

**Increasing Marketing Opportunities of
Lesser Known Wood Species and Secondary Wood Products
in Tropical Central America and Mexico**

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Problem Statement

Two primary timber species are highly sought after in tropical America: bigleaf mahogany and Spanish cedar. Unregulated and targeted exploitation of these precious woods, as well as land-use conversion to agriculture, has led to their scarcity in many countries of the region, and consequently a shift in the market supply and demand dynamics.

Utilization of lesser-known species (LKS) may be able to help alleviate the pressure on the diminishing primary species, and at the same time diversify the economic opportunities for communities responsible for sustainable forest management. Little is known about the wood properties of some of the species, hence requiring wood technology research. Other species have been extensively studied and matched to potential products. However, profitable linkages must be created between LKS supply and the marketplace.

In addition to the problem of not utilizing LKS, wood processing in general in Latin America is often inefficient. This results in a high level of waste in the form of slabs and pieces cut off in bucking or sawing. There is a need to identify and develop markets for these currently unmerchantable products.

Increasing population and per capita incomes will continue to exert pressure on the quantity of logs demanded from primary forests in Latin America. In one study in Costa Rica, these factors were shown to account for over 75% of the variation in demand as well as having a significant impact of local prices of processed timber (Aguirre 1994a).

Previous research has identified the physical and morphological characteristics of lesser-known species in Central America and Mexico. Therefore, the proposed research study will focus on identifying properties-in-use and market opportunities for these species and manufacturing by-products. In addition, market and distribution channel linkages between suppliers and the United States will be identified. A generalized marketing strategic framework that can be applied to all of the regions will be developed. This plan or model will be the framework on which to develop and implement tactics to achieve study objectives.

The regions that will be studied are previously identified sustainably managed forests in five Latin American countries (Mexico, Guatemala, Honduras, Costa Rica and Nicaragua).

Overview

A major problem facing the tropical rain forest of Central America is its species diversity. There are currently approximately 150 species which have been classified as having a potential economic utility (Malavassi 1995). Of these, a small percentage, typically 10-15 species, are commercialized with the balance falling into a category commonly termed lesser-known species (LKS). In spite of adequate physical properties for many of these lesser-known species, consumers shy away from using them due to lack of knowledge and understanding (Malavassi et al. 1985).

For example, in Mexico, El Salvador and Guatemala in a 1994 study which explored the marketing possibilities of non-traditional species, it was found that there was an overwhelming preference for very few species, particularly cedro and caoba. Due to local scarcities, caoba was being imported from Bolivia to meet demand. Other species with similar workability properties were being

bypassed by sawmill operators due to a lack of consumer preferences and demand. (Guillen 1994). The same study found that in El Salvador the 8 largest sawmill and timber wholesalers indicated, in order of preference, their interest for caoba, cedro, palo blanco, pino, tonacaste, liquidambar and cypress.

The result of consumer preferences for so few species in Latin America has resulted in three patterns of behavior on the part of sawmill operators and timber traders: a) a highly selective extraction, that is very damaging to the ecosystems, b) promotion of the illegal trade to meet consumer demand for traditional species and c) many of the lesser known species even though they may meet workability standards and requirement are today being burned on site for developing new pasture and crop areas (Aguirre 1993).

Country Information

Mexico

In the case of Mexico, Guillen (1994) found that consumer preferences are high for cedro and caoba, which are both harvested legally and illegally from Belize and Quintana Roo. His study left no doubt that the only species with prices attractive enough to warrant extraction and trade were cedro and caoba. All other species that had potential as new introductions to the marketplace, even though the markets showed some interest, were proven uneconomical due to low prices. In Quintana Roo, timber extraction grew from 799 m³ in 1967 to 6,237 m³ in 1997. Thirty-seven percent of the 1997 harvest was from the traditional species cedro and caoba and 63% was non-traditional commercial species. In 1997, caoba represented only 15% of the total volume while in 1967 it accounted for well over 65%. The point is that over the last 30 years, selective extraction practices on caoba has seriously affected its regeneration and has created a serious threat to the future of the species in the Quintana Roo region (Forster 1997). The importance of further promoting lesser-known species and identifying markets for them is of critical importance.

Honduras

In Honduras, one of the most interesting examples of a forest cooperative is COATLATHL, established in 1977, comprised of 12 groups and 215 members. This cooperative covers an area of 15,433 hectares with a total commercial volume under inventory of 753,591 m³. Annual production capacity is 4,875 m³ on a 30-year cutting cycle. The forest operations of the cooperative have been certified by Honduras Siempre Verde, the local Rain Forest Alliance/SmartWood partner (Rodriguez 1997).

At the present time, a total of 16 non-traditional species are under commercial extraction while an additional 15 species have been identified to have commercial potential based on their physical characteristics. The three key features of the species that make them suitable for exploitation are resistance to fungi and termites, ease of drying and workability. Potential uses cover a wide range of applications including furniture, construction and industrial uses.

The major impediment to using non-traditional species is that cooperative members garner a 20 to 25% price premium per cubic meter for traditional desired species. This difference on price can make the difference between success and failure in their businesses.

COATLATHL members have experience in local and national timber trade channels. They have been successful in trade fairs and with their own retail stores and internationally, they have successfully sold block timber and finished timber. However, they have encountered major problems including:

- ?? Excessive bureaucracy on the part of the national forest institute.
- ?? Lack of funds for payment to timber suppliers due to buyer payment delays.
- ?? Lack of demand and resulting large inventories.
- ?? Poor monitoring of work plans.
- ?? Lack of knowledge of growth curves of non-traditional species.
- ?? Lack of information on the physical and mechanical properties of many of the species.
- ?? Lack of a strong understanding of markets, buyers and demand trends.
- ?? Lack of a comprehensive market strategy.

In summary, the cooperative seems to have the production and manufacturing know-how but lacks the marketing contacts and financial strength for successful incursions in the United States and Europe.

A major untapped marketing opportunity is the fact that products produced from these certified timberlands carry with them an eco-label that is recognized internationally.

Guatemala

In the case of Guatemala, the area with the greatest forest potential of non-traditional species is the Peten Region, in the northern part of country, encompassing half of the nation's territory. In 1996, the forest cover of the country was 37,502 km², of which 80.1% were broad leaf forest, 6.1% conifers, 0.5% mixed, 0.5% wetlands and 9.9% others. According to Ruana (1997), the country has preliminarily identified a total of 27 non-traditional commercial species. Physical characteristics of these species have been identified including specific gravity, durability, workability and dryness. In addition, available volumes in management areas have been estimated.

As is the case in other countries, the two species that have been classified as having totally developed markets are cedro and caoba. Nine species have partially developed markets, and 18 species have market potential in view of their physical and mechanical properties (Ruana 1997). The upside potential for non-traditional species is high in light of the fact that the availability, which as expected, is many times greater than that of cedro and caoba.

Eight sustainably managed areas with a total of 66,027 hectares have been designated in the region:

- | | |
|-----------------------------|-----------------------------|
| ?? San Miguel la Palotada | ?? Ejido Municipla Sayaxche |
| ?? La Pasadita | ?? Rio Chanchich |
| ?? Arroyo Colorado | ?? Uaxactun |
| ?? Cooperativa Bethel | |
| ?? Cooperativa Manos Unidas | |

The major problem in marketing non-traditional species in these management areas is price. While cedro and caoba command local prices of about US\$420 dollars per m³, non-traditional species bring on the average US\$202 per m³.

Guatemala, in general, faces the same problems as other Central American countries under investigation in this study. These include:

- ?? 80% of the standing volume is made up by species with no present market.
- ?? Presently the species with markets represent only 5% of the total standing volume.
- ?? 15% of the species have inconsistent markets depending on availability and prices of traditional species.
- ?? There is a poor production infrastructure.
- ?? More than 50% of the timber cut is wasted due to poor extraction and production practices.
- ?? Poor silvicultural and production practices are due to a lack of education resulting in poor planning of extraction operations.
- ?? There is a long-standing tradition in the consumption of cedro and caoba.
- ?? Poor quality products are produced.
- ?? No policies and programs exist to promote lesser-known species.
- ?? Lack of entrepreneurial spirit in the industry and obsolete and poor equipment in the sawmill sector.

