More thrust on rubber timber in ANRPC countries

Apart from the development of timber latex clones, emphasis is also being given to the development of plantation practices and techniques to increase rubberwood yield in ANRPC countries

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The value of the rubber tree till recently has been mainly for its latex. But this is slowly changing. The utilisation of the rubber tree in a holistic sense is now being given focus: for instance, the tree is being looked at from the environment angle; plant nutrients and other useful chemicals are being sourced from effluents and waste from rubber processing; and above all rubber timber is now a valuable resource. Over the last decade the demand for rubber timber had been increasing rapidly. The term, "rubber wood" is usually given to the timber of the species *Hevea brasiliensis*.

Table - 1
Area under NR in ANRPC countries 1994 ('000 ha)

Country	Area
India	516
Indonesia	3,448
Malaysia	1,760
Papua New Guinea	17
Sri Lanka	192
Thailand	1,940

Returns inadequate

The rapid development in the major natural rubber producing countries is bringing about changes to the socio-economic environment in these countries which have considerable influence on rubber production. In the light of attractive alternative opportunities, unless returns are adequate, the small-holders may move away from rubber. Therefore, there is a constant need to enhance returns from rubber holdings. Harvesting of rubber timber is being looked upon, among other things, to provide additional revenue which would not only encourage the estates and the small farmers to continue cultivating rubber but also stimulate expansion of rubber cultivation.

Research and development activities had in the past primarily focused on the production of high yielding, precocious clones which are resistant to pests and diseases. That scenario is changing and today considerable attention is being given to the production of rubberwood. Timber latex clones are being developed; apart from the development of these clones commonly referred to as TLC, emphasis is also given to the development of plantation practices and techniques which could contribute towards enhancing the yield of rubber timber per unit area.

The good working qualities of rubber timber, its durability, pleasant appearance and beautiful grains make it suitable for numerous end uses. It is an ideal wood for making furniture: a whole range of furniture, from household furniture to padded or upholstered furniture are produced from rubberwood. Rubber-wood in solid or laminated form is u in the manufacture of mouldings, parq household utility items, toys, and m other finished items. It is also used making plywood, particle board, laye construction materials, fibre board, w

Table - 2
Area replanted in 1994 ('000 ha)

Country	Area
India	7.5
Indonesia	39.2
Malaysia	30.0
Sri Lanka	1.6
Thailand	37.0
Total	**115.3**

cement board, composite woods, pap charcoal, etc. Though the practice is be discouraged, rubberwood is still important source of fuel in many are

Availability

The total area under NR in ANR countries in 1994 was about 7.87 mill hectares. Table I shows the planted a in 1994 in the member countries. T estimated area replanted in 1994 is giv in Table 2.

Assuming the yield of wood fro rubber trees at 180 cubic metres per h the potential output of rubberwood fro these countries in 1994 would add up t 20.75 million cubic metres. Again, base on the usual assumption that 180 cubi metres of rubberwood would result

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45 cubic metres of usable logs the potential output of usable logs in 1994 would be 5.2 million cubic metres. At prices of about US $ 23 per cubic metre the value of usable logs in 1994 from the ANRPC countries would have been in the region of US $ 119.6 million. The above computation is based on estimates of area replanted.

The availability of rubber timber under optimal conditions could be computed by using a replanting rate of 3% per annum—the internationally accepted norm. At this rate, based on the total ANRPC area under rubber of 7.87 million ha, at least about 10.62 million cubic metres of usable logs would be generated per annum.

For timber alone

New plantings would increase the output and R & D to produce TLC may further augment the output. Timber latex clones have already been developed in Malaysia. Considerations are also being given to planting rubber purely for timber purpose.

Plantation management practices and techniques are also being developed to optimise, not only the output of NR but also rubber timber. A time may even come when rubber will be grown for wood and latex may become a secondary product. One recommendation is to plant 1,000 trees per hectare compared to the present 400 to 500 trees per hectare. Interplanting other crops with rubber for timber purposes also merits consideration; the trees could also be exploited for latex. Such approaches would not only lead to an increased output of rubber timber but also latex. The combined return from rubber timber and latex may make it an attractive business venture.

Based on the figures given earlier, a hectare under rubber would yield about 45 cubic metres of usable logs. At US $ 23 per cubic metre, the gross revenue would amount to US $ 1,035 per hectare. The price of rubberwood varies considerably depending to some extent on the proximity to timber processing factories, the number of trees and other factors. It has been reported that a matured rubber tree in some places fetches as much as US $ 15 or more. Although from the point of investment, the returns from rubberwood, after discounting 25 years, may not mean very much, it is still an additional revenue. However, from the point of the nation as a whole, with particular reference to downstream activities, the return from rubberwood to the nation would be considerable. For instance, in the case of Malaysia in 1990 RM 115 million (US $ 57.4 million) worth of rubberwood furniture was exported and the figure surged to RM 1.2 billion (US $ 0.46 billion) in 1994. It has been projected that by the year 2000, exports of rubberwood furniture would generate RM4.5 billion. Exports of rubberwood sawn timber in 1994 was valued at RM 35.9 million (US $ 13.7 million).

