Rubberwood industry lacks quality control

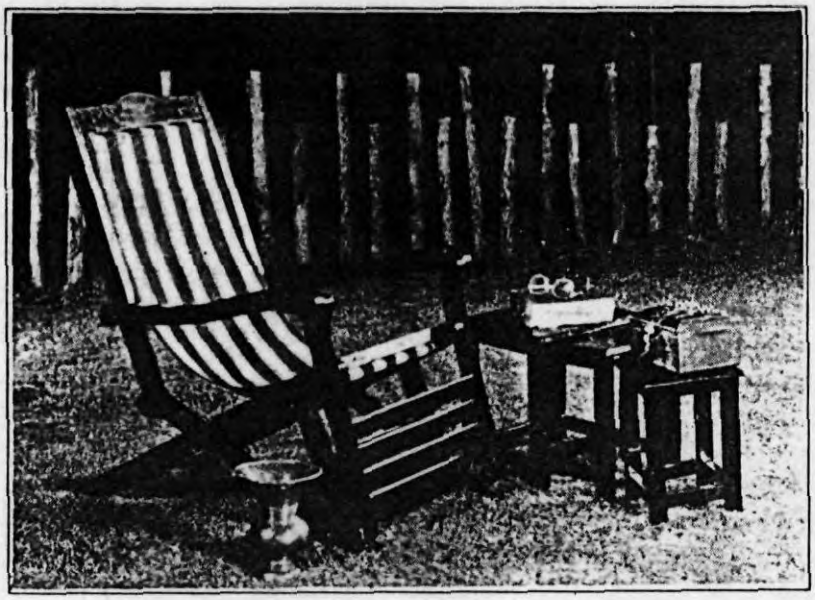
Toms Joseph & Dr. K. Tharian George

The rubberwood industry in the country is basically inward oriented and export of rubberwood products are marginal. The existence of spurious sellers of treated wood is the main factor responsible for the lower level of domestic market acceptance

The commercial exploitation of rubberwood assumes great importance as it substitutes the conventional hardwood varieties available from tropical forests for a variety of end uses. Its importance stems from the fact that it is a renewable byproduct of rubber plantations. Since the supply of rubberwood is inexhaustible it can contribute to the conservation of natural rain forests. It has been estimated that six lakh hectares of tropical rain forests can be conserved with the utilisation of economically available rubberwood and in India 19,000 hectares of rain forests can be conserved on an annual basis.

Conservation of fast depleting natural rain forests is an important segment of the environmental policy across countries at various stages of development. In 1993 the estimated rate of deforestation in the developing countries was 16.8 million hectares per year. The emerging trends in the world timber economy underlines the need for identifying environment friendly species of wood.

There has been dynamic growth of global trade in timber since 1980. While 76 per cent of the exports of timber and timber products is accounted by developing countries, the share of developed countries in imports is around 60 per cent. The relative prices of different forms of wood also have been steadily increasing from mid 1980's and tropical sawn wood registered the highest increase. The contributing factors are progressive change in the structure of exports, growth and geographical concentration in demand, increasing exploitation of the tropical hard wood varieties and growing concern for conservation of environment.



Rubberwood furniture : Big scope for expansion

Treatment

Rubberwood is a high colour, medium density timber with reasonably good strength characteristics.

The preservative treatment in the form of chemical impregnation, safeguards rubberwood from fungal and insect attack while seasoning reduces the higher moisture content to the required minimum level. Treated rubberwood obtains tolerable dimensional stability, smooth machining properties and it can replace popular hard wood varieties on various end uses. Furniture, plywood, household articles, fancy items and

Mr. Toms Joseph and Dr. Tharian George are working in the Rubber Board, Kottayam.

construction components are manufactured from rubberwood. Small dimension rubberwood including branch wood, off-cuts from wood based product manufacturing units and saw mill residues are used in the manufacture of medium density fibre board, particle boards, wood based panels, mosaic parquet and activated carbon. Good quality charcoal and briquettes can be made of saw dust of rubberwood. The use of insecticides and fungicides is inevitable in wood preservation in general and rubberwood is no exception. Typical chemicals used are CCA, borax, alkylammonium compounds etc.

