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Tropical Wood Species and the U.S. Market

The U.S. imports about 1.7 million cubic meters (m^3) of tropical wood—80 percent of which is plywood—with the remainder lumber.[1] There are at least 217 trade names for tropical woods imported into the U.S.[2] Rather than using the scientific names to market the product, importers typically group a genus of species or several different species with similar properties into a single trade name. For example, Virola (*Virola sp*), Meranti (*Shorea sp*) and Ipê (*Tabebuia sp*) are all groups of species within a single genus.

Courtesy of Edward Parker/WWF

Due to the popularity of the three Latin American species of mahogany (*Swietenia sp),* traders have adopted "mahogany" as a trade name to describe entirely different woods with similar characteristics—examples being Philippine mahogany (*Shorea sp*) and African mahogany (*Kaya sp*). This fact sheet uses the term "species" in the scientific sense, and "woods" or "trade names" to refer more broadly to the various names under which tropical timber is traded in the U.S. market. The easiest way to avoid confusion is to cross-reference both the scientific name and trade name as is done above.

ORIGINS OF TROPICAL SPECIES IN THE U.S. MARKET

Latin America exports the greatest variety of tropical woods into the U.S. (99 types), followed by Asia (65) and Africa (53). The majority of woods imported from Latin America are used in the lumber market. Asian and African imports are characterized by an even split between lumber and plywood. There is greater diversity in wood types for the lumber market than in the plywood market due to the emphasis on aesthetic properties and the existence of several niche markets. These include the decking, furniture, flooring, musical instruments, door and cabinet segments.

Table 1—Number of trade names carried per company

Species traded	Companies
1-10	9
11-20	6
21-30	3
31-40	2
41-50	2
more than 50	1

Source: Metafore

IMPORTERS AND SPECIES USE

As Table 1 indicates, of U.S. import companies researched by Metafore, the majority import between one and 20 trade names at a time. A few companies note that they manage more than 40 different woods. One company trades more than 50. While this company had the smallest gross sales volume, in general, the larger the company the greater the variation in woods imported. The table at the end of this fact sheet shows the relative amounts of different woods traded by the U.S. importers researched by Metafore.

[1] International Tropical Organization, 2003. *Annual Review and Assessment of the World Timber Situation 2002*. International Tropical Timber Organization, Yokohama, Japan.
[2] United States Department of Agriculture Animal & Plant Health Inspection Service.

Big-leaf mahogany (*Swietenia macrophylla*), Jatoba (*Hymenea sp*), Ipê (*Tabebuia sp*) and Purple Heart (*Peltogyne sp*) are the most frequently traded woods based on interviews with importers. The species under these trade names originate in Latin America and are used in the lumber market.

Among the top 20 tropical woods, only five are used in the plywood market. The most commonly traded plywood products are made of Meranti (*Shorea sp*), Virola (*Virola sp*) and Keruing (*Dipterocarpus sp*). Importers indicate, however, that grain, finish, color and density are more important than species type when making plywood purchasing decisions.

Of the companies interviewed, only one consistently purchases lesser-known woods—managing more than 90 tropical species in total. Other companies rarely purchase lesser-known woods due to the lack of volume and the difficulty finding customers interested in purchasing woods with anything but well-established trade names.

TRENDS IN SPECIES USE

Recent trends suggest that there is increasing flexibility in the tropical lumber market. For example, the market for Teak (*Tectona grandis*) is robust despite the fact that it is traded in relatively low volumes compared to other popular species. Further, there is growing willingness to substitute lower cost species such as African mahogany (*Kaya sp*) or Andiroba (*Carapa guaianensis*) in place of Big-leaf mahogany (*Swietenia macrophylla*). This flexibility does not extend as readily to lesser-known woods, as there is a strong reluctance to introduce and attempt to develop a market for a new type of wood in what importers already see as a very diverse market.

