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05005



United Nations Industrial Development Organization

Distr.
LIMITED

ID/WG.163/16
27 September 1973

ORIGINAL: ENGLISH

Seminar on Furniture Industry
Lahti, Finland, 6-25 August 1973

**THE BRAZILIAN FURNITURE INDUSTRY:
CURRENT STATUS AND PROSPECTS FOR DEVELOPMENT**

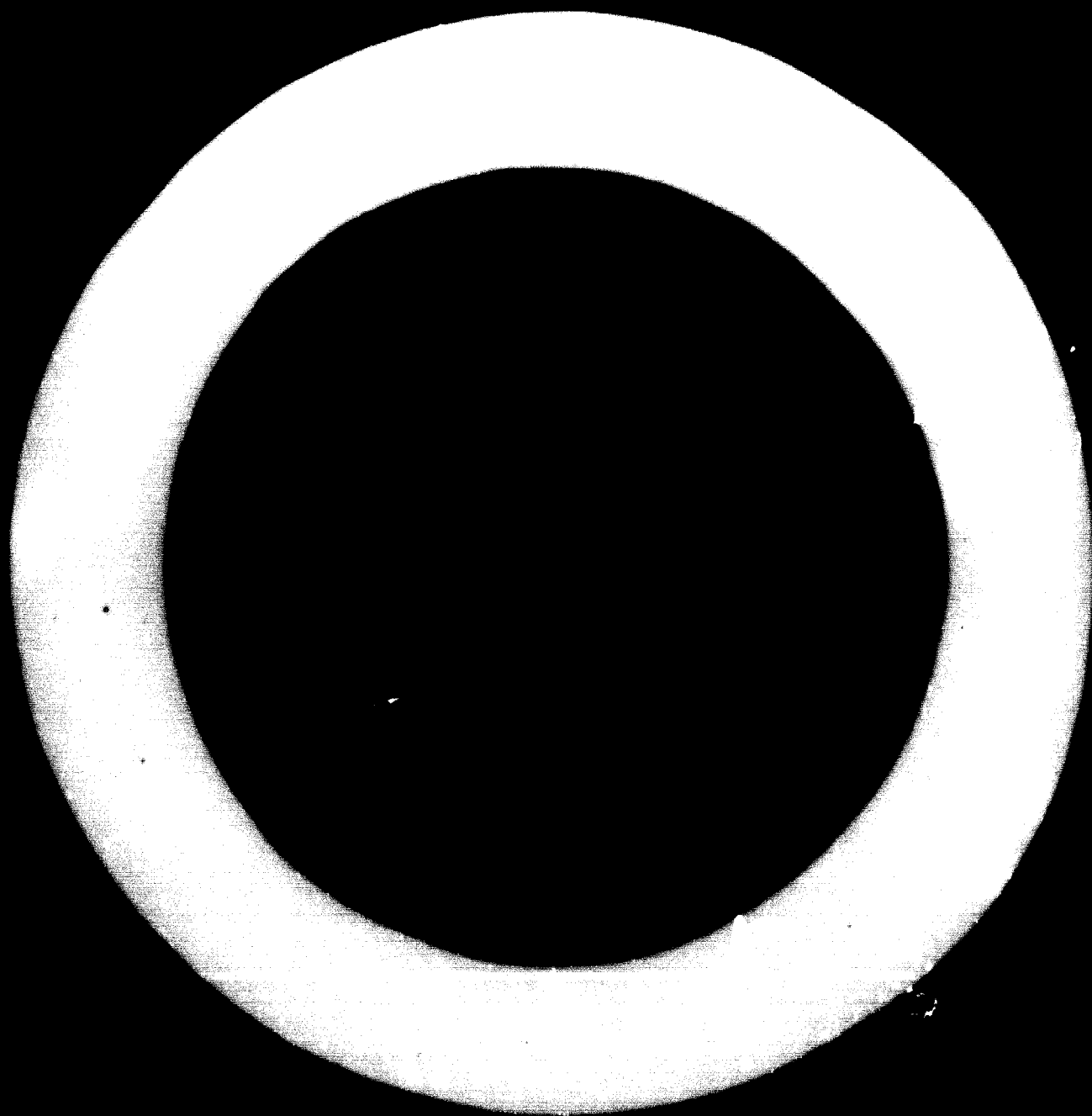
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Id. 13-6561

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INTRODUCTION

Having 352 million hectares of forests, Brazil owns 50% of Latin America's forest area. Despite this fact, however, there are difficulties in their exploration mainly due to lack of infrastructure. From the above total, 261 million hectares cover the Amazonia region, with incipient and primitive exploration, utilizing rivers as the means of transportation.