R & D efforts

In the application of chemicals to rubberwood, earnest R&D efforts are needed as replacement of synthetic chemicals with biological protection methods would enhance the market image of rubberwood as a eco-friendly, sustainably produced timber. The export earnings of Malaysia, the leading exporter of rubberwood based products was worth $ 157 million during the year 1992. The share of rubberwood in gross wood consumption is the highest in Sri Lanka and Thailand (around one third of industrial wood consumption). The status of rubberwood industry differs among the major NR producers. Malaysia and Thailand are the leading countries in terms of the volume of consumption, pattern of exports and the level of technology compared to India, Indonesia and Sri Lanka. The natural rubber producing countries together exported 7.4 million cu.m. of treated sawn rubber wood/products during 1990. The major importing countries are the USA and Japan and the main form of import is furniture which accounts for around 71 per cent of the annual consumption of rubberwood based products of the major importing countries. Only 12 per cent has been imported in lumber form and the share of builders wood work is as low as six per cent.

Consumption pattern

During 1992-93 India imported wood and wooden items worth Rs. 580.14 crores from mainly Malaysia and Myanmar. India requires annually around 25 million cu. m. of wood for industrial applications. The availability of rubberwood has been estimated as 12,35,000 cu.m. during 1993-94, consisting of 60 per cent stem wood and 40 per cent branch wood. The branch wood is mainly used for industrial and household firewood requirements. The consumption pattern of stem wood is highly skewed as 62.5 per cent is being used in packing case industry. The current trends show an increasing share of plywood manufacturing sector. The plywood units do simple diffusion treatment after peeling. Rubberwood treated through simple dipping process is also used in the manufacture of textile shuttle blocks, cable reels and soda crates. The rubberwood processing industry consumes only seven per cent of the available stem wood.

In India one of the pre-requisites for the sustained growth of this industry is the establishment of a promotional agency with regulatory powers supplemented with R & D set-up to implement the prescribed standards

During 1993-94, there were 31 processing units out of which 21 were in Kerala. The extent of vertical integration within the industry is low as only 10 units have saw milling and only 17 units have downstream manufacturing facility. Most of the units are constrained by the scale of operation and rigidities of the internal market. The industry is basically inward oriented and exports of products such as furniture, fancy/household items, brush handles and treated sawn planks are marginal.

Capacity utilisation

The average capacity utilisation of the existing units is as low as 37 per cent. The existence of spurious sellers of treated wood is the main factor responsible for the lower level of domestic market acceptance. The absence of a statutory authority to implement and monitor quality standards deserves attention from a policy angle. Another important problem is the inability of the processing units to control the quality and price of rubberwood logs in the primary market. The price of rubberwood logs in India is higher mainly due to the competition among the different consuming sectors such as plywood, packing case and processing industry and the emergence of intermediaries in the raw material market.

The price of rubberwood logs varies depending on end use as girth requirements differ among various end uses. The price range of rubberwood logs suitable for treatment is Rs 2000 - 2500 per cu.m. while that of logs suitable for packing case industry is only Rs 1300 - 1400 per cu. m. Yet

treated rubberwood sawn planks are cheaper compared to other popular timbers. Its average price is only around 1/5th of the price of first quality teak wood sawn planks and 32 per cent lower compared to the price of sawn planks of jack fruit tree.

Prospects

The industrial potential of rubberwood has to be viewed in the light of the emerging trends in the domestic as well as world timber economy. The annual availability of rubberwood in India by 1997-98 is projected as 17,06,000 cu.m. and the volume of sawn timber suitable for processing will be 3,58,000 cu.m. The current installed capacity of the existing units is capable of processing only 15.6 per cent of the available suitable sawn timber.

