

Drying Exotic Woods

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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.

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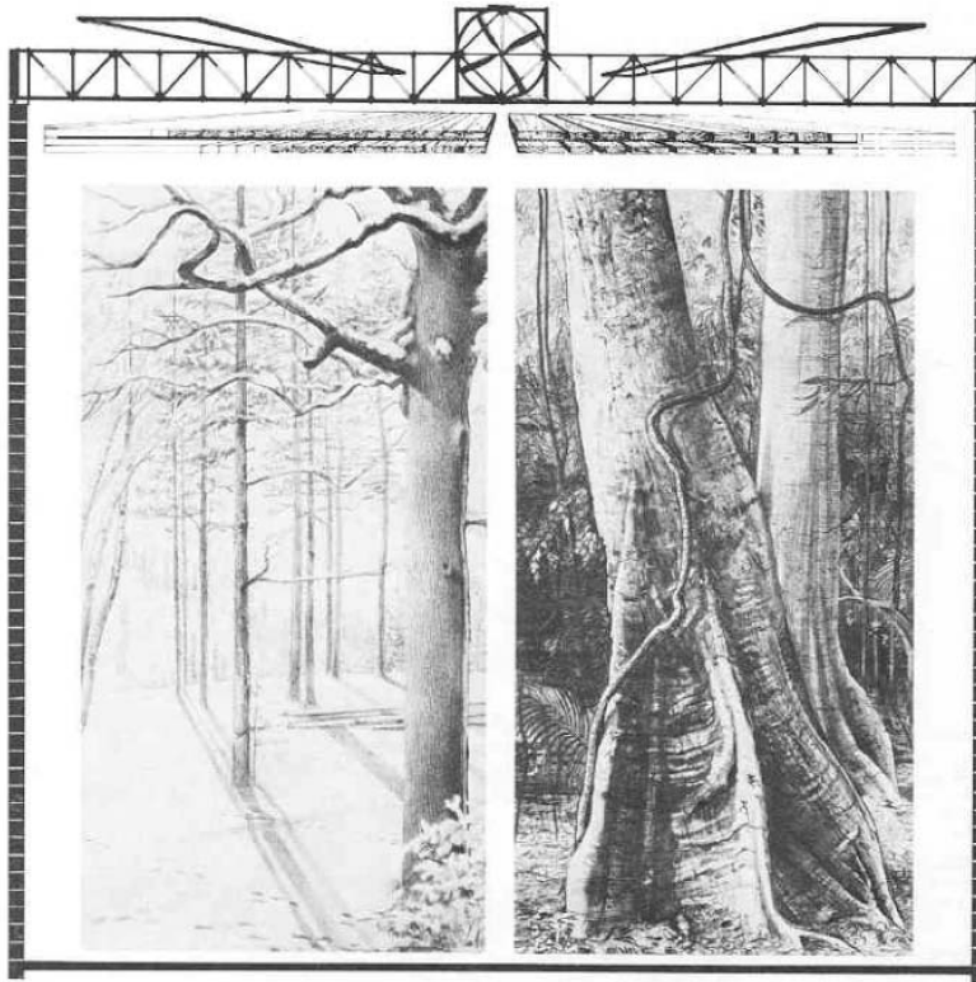
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Technical
Report
FPL-GTR-57



Dry Kiln Schedules for Commercial Woods Temperate and Tropical

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TECHLINE

General

Tropical Timbers of the World

Tropical timbers are now an established part of the U.S. marketplace. Since the early 1960s, U.S. tropical lumber imports increased fourfold, and plywood imports (primarily from Asian sources) soared fortyfold, to the point where plywood imports equal domestic production. By contrast, log imports decreased drastically, from 100 million board feet (450,000 m³) (log scale) in the 1950s to 14 million (63,000 m³) in 1987. Much of the world timber trade is now processed material.

A comprehensive reference book published by the U.S. Department of Agriculture, Forest Service, describes the array of tropical wood species and species groupings now available to U.S. processors. *Tropical Timbers of the World*, Agriculture Handbook 607, describes 370 species of tropical trees and their characteristics and uses. The 464-page book includes softwoods, hardwoods, decorative species, and utility woods from three geographical areas: Tropical America, Africa, and Southeast Asia and Oceania.



Author Martin Chudnoff, formerly of the USDA Forest Service, Forest Products Laboratory, compiled and synthesized data from world literature and spent more than 30 years studying tropical woods.

Information on the species and species groupings includes scientific and common names, distribution, general characteristics, weight, mechanical properties, and current uses. A section of comparative tables on specific properties and end uses follows the individual species entries grouped by geographic origin. The book includes an index of trade names and important common names cross-referenced to scientific names and geographic region.

Tropical Timbers provides researchers, tropical wood processors, and importers with an invaluable, well-organized reference. The easily used book assembles detailed data not previously accessible to most users. The continued growth in lumber imports from tropical areas will

increase the demand for more adequate scientific and technical data on these woods and their applications.