According to a study of the Federacao das Industrias do Estado do Parana (Federation of Industry of the State of Parana), the Brazilian per capita lumber consumption increase between 1970 and 1972 was about 2.5% per year (Table I), showing the necessity of reforesting in priority areas to face the increasing demand. The total wood consumption of the domestic market is estimated at 31 million cubic metres in 1975 and 60 million cubic metres in 1985 (Table II).

Brazil is considered one of the most important countries in forested area. Despite this fact, the cultivation of rapid growing species under governmental incentives took place only recently; the systematic cultivation began in 1967, and between then and 1970 about 1 million hectares were reforested.

In the Amazon's forest, according to F.A.O.'s studies, each hectare has about 1,000 trees, but the commercial exploitation is of only 150 m³/hectare. These calculations are, however, anterior to the governmental projects of the Transamazonic highway, which will facilitate access to the native forests, and also do not take into account new technological processes which permit the industrialization of almost any type of tree, independent of diameter and species. F.A.O. encountered only 60 commercially exploitable species of trees.

On the other hand, the most important raw material source for the wood industry (the Parana Pine natural reserves) lies in the south of the country. These reserves cover 3 million hectares, representing about 250 million m³ of wood, with a yearly increment of 2.5 million m³ (i.e. 1%); but the yearly consumption is of about 10 million m³ for domestic and external markets (1970), which will rise to 23 million m³ in 1985, meaning that the natural reserve will be exhausted by around 1990.

These facts explain the governmental policies in giving incentives, for the development of raw reserves to prevent a lack of wood products in the country.

INDUSTRIAL CONJUNCTURE

According to the Instituto Brasileiro de Desenvolvimento Florestal (Brazilian Institute for Forestry Development), there currently exist in Brazil around 14,500 wood industries, from which about 9,200 are mobile sawmills and 545 veneer and plywood factories, the remainder being other types. The great majority of this total are poorly equipped, while on the other hand the well equipped plants produce more than 10,000 m³ of sawn wood per year.

These industries will, in the future, establish plants at highway junctions or near reforested areas, using modern equipment which will permit integrated exploitation of wood, and will also offer opportunities to establish furniture industries near them and probably integrated with them, which will be much more efficient than the current ones which are based on the old technique of exploiting natural reserves with a low productivity.

According to Ribens de Melo, President of the Veneer, Plywood, Particle Board, and Fibre Board Industries Union of Sao Paulo, countries like Finland, Sweden, Canada and Norway who are traditional wood industrializers cannot increase the production capacity, due to low yields of the forests they own. The growth rates are about $3 \text{ m}^3/\text{hectare}/\text{year}$, with the first cut occurring after 50 years and the last after 100 to 150 years. In Brazil the Pinus forests have already proven growth of 30 to $40 \text{ m}^3/\text{hectare}/\text{year}$ with the first cut occurring after 5 to 10 years and the final cut after between 20 to 30 years. These figures show the still only exploited potential of the Brazilian wood sources and also future development possibilities of the furniture industry, taking into account the Brazilian and even the world market.

PLYWOOD, FIBRE BOARD AND PARTICLE BOARD

Plywood manufacture began in Brazil around 1930, and was widely used in the various wood industrialization sectors. Parana Pine, Cedro (cedrela odorata) and Virela (virela spp.) are the most used wood, and are presented in the market either overlaid on one or both faces with veneers of high price decorative woods or without any special overlay.

Fibre boards were introduced to Brazil after 1950. There are two main producers - Larator S.A. and Mocotex S.A. The former produces just hard board, while the latter also produces soft board used as thermal or acoustic insulation. Brazilian fibre boards are produced only from eucalyptus fibres. Both manufacturers consume their own cultivated forest.

The boards are sold in panels or cut-out in desired dimensions, with just one smooth face or with two smooth faces (produced by gluing two components). The smooth face can be either lacquer or plastic coated. About 50% of production is presently being exported, mainly to the U.S.A. and Europe, in spite of the growing internal market which even lacks this type of material.

Two plants are being installed, one by each of the aforementioned manufacturers, which should double the installed capacity; nevertheless, their production will be solely for export. These plants will start production between mid-1973 and mid-1974.