Big-leaf mahogany

Big-leaf mahogany (*Swietenia macrophylla*) is one of the most valuable woods in the U.S. market. Its end-use value, which ranges between $1,200 and $2,500 per m^3 depending on the grade and volume specified, is based larely on its aesthetic properties. The substantial mark up in price paid by end users versus what tropical producers receive is due to the risks of exporting the product and the fact that it is in high demand for furniture, cabinetry, fancy veneers, musical instruments, boats, and interior paneling products. The premium price and popularity of Big-leaf mahogany explains why this single species alone accounts for approximately 50 percent of import earnings in the lumber market.

The plywood market is distinct from the lumber market in that its lack of niche segments and emphasis on aesthetic and machining performance provides greater opportunity for the introduction of lesser-known woods. The successful introduction of new woods into the tropical plywood market depends on the ability of producers to improve their log processing capacity and overall product quality.

OPPORTUNITIES

Latin America provides the greatest diversity of tropical woods traded in the U.S. market. Most Latin American woods are used in the lumber market, which places an emphasis on aesthetics and a variety of properties due to the many segments—furniture, cabinets, instruments—that demand lumber. The majority of traded woods originating in Asia are destined for the plywood market, which is less diverse than lumber in terms of end uses and has an emphasis on aesthetics over mechanical properties.

Despite the reluctance of the U.S. market to adopt new woods, particularly in lumber, there are signs that such a shift is imminent. This is illustrated by the shift from popular woods to lower-cost alternatives.

Table 2—Woods Traded by Interviewed Importers

Trade Name	Scientific Name	Percent of Surveyed Companies[3]	Origin
Jatoba	*Hymenea sp*	65%	Latin America
Big-Leaf Mahogany	*Swietenia macrophylla*	65%	Latin America
Ipê	*Tabebuia sp*	57%	Latin America
Purple heart	*Peltogyne sp*	57%	Latin America
Meranti	*Shorea sp*	48%	Asia
Massaranduba	*Manilkara bidentata*	48%	Latin America
Virola	*Virola sp*	43%	Latin America
Cumaru	*Dipteryx, odorata*	43%	Latin America
Cambara	*Erisma uncinatum*	39%	Latin America
Spanish Cedar	*Cedrela odorata*	39%	Latin America
Keruing	*Dipterocarpus sp*	39%	Asia
Teak	*Tecktona glandis*	35%	Asia
Faveira	*Parkia pendula*	35%	Latin America
Santos-Mahogany	*Myroxylon balsamum*	35%	Latin America
Sapele	*Entandrophragma cylindricum*	30%	Africa
Goncalo-alvez	*Astronium lecointei*	30%	Latin America
Tauari	*Couratari guianensis*	30%	Latin America
Marupa	*Simarouba amara*	30%	Latin America
Aniegre	*Aningeria altissima*	26%	Africa
Peruvian Walnut	*Juglans, neotropica*	26%	Latin America
Aniegre	*Aningeria sp*	26%	Africa
Mersawa	*Anisoptera costata*	22%	Asia
Padauk	*Pterocarpus soyauxii*	22%	Africa
Okoume	*Aucoumea klaineana*	22%	Africa
Pau Marfim	*Balfourodendron riedelianu)*	22%	Latin America
Angelim-vermelho	*Dinizia excelsa*	22%	Latin America
Agathis	*Agathis sp*	22%	Asia
Sumauma	*Ceiba Pentandra*	22%	Latin America
Mersawa	*Anisoptera sp*	22%	Latin America
Okoume	*Aucoumea klaineana*	22%	Africa
Angelim-pedra	*Hymenolobim petraeum*	22%	Latin America
Angelim-vermelho	*Dinizia Excelsa*	22%	Latin America
Banak	*Iryanthera spp*	22%	Latin America
Andiroba	*Carapa guaianensis*	22%	Latin America
Faveira	*Parkia spp*	17%	Latin America
Rosewood	*Dalbergia sp*	17%	Latin America
Sande	*Brosimun utile Brosimun utile*	17%	Latin America
Faveira	*Vaitareopsis spp*	17%	Latin America
Breu vermelho	*Protium altosonii*	17%	Latin America
Tatajuba	*Bagassa guaianensis*	17%	Latin America
Wenge	*Millettia spp.*	17%	Africa
Amapa	*Brosimum parinarioides*	17%	Latin America
Merbau	*Intsia bijuga (and I. palembanica)*	17%	Asia
Zebrawood	*Microberlinia brazzavillensis*	17%	Africa
Bubinga	*Guibourtia sp*	17%	Africa
Kapur	*Dryobalanops sp.*	13%	Asia

[3] Metafore research of 23 U.S.-based wood import companies. 2003.