In the period 1992/93 an estimated 1.05 million cubic metres of rubberwood was produced annually in India and the entire quantity was consumed locally. Some 40 % of production was consumed as firewood. Another 45% was utilised in making packing cases. The veneer industry consumed 11% of production and only 3% of rubberwood production was used in the manufacture of furniture, utility items, etc. The balance was used in the manufacture of matches and other items.

From the mid-1980's rubberwood was used in a big way in the production of particle board panels in Indonesia. By 1991, an estimated 1,80,000 cubic metres of particle board panels was produced. About 45% of this volume was exported. In terms of wood products including that made from rubberwood, furniture and furniture parts added US $ 665.7 million and US $ 778.9 to the export earnings of Indonesia in 1993 and 1994, respectively.

Table - 3

Malaysia's export of rubberwood sawn timber by country of destination

Country of destination	1993		1994	
	Volume (cubic metre)	Value (RM million)	Volume (cubic metre)	Value (RM million)
Taiwan	17,735	11.4	32,059	24.7
Japan	4,552	3.5	3,667	3.6
USA	1,533	1.2	1,305	1.3
Belgium	1,128	0.9	46.3	0.4
Singapore	1,195	0.8	2,381	1.5
Netherlands	128	0.1	442	0.4
China P.R.	35	0.03	—	—
Others	1,314	0.8	4,980	4.0
Total	**27,620**	**18.7 (US $ 7.3 million)**	**45,297**	**35.9 (US $ 13.7 million)**

Rubberwood as fuel

A large proportion of rubberwood is used as fuel in Sri Lanka. The total consumption of domestic fuel wood which includes rubberwood was estimated at 7.9 million tonnes per year in 1993 and was expected to increase to 9.5 million tonnes per year from 1996 to the year 2000. The annual industrial use

of fuel wood was estimated at 1.8 million tonnes per year in 1991-92. Sri Lanka is facing a severe shortage of timber and it is envisaged that rubberwood would become more and more prominent in the future.

Wood consumption in Thailand was about 4 million cubic metres in 1992, of which only about 110,000 cubic metres was produced domestically. The balance was imported. Thailand exported furniture and furniture parts valued at 16,738 million baht (S 661.8 million) tin 1993 and the figure for 1994 was 19,530 million baht (US S 779.6 million), representing an increase of less than 17%. A sizable portion of the furniture and furniture parts were made from rubberwood. Rubberwood could be expected to meet a major part of the future need for wood in Thailand.

Rubberwood in the form of raw materials namely, logs and sawn timber, intermediate products such as plywood, parquet and flooring materials, and as finished products is widely accepted, both domestically and at the international level. Malaysia, for example, exports rubberwood sawn timber worldwide. Table 3 shows the exports of rubberwood sawn timber by country of destination for the years 1993 and 1994.

Exports of rubberwood furniture for 1994 also shows a fair distribution. The value and percentage of rubberwood furniture exported by country of destination for the year 1994 is presented in Table 4.

The other member countries also produce and export various items made from rubberwood worldwide.

Constraints

One of the reasons often cited for not realising the potential output of rubberwood is low prices. Due to several factors, farmers in certain environments do not receive prices which encourage them to take steps to sell rubber timber. A comparative analysis by the Forest Research Institute of Malaysia (FRIM) shows that rubber logs are valued too cheaply compared to light red meranti. The sawmiller's profit margin for light red meranti was estimated at 8% whereas that for rubberwood was 164% indicating that low prices had been paid for rubberwood.

Apart from price, infrastructural bottlenecks, inadequate institutional support and technical services, and eve ignorance are some of the other factor

For the last 100 years or so the rubb industry was primarily concerned wi the production of rubber. R & D effor have been directed to produce trees whic are high yielding, precocious an resistant to pests and diseases. Rubbe timber as a product was not looked at a such until about a decade ago. Althoug now efforts are being made in th direction, there is a need for intensifyin R&D work in this area.

Plantation management practices and techniques will give emphasis to bot latex and timber production need to b developed. Collaboration and co-operation among producing countries i this area would certainly go a long way towards achieving this goal.

Planting of rubber jungle also deserves consideration. This approach would also provide a potential stock o rubber, to be exploited when prices are favourable. It may also be necessary to examine the existing institutional and other arrangements to support the development of the rubberwood industry. Where necessary, the existing set up may need to be strengthened.

An information campaign to highlight the value of rubberwood to the farmers and in general the contribution of the rubber tree to the environment are some of the other avenues which could be pursued to augment the output of rubber timber.

Table - 5

Comparative economic assessment of sawn timber production from light red meranti to rubberwood, 1995 (per cubic metre)

Items	Light red meranti	Rubberwood
Total manufacturing cost to produce sawn timber including cost of logs	RM 842.5 (US $ 321.6)	RM 290.0 (US $ 110.7)
Price ex-mill	RM 911.0 (US $ 347.7)	RM 765.0 (US $ 292.0)
Profit	RM 68.5 (US $ 26.1)	RM 475.0 (US $ 181.3)
Profit margin (%)	8	164

Table - 4
Malaysia's exports of rubberwood furniture by destination (1994)

Destination	Value (RMm)	Percentage
USA	510	45.1
Japan	232 2	20.5
Singapore	134	11.9
UK	43	3.8
Australia	39	3.5
Taiwan	33	2.9
Others	139	12.3
Total	**1,13 0 (US $ 431.3 million)**	**100.0**