Particle board was the last type of wood panel to be introduced into Brazil, appearing a few years after fibre board (1955) and it is produced from various species of wood. Major demand for it is concentrated in the furniture industry, but particle boards are also utilised in pre-fabricated wood houses. As for fibre boards, the installed capacity does not cover current demand. This deficiency is bigger in the specific field of boards for lacquer coated furniture.

Prices of particle boards are almost the same as those of plywood. The high prices are mainly a result of the high price of the resins used to bind together the wood particles. This fact is explained by the need of importing raw materials for the manufacture of resins.

OTHER RAW MATERIALS FOR THE WOOD FURNITURE INDUSTRY

Hardware availability is currently under control. The manufacturers are modernising their equipment and an increasing variety is now found on the market. In spite of this, some furniture manufacturers are still importing a certain amount of hardware, mainly from Europe. Almost no data is available to describe the prospects of future development; however no problems will occur in this sector as a raw material supplier.

Various manufacturers produce and are able to develop new products in the paints sector. Paints currently in use by the wood furniture producers are mainly polyurethane primers and enamels, varnishes, nitrocellulose lacquers and melamine enamels (drying through acid catalysts). Problems are occurring with their raw material suppliers, mainly those of petrochemical origin, due to the present world petroleum crisis.

Plastic sheets producers (of the Formica type) have a very competitive market and are able to follow the development of the Brazilian market, especially consumers like furniture makers.

THE FURNITURE INDUSTRY

Lack of statistical data prevents locating the Brazilian furniture market. Production volume comes from small sized factories scattered all over the country. In almost any city, mainly in the southern region, two or three small producers can be found. The biggest slice (about 25% to 30%) is divided among the first 10 to 15 companies.

In a general way it is possible to say that the wood furniture market is developing quickly, inducing better organized firms to modernize their production using governmental facilities to import sophisticated equipment from several countries, mainly U.S.A., West Germany, Italy, Belgium and Switzerland.

A general tendency, in terms of aesthetic trends, is to the use of lacquer coated surfaces, although furniture using natural wood veneer coatings have a solid market. Models inspired by foreign lines (mainly European) can be seen in parallel with locally designed lines, with both finding acceptance in the various market levels.

A complete line dedicated exclusively to children was introduced for the first time in 1970, of the lacquer coated type. This market is developing well and after three years there are already about 20 manufacturers, from which all except three have only regional markets.

Finally, all of the main furniture producers developed their own "know how" and manufacture in series. It is possible to affirm that, with the exception of a few manufacturers, the industrial productivity is inferior to that of European furniture makers producing similar products.

FURNITURE EXPORTS

Several Brazilian companies are currently exporting a certain part of their production to Latin America, North America and countries in Europe. In a general way, better opportunities lie in the hands of exporters who develop furniture of good design.

Through an original incentives policy, the government is making our country's furniture more competitive on the world market, permitting the modernization of the production line through the importation of more sophisticated equipment free of taxes. See Table III for data on Brazilian furniture exports.

CONSUMPTION OF WOOD PRODUCTS IN BRAZIL

<u>Description</u>	<u>Unit</u>	<u>1967</u>	<u>1970</u>	<u>1975</u>	<u>1985</u>
			(1,000 units)		
Sawn wood (Parana Pine)	m ³	2585	3200	4050	4500
Sawn wood (other)	m ³	2900	3350	4950	11500
Plywood and veneers	m ³	400	500	620	520
Particle board	metric ton	23	95	325	1000
Fibre board	metric ton	70	100	220	730

Source: Statistical data from IBDF, FAO, BID (1971)

ESTIMATE OF BRAZILIAN FOREST PRODUCTS NEEDS

<u>Description</u>	<u>1970</u>	<u>1975</u> (1,000 m ³)	<u>1985</u>
Wood (Diameter over 40 cm)			
Parana Pine	5080	6335	7276
Other	7870	11225	24358
Wood (Diameter under 40 cm)			
Parana Pine	5046	7078	15147
Other	5634	5820	11204
Total (approximate)	22500	31000	60000

Source: **Banas Magazine**

EXPORTS OF BRAZILIAN WOOD FURNITURE

<u>1970</u>	<u>1971</u>	<u>1972</u>
	(US\$ 1,000)	
120	1610	1760

Source: CACEX (Banco do Brasil S.A.)





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