Trade Name	Scientific Name	Percent of Surveyed Companies[3]	Origin
Jelutong	*Dyera costulata*	13%	Asia
Freijo	*Cordia goeldiana*	13%	Latin America
Lacewood	*Cardwellia Sublimis*	13%	Oceania
Cupiuba	*Goupia glabra*	13%	Latin America
Baboen	*Virola koschnyi*	13%	Latin America
Cerejeira	*Amburana cearensis*	13%	Latin America
Canary Wood	*Centrolobium spp.*	13%	Latin America
Cocobolo	*Dalbergia retusa*	13%	Latin America
Ramin	*Gonystylus spp. (mainly G.bancanus)*	13%	Asia
Amescla	*Trattinnickia burserifolia*	13%	Latin America
Curupixa	*Micropholis venulosa*	13%	Latin America
Ebony (all sp)	*Diospyros sp*	13%	Africa
Red Louro	*Ocotea rubra*	13%	Latin America
Melapi	*Shorea assamica (or S. cochinchinensis)*	9%	Asia
Khaya	*Khaya anthotheca*	9%	Africa
Melapi	*Shorea hypochra*	9%	Asia
Afrormosia	*Pericopsis elata (syn. Afrormosia elata)*	9%	Africa
Balsa	*Ochroma pyramidale (syn. O. lagopus)*	9%	Latin America
Benge	*Guibourtia arnoldiana*	9%	Latin America
Brazilian walnut	*Ocotea Porosa*	9%	Latin America
Cativo	*Prioria copaifera*	9%	Latin America
Lacewood	*Euplassa sp*	9%	Latin America
Cedroarana	*Cedrelinga cateniformis*	9%	Latin America
Ekki	*Lophira alata*	9%	Africa
Jaboty	*Erisma uncinatum*	9%	Latin America
Itauba	*Mezilaurus itauba*	9%	Latin America
Curupay	*Anadenanthera macrocarpa*	9%	Latin America
Idigbo	*Terminalia ivorensis*	9%	Africa
Koto	*Pterygota bequaertii (or P.macrocarpa)*	9%	Africa
Tzalam	*Lysiloma bahamensis*	9%	Latin America
Satin wood	*Euxylophora paraensis*	9%	Latin America
Pau Ferro	*Machaerium spp.*	9%	Latin America
Pau Amarelo	*Euxylophora paraensis*	9%	Latin America
Piquia	*Caryocar Villosum*	9%	Latin America
Rubberwood	*Hevea brasiliensis*	9%	Latin America
Tulipwood	*Dalbergia frutescens*	9%	Latin America
Sucupira	*Bowdichia sp*	9%	Latin America
Oroko	*Chlorophora excelsa (and C. Regia)*	9%	Africa
Quaruba	*Vochysia sp.*	9%	Latin America
Philippine Mahogany	*Shorea spp*	9%	Asia
Muirapiranga	*Brosimum paraense*	9%	Latin America
Korina	*Terminalia superba*	9%	Africa
Piquia marfim	*aspidosperma desmanthum*	9%	Latin America
Yellowheart	*Fagraea spp*	9%	Latin America

This fact sheet was made possible through support provided by the Global Development Alliance and the Office of Environmental and Natural Resources, Bureau for Economic Growth Agriculture and Trade, U.S. Agency for International Development, and by the USDA Forest Service International Programs, under the terms of Award No. 03-DG-11132762-027. The opinions expressed herein are those of the author(s) and do not necessarily reflect the view of the U.S. Agency for International Development or the USDA Forest Service.