US Markets for Brazilian Softwood
Moulding & Plywood

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Almost 60% of Brazilian wood products exporters are sent to US;

**Moulding:** 90% of Brazilian exports go to US. World’s second largest exporter to US

**Softwood Plywood:** 22% of Brazilian exports go to US. World’s largest exporters to US

**Brazil’s Economy**

GDP (2007 est.): $1.269 trillion USD  
U.S is $13.79 trillion

**Per capita (2007 est.):** $9,700 USD  
U.S is $46,000

**Exports:** $159.2 billion f.o.b (2007 est.)  
Planted Forest Products Exports: $6.1 billion

**Imports:** $115.6 billion f.o.b (2007 est.)  
Planted Forest Sector Imports: $1.4 billion

Source: CIA (Central Intelligence Agency), April -2008
- Occupy about 5.98 million hectares;
- Planted Forests supply approximately: 191 million cubic meters of wood (specifically from Pine and Eucalyptus)

- 1.8 million ha of Pine species reforestation (30.2%)

Other species planted:
- Acacia (Acacia spp)
- Teak (Tectona grandis)
- Rubber wood (Hevea brasiliensis)
- Parana pine (Araucaria angustifolia)
- Parica (Schizolobium sp)
- Poplar (Populus sp) (7.1%)

- 3.7 million ha of Eucalyptus species reforestation (62.7%)

Source: ABRAF (Associacao Brasileira de Produtores de Florestas Plantadas), adapted by Mariane Bueno de Camargo

World Forest Institute  http://wfi.worldforestry.org
Percent of Roundwood Consumption from Planted Forests by Segment (2006)

Source: STCP, ABIPA, BRACELPA, AMS – 2006. Adapted by Mariane Bueno de Camargo
US: A Great Customer

- More than 300 million habitants
- 30% of the US territory is covered by forests
- American timber industry is one of the largest in the world, but with historically led to rapid deforestation
- Vast majority of the North American population lives in wood homes

Recently, changes in public opinion regarding the use of federal forest lands and growing environmental restrictions... lead to a sudden increase in wood imports to meet demand

- 70% of American GDP is driven by consumption
- Economy is seen as one of the most open and transparent
- Few restrictions against foreign investment and imports
- Trade agreements with several countries (NAFTA, APEC, G8, SFP, etc)
Pinus ponderosa is now less available due to ponderosa forest health decline.

Brazilian exports do not get prices higher than Ponderosa. Indeed, Ponderosa is considered a higher grade material.
Softwood Moulding
Mouldings are profiles obtained from reprocessing of lumber or blocks and blanks.

The largest consumer of moulding is the construction segment.

The average age of homes in the United States is around 33 years old.
2007, Market share declines:

- Mexico: 23%
- Chile: 19%
- Brazil: 18%
- Canada: 12%
- China: 4.1%

Source: FAS Commodity Aggregations (2008)
Last year, Brazil overtook Chile to become the biggest player in value of US imports of softwood moulding.
US Imports of Hardwood Moulding (Volume)

The largest exporters in this market are all from Asia.

Source: FAS Commodity Aggregations (2008)
US Moulding Imports in General (Value)

1997 = US$385 million
2006 = US$1.3 billion

(*) Main: Hardwood Moulding
(**) Main: Softwood Moulding

Source: FAS Commodity Aggregations (2008)

World Forest Institute  http://wfi.worldforestry.org
Composite products and alternate technologies are placing increased pressure on traditional manufacturers of softwood moulding. These products are:

- Finger Joint
- MDF
- Plastic

- Finger joint materials are predominant in the American marketplace
- The Growth of MDF has remained constant, even with rising cost of production and raw material
MDF put strong pressure on manufactures of Solid Moulding, but it will not replace FJ

✓ Plastic and vinyl also have a share in the market, but more specifically in the windows and doors industry.

Some experts predict that MDF will reach 1/3 of the moulding market

✓ MDF/Plastic substitutes increased greatly between 1989 – 2003

✓ Large part due to factors such as declining Pinus ponderosa availability

✓ American companies have opted to produce MDF, more as a matter of survival in the market, since this provides an alternative, low cost product

### Materials Used

<table>
<thead>
<tr>
<th></th>
<th>Wood *</th>
<th>Plastic</th>
<th>Other **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouldings</td>
<td>78,7%</td>
<td>7,2%</td>
<td>14,2%</td>
</tr>
<tr>
<td>Stair Work</td>
<td>50,1%</td>
<td>1,2%</td>
<td>48,6%</td>
</tr>
<tr>
<td>Other Cuts</td>
<td>60,1%</td>
<td>26,3%</td>
<td>13,6%</td>
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</tbody>
</table>

* Just Solid Wood Moulding and Finger Joint
** MDF and another materials

Source: Freedonia, 2005

World Forest Institute  http://wfi.worldforