Drying Exotic Woods

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SUNY ESF Wood Products,
Syracuse, NY
What are Exotic Woods?
Certainly not

pine, maple, spruce or oak....
Exotic Woods typically come from the tropical regions of the world:
- Central and South America
- Africa
- Asia
We like exotic woods because:

• They come from sustainable and certified sources? (right, well whatever….)
• They have the “look”.
• They have unique characteristics, such as natural durability.
• Customers ask for and want to buy them.
So, what’s the big deal?
We know how to dry wood.

• These are typically high density woods, which means high shrinkage coefficients.
• Customer desire and application often requires thicker stock.
• This means slow, mild drying is required – low temperature, small WBD, high EMC.
So, what schedule do we use?

- What kind of wood is it? Often only a (the?) common name is known.
- Are there published schedules?
- Where can schedules be found?
- Do we trust these schedules?
What else do we need to know?

• What is the application?
• What final MC is desired?
  – Interior use? 6-7% MC
  – Exterior use? 12-15% MC
• What is the history – green, air dried, PAD, kiln dried?
Some typical species -

• Mahogany – Central American, African, Philippine?
• Ipe (South America)
• Spanish cedar (Latin America)
• Teak (Burma)
Some typical species -

- Jahoba (Brazil)
- Bubinga (Africa)
- Cocobolo (Latin America)
- Purpleheart (Central, South America)
Drying characteristics, schedules and other useful information can be found in several sources.

- USDA FPL schedule book.
- European schedules.
- Local knowledge.
  - Look to your purchasing agent and contacts in the field.
Dry Kiln Schedules for Commercial Woods
Temperate and Tropical

R. Sidney Boone
Charles J. Kozlik
Paul J. Bois
Eugene M. Wengert
Tropical Timbers of the World

Tropical timbers are now an established part of the U.S. marketplace. Since the early 1960s, U.S. tropical timber imports increased fourfold, and plywood imports (primarily from Asian sources) soared fourfold, to the point where plywood imports equal domestic production. By contrast, log imports decreased drastically, from 100 million board feet (450,000 m³) in 1950 to 1.4 million board feet (53,000 m³) in 1985. Most of the world timber trade is now processed sawn.


Degradation of wood products due to attack by decay fungi and insects is an ever-present hazard in the tropics. Construction timber imported into Puerto Rico is treated with wood-preserving salts and then stacked for air drying.

Copies of Agriculture Handbook 697 are available from:
U.S. Department of Commerce
National Technical Information Service (NTIS)
5255 Port Royal Rd.
Springfield, VA 22161
Order No.: PB95-116117
Cost: $26.50 + $1 S&H (U.S.); $34 + $10 S&H (non-U.S.)
Phone: (800) 555-6847

United States
Department of Agriculture
Forest Service
Forest Products Laboratory
Phone: (606) 231-9200; FAX: (606) 231-9592
Website: http://www.fpl.fs.fed.us/

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Tropical Timbers of the World
Present and Potential

Commercial Timbers of
The Caribbean

With Special Reference to

• The West Indies
• The Guianas
• And British Honduras

by

Franklin R. Longwood

Northeastern Forest Experiment Station, Forest Service;
formerly at the Tropical Forest Research Center of the
Forest Service in Puerto Rico.

Agriculture Handbook No. 207
Forest Products From Latin America

An Almanac of the State of the Knowledge and the State of the Art
SOUTH AMERICAN TIMBERS - THE CHARACTERISTICS,

PROPERTIES AND USES OF 190 SPECIES

(ALGUNAS MADERAS DE AMERICA DEL SUR - LAS CARACTERISTICAS,

PROPIEDADES Y USOS DE 190 ESPECIES)

C. A. BERNI, ELEANOR BOLZA

and F. J. CHRISTENSEN
PROPERTIES OF IMPORTED TROPICAL WOODS

By

B. FRANCIS KUKACHKA, Botanist

INTRODUCTION

The descriptive text and tabular data compiled here have been drawn freely from a wide variety of sources, but special credit is due the publications of the British Forest Products Research Laboratory and those of the Yale University School of Forestry.

Species descriptions are arranged alphabetically by generic names. The generic name may be followed by a specific name when the latter is the sole or principal name used in the timber trade. When a number of species are involved and it is generally not practical to identify the such as birch and teak in connection with totally unrelated species is bad practice and only adds to already existing confusion of names in the wood-using industry.

The pair of capital letters after the species name serves as a quick reference to the broad area of origin as AF (Africa), AM (Latin America), and AS (Southeast Asia).

An index of common names with their botanical equivalents is included at the end of this report.

The average weight of the woods described is
Grouping Tropical Wood Species for Kiln Drying

William T. Simpson
Charlie K. Baah
WWW Drying Schedule Computer Program for Hardwood Species

Welcome to the Drying Schedule program. Documentation for the program is available via this link. This page enables a user to run the Drying Schedule program over the World Wide Web.

This program is based on research that was directed at estimating appropriate schedules for species for which no drying schedules have yet been established. Thus it is primarily focused on tropical species.

If, instead, you are interested in established schedules, here are accepted schedules for common hardwood species.

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Sorry about that.

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What do you want to do?

- Enter a specific gravity and obtain a recommended schedule?
- Enter a species name and obtain a recommended schedule?

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For drying questions, please contact Bill Simpson at wtsimpson@facstaff.wisc.edu or 608-231-9357.
Thank you!

• Questions?
• Comments?
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