Planalto forest in Rio Curua-Una region, Brazil. About 60 percent of the volume is in species considerably denser than U.S. commercial woods (basic specific gravity over 0.70).



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

Copies of Agriculture Handbook 607 are available from:
U.S. Department of Commerce
National Technical Information Service (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Order No.: PB85-156917
Cost: \$86.50 + \$5 S&H (U.S.); \$174 + \$10 S&H (non-U.S.)
Phone: (800) 553-6847



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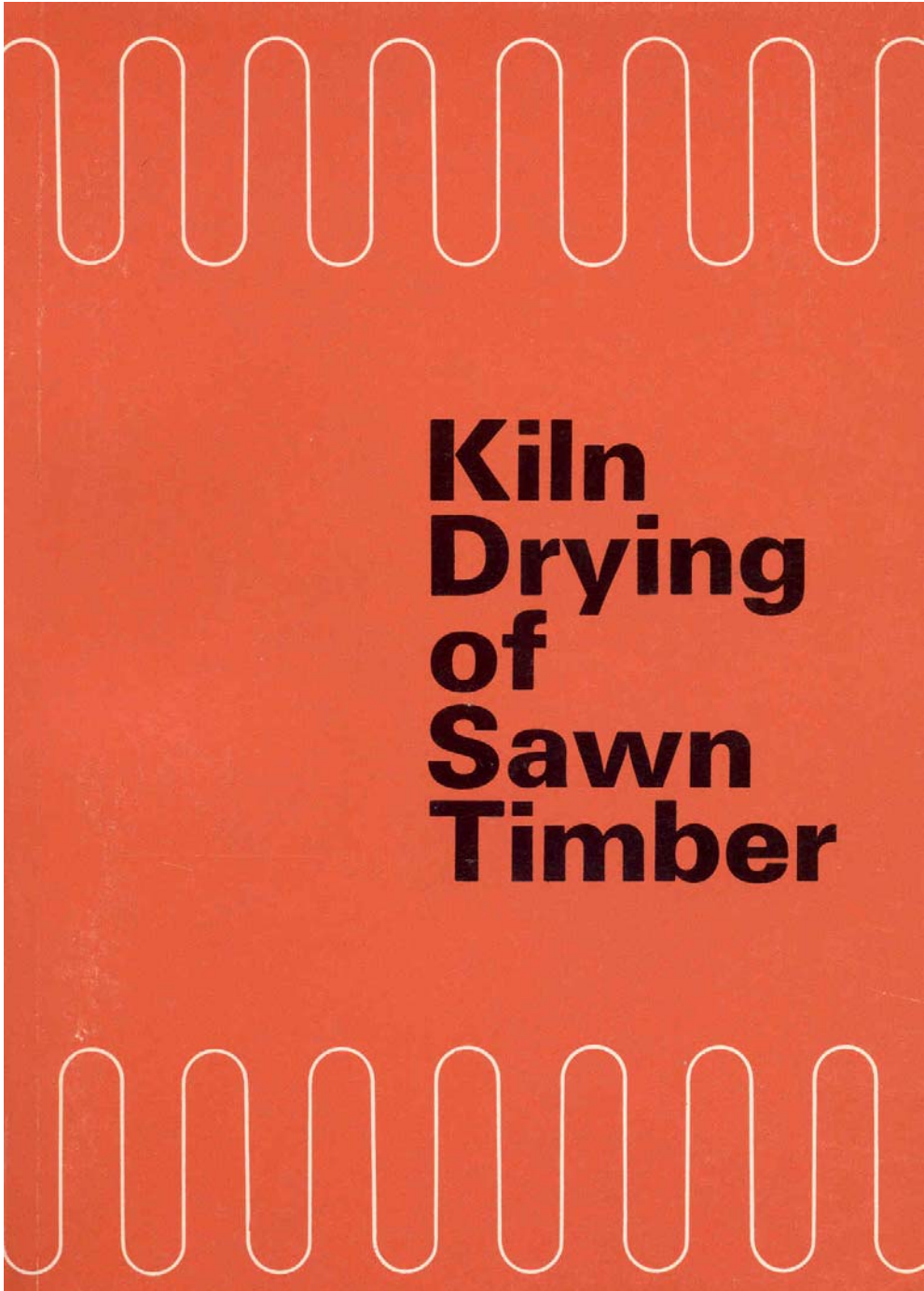
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Agriculture
Handbook
Number 607

Tropical Timbers of the World





**Kiln
Drying
of
Sawn
Timber**

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;
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Agriculture Handbook No. 207

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Technical
Report
FPL-GTR-67



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 WOODS¹

By

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Forest Products Laboratory,²

Forest Service

U.S. Department of Agriculture

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

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Note
FPL-RN-0256



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.

What do you want to do?

- Enter a [specific gravity](#) and obtain a recommended schedule?
- Enter a [species name](#) and obtain a recommended schedule?

For drying questions, please contact Bill Simpson at wtsimpso@facstaff.wisc.edu or 608-231-9357.

Thank you!

- Questions?
- Comments?
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