,000
1987–88	273,000	75,000
1988–89	293,000	77,000
1989–90	315,000	80,000
1994–95	420,000	100,000
1999–2000	560,000	120,000

We can look at the demand projections from another angle. The per capita consumption of rubber in India today is 0.4 kg. per year, while the same is 12kg. per capita per year in U. S. A. and Japan, and 5 to 10 kg. in other developed countries. With the steady improvements in living standards in our country, it would be very reasonable to expect this figure to reach at least 0.5 kg. per capita per year by the turn of the century. For the then expected population of 100 crores, the rubber consumption would work out to at least 500,000 tonnes, by 2000 AD. This figure would reach 600,000 tonnes, if per capita consumption of rubber becomes 0.6 kg. per year.

Production prospects

For projecting the production, the tappable rubber area in each year has to be worked out, based on the year of planting. This area has to be distributed among the different age/yield groups as the yield of the rubber tree increases gradually from the 1st year of tapping to the 5th to 7th year of tapping, then remains more or less steady upto the 17th to 20th year of tapping and thereafter starts declining. Production is then computed by multiplying the tappable area in the different groups by the corresponding yield per hectare. The loss of production due to replantation and the increase in production as the new planted and replanted areas reach tappable age, are also taken into account. It is assumed that replanting

But, will the rubber plant grow well and yield rubber in the non-traditional areas, which do not have the round the year warmth and sunshine and the copious rainfall enjoyed by Kerala or Kanyakumari District? Here, we need not have to live on hopes alone. The first few rubber plantations raised in Assam, Tripura, Andamans and Goa a few years ago have already started yielding by now. The total area planted is 1425 ha. in Assam, 8200 ha. in Tripura, 850 ha. in Andamans and 720 ha. in Meghalaya. and 700 ha. in Goa. Out of this, tapping has begun in 436 ha. in Tripura, 136 ha. in Assam, 64 ha. in Meghalaya, 125 ha. in Goa and 600 ha. in Andamans. Considering the poor quality of the planting and maintenance in most of these early planted areas, the yield being obtained now is very encouraging and the productivity will be not very much below the levels obtained in Kerala.

Though rubber traditionally grows well in the regions between 0 to 10 degrees of latitude on either side of the equator, it is a tough and hardy plant and it can thrive in less congenial climates as well. The Rubber Board has started recommending the raising of rubber plantations in non-traditional regions referred to above if the annual rainfall is at least 1200 mm. and if the temperature does not go beyond 10°C and 38°C. During the first three years of the plant's growth, it may have to be given at least one wetting in a week during the rainless months.

Viable Projects

But, what will be the cost of raising the plantation in the non-traditional areas? What is the point in producing the rubber in the non-traditional area, if the cost of production becomes very high? Is it worthwhile to invest in such a venture our scarce resources? These are all genuine questions which call for explanations.

Let us examine the various cost components. Wages form about 57% of the total annual expenditure in maintaining a plantation and about 70% in the cost of establishment of it. It is in this element of cost that the non-traditional areas score over the Kerala-Kanyakumari belt where the wages are very high, in fact 100% higher. Costs of fertilizers, fungicides and planting materials are almost the same. The cost of land also is very low in the non-traditional regions. While the total cost of raising a hectare of rubber plantation and maintaining it for the 7 year immaturity period is about Rs. 28,000/- in Kerala, the same is only Rs. 19,000/- in Orissa. The wage levels and therefore the cost are more or less at the Orissa rate in the other new areas as well. The only additional item of expenditure to be added in the non-traditional areas is the cost of irrigation. Since the irrigation required for the young rubber plant is only one wetting a week and that too during the summer months alone (10 litres per plant per week in association with mulching) heavy expenditure will not be incurred on that. We have already seen that the productivity of the rubber plantation in non-traditional areas will not be very much below the levels attained in Kerala. But, then the cost also is less than the cost of cultivation in Kerala. Thus, it is clear that the rubber plantations in the North-East and other new regions will be eminently viable projects.

Considering all these factors, it is obvious that we should take full advantage of the abundance of sunshine and other favourable conditions in our country and try to grow natural rubber to the maximum possible extent. ●

FUNGUS ROOTS FOR PLANT NOURISHMENT

Researchers at the Centro International Agricultural Tropical (CIAT), Colombia have worked out a simple method of producing mycorrhizae inoculum, so that the small farmers can introduce them into their fields themselves. The scientists suggest that small areas of 25 sq. metres should be sterilised, and they should then be infected with a starter inoculum specially selected for its adaptation to specific soils and crops. A fast-growing host plant (legumes) can be grown in the fields using minimum quantities of agrochemicals, according to them.

Farmers trained in this method can produce about five tonnes of infested soil at a time—enough to inoculate a hectare of land in four to six months, without using large-scale sterilisation. The farmers should be supplied only a minimum package of 2.5 kg of inoculum and small amounts of fumigant, say the researchers.

Mycorrhizae are microscopic soil fungi, which have mutually beneficial association with the plants whose roots they inhabit. Literally meaning 'fungus-roots', mycorrhizae tap their host plant's ability to photosynthesise, absorbing between 10 and 40 per cent of the carbohydrates and other nutritive substances it produces. In exchange, the fungi helps in effective expansion of the root system, and provides the plants with elements such as nitrogen, phosphorus, copper and zinc that are vital for growth