Costa Rica

According to the Costa Rica Forest Service, there are 36 species for which they issue extraction permits regularly from primary and secondary forest. These species are the most commonly used and preferred by customers (DGF 1993). In an effort to discern consumer usage patterns and preferences for these and other species in Costa Rica, Aguirre and Soihet (1994) conducted a market study in the capital city of San Jose. The sample frame of 200 consumers was taken from three different areas of the city considered to be high, middle and low-income areas. The central variable of the study was the number of species consumers were willing to consider for purchase by income categories.

Furniture was the number one product consumed, purchased by 97% of respondents in the high-income group and by 93% in the middle and low-income groups. Consumers in the high-income category preferred 16 of the 36 species in the list. The top six were cenizaro, laurel, cristobal, cedro amargo, cypres and pochote. The top six species were preferred by 71.% of respondents in this income bracket. The preference for dark woods was found in 90% of the cases. In the middle-income category the number of preferred species increased to 29. The top six species preference index was 56%. In the low-income category, all 36 species were consumed.

When asked if they were willing to purchase lesser-known species, the affirmative responses were 87% in the high income category, 80% in the middle and 77% in the low income category, respectively.

The study resulted in three important observations: a) consumer understanding of most species was very limited; b) as income decreases, consumers expand their range of species choices and; c) certain species carry an aura of prestige indicated by the fact that the top six species in all three income groups was the same.

The scarcity of fine quality woods has forced into the markets species that ten years ago were considered only acceptable for low-end construction type uses. One case in point is the caobilla (*Carp guianensis*), a species that ten years ago was considered almost exclusively for roof beams and wood frames and today is being promoted in the furniture market as high quality high-end furniture specie.

Another new development is the interest for information about the physical properties and potential uses of many lesser known colored tropical hardwoods and their comparison with the characteristics of the called traditional species like cedro (*Cedrella odorata*) and caoba (*Sweteenia macrophylla*) as an apparent way to promote their use. One element of this information being emphasized are the workability and the color. In a market study in the Turrialba area of small furniture manufactures, it was found that the owners of these workshops have a preference for lighter colored medium density hardwoods. This is due to ease of dying and tinting which can make the wood look like more desirable fine quality woods. New developments in tinting and finishing technologies appear to be opening the market for lesser quality materials. However it may create a credibility problem among poorly informed urban consumers as to whether or not they are buying what they are being told that they are buying (Aguirre 1993).

In a study conducted in the Talamanca region in the north of Costa Rica, the two remaining locations where one can still find undisturbed tropical rain forests established that the 9 most sought after species in the region by the sawmills and local consumers were: almendro, caobilla, casha, cedro amargo, gavilan, sura, pilon and nispero. Caobilla, laurel and gavilan are used today for furniture manufacturing, while ten years ago they were commonly burned on site to open wooded areas for livestock production in the region (Lux and Von Platten 1995).

Finally, in 1996, studies conducted on twenty species in Costa Rica indicated that in most cases the species were as good as traditionally exploited species and that their use is limited by lack of markets, general in-use information and consumer preferences. This study included species from the rain forest as well as species from the secondary forest (Malavassi et al. 1996).

In the case of Costa Rica, there exists one of the most successful efforts of using non-traditional species for the manufacture of doors and furniture parts, an effort that has been in existence for at least 15 years (CCF 1997). PORTICOS and PLACIO DEL ROBLE, two of Costa Rica's most successful manufacturers of furniture, chairs and doors manufacture products from caobilla (*Carapa guianensis*) and Gavilan (*Penthacletra macroloba*), harvested from the firm's certified forests. The marketing strategy was to produce products of similar quality as caoba but of substantially lower price for export to Puerto Rico and the United States.

Before the firm decided to go international, it produced doors for local markets, testing whether the strategy was technically as well as economically viable. After consolidating its position locally, the company secured its own sourcing by buying several thousand hectares of natural forest rich in caobilla. At the same time, the company began sustainably managing its forest resulting in certification by Green Cross. The strategy followed by the firm to open international markets are summarized in the following steps:

- 1) Making sure that the species met demand standards.
- 2) Making sure there was sufficient raw materials in the country.
- 3) Making sure that it could developed a steady supply of the products it decided to promote.