Domestic market

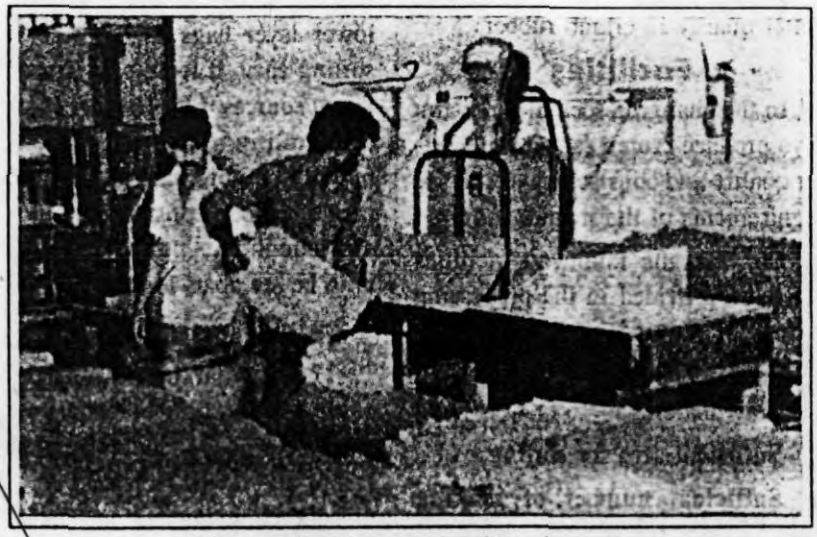
Two recent developments in the domestic market having long-term implications on the prospects of the industry in the manufacturing of construction components sector are (1) the inclusion of rubberwood by the Bureau of Indian Standards for doors, window shutters and frames and (2) the ban of forest wood for the construction work undertaken by the CPWD since April, 1993.

However, internationally in the construction components sector rubberwood is mainly used for flooring and panelling compared to windows and doors due to warping problems. Hence in a world market dominated by furniture and household articles, vertically integrated large scale units with down stream manufacturing facility appear to have a comparative advantage.

Promotional agency

In India, one of the prerequisites for the sustained growth of this nascent industry along with other species of softwood is the establishment of a promotional agency with regulatory powers supplemented with R&D set up to implement the prescribed standards and to exploit the potential of value addition. Such a policy intervention will not only ensure controlled growth of the industry but also indirectly contribute to the environmental conservation efforts. □

Rubber products must have quality and consistency in performance for facing global competition. To achieve this, the material should be of good quality and the processing method should be modern and scientific



Processing in a crumb rubber factory

How to produce quality crumb rubber

Dr. M.G. Kumaran

How to produce crumb rubber with better quality and consistency to suit the requirements of the manufacturers? What are the facilities to be provided in the crumb rubber factory? What methods and process should be adopted in a factory to achieve quality and standard?

The liberalisation process has made much headway in recent months. Yet, even now, we have a closed market system in which most of the rubber and rubber goods produced in the country is completely consumed internally irrespective of its quality. But the situation is bound to change drastically in the coming months. According to the Government policy, there will be an open market system in the near future and hence there will be global competition for raw material as well as products. This means that only quality items will survive and this is true with regard to rubber and rubber products also.

For example, in tyre, the quality and consistency in performance are the important criteria for preference of a specific brand. This implies that all types should have good mileage, low failure rate, good retreadability etc. To achieve this, the prime requisite is the quality and consistency of raw materials. Since rubber is the main raw material for the manufacture of rubber products the level of quality and consistency is very important. If this can be achieved in technically specified rubber (TSR) particularly in ISNR - 20, major industries producing tyres, belting, hoses etc., will definitely show a preference to TSR and the market potential of crumb rubber can be improved.

Even though sheet rubber is the major raw rubber used by these industries for technological advantages, they are also facing serious processing problems such as high premastication time, high heat generation during compounding and high viscosity variation. With crumb rubber particularly ISNR - 20, these processing problems are comparatively less.

Yet, in practice, it is seen that the level of consistency is less between factories, between batches and even between bales. This is particularly true with ISNR 10, 20 and 50. It is

Dr. M. G. Kumaran is Deputy Director, Quality Control Division, Rubber Board.