- 4) Designing an aggressive marketing campaign using the "trade name" of TROPICAL HARDWOOD some sort of a generic rather than the species name using well-planned and attractive displays.
- 5) Conducting a market study in key markets in the U.S. and Puerto Rico.
- 6) Developing samples of products of high quality and presentation with competitive prices.
- 7) Developing and redesigning new products in accordance with changing consumer tastes and preferences.
- 8) Monitoring taste and preferences in a systematic fashion.

The key elements in the Puerto Rico marketing of furniture and doors were:

- ?? Reliable and constant quality.
- ?? Stable and moderately price products. The concept of consistent prices at an acceptable level was very important for a market that does not have the purchasing power of the U.S. market but that uses hardwood doors more so than the U.S. market.
- ?? The key feature looked for in the wood was the beauty of the grain and finishing capability.

In the case of the U.S., the main features were:

- ?? Adherence to the strictest standards of quality.
- ?? Constant monitoring of consumer preferences through offices in Atlanta that the firm opened ten years ago. This office constantly monitors customers and sales.
- ?? Low inventory at the wholesale and retail levels.
- ?? Short delivery time from Costa Rica warehouses to market.

The experience of the company in recent times indicates that participation in trade fairs and Internet information are new key market opportunities. They also can encourage direct sales, thereby reducing the number of intermediaries. However, for companies of small countries it is very difficult to participate in trade fairs unless trade groups and trade representatives of the government are willing to play a more supportive role.

Nicaragua

In the case of Nicaragua, an important point is that in the past, the country was a significant exporter of timber. According to study conducted by Lacayo and Gonzales (1997), two hundred and fifty years ago, the country reportedly was exporting timber from Nicaragua through the Caribbean coast. In 1757, total caobo exports were 200,000 m³.

By the end of the last century, three major concessions exported most of the mahogany and other species from the country. These were: John D Emery, exporting 2,000 logs a month and employing around 600 workers, the Bargman's Bluff Lumber Co. that exploited primarily pine forest and produced in its heyday around 55,000 board feet daily and employed around 3,000 workers, and the Nolan Co. and Karawala that produced around 45,000 board feet a day.

Between 1900 and 1980, the country, with the exception of the years of the Second World War, experimented with all sorts of policies and technologies to exploit the country's timber resources.

Many concessions were given and a flourishing timber exporting business developed. During the eighties, the industry entered a period of contraction for political reasons and, in 1992, a new era began with an explosion of concessions. However, the only large-scale operations are MADENSA, SOLCARSA and PROFOSA, all located in the RAAN territories of the country in the Atlantic region. WOOTEN, a European concern, buys locally caoba, cedro, granadillo, coyote and nambar. At the present time, land tenure instability, the moratoriums on cutting (moras forestales) and political problems are placing a heavy burden on the timber trade. However, the country is making a serious effort to organize the industry and to develop more sustainable use of what is left of the country's virgin forest.

An interesting evaluation of the potential of new species in Nicaragua is the study by Cordoba and Gonzales (1997) of the Coopesan R.L. San Ramon Los Chiles cooperatives in Nicaragua. The study included 26 species including cedro real and caoba and 24 commercial non-traditional species accepted in local markets. Most of the material exported goes to Cuba, the Dominican Republic and the United States.

The major problems that were identified in the development of markets for new non-traditional species were:

- ?? The forestry moratoriums or moras in the cutting of many traditional and non-traditional species.
- ?? The lack of a clear legal framework for providing forest products from managed forests.
- ?? Lack of interest and support from the local banking system.
- ?? Lack of market information.
- ?? Lack of technologies for dealing with new species.
- ?? Lack of promotion among the consumers.

Market organization and development seems to be the most fertile area to promote new species. However, this must be done in concert with a restructuring of production practices and improved forest management. To effectively market lesser-known species to serve as substitutes for traditional species, resistance on the part of manufacturers and brokers must be overcome. This requires an effective and comprehensive marketing strategy (Eastin and Wright 1998). This marketing strategy should be a framework that can be applied regardless of forest region, lesser known species or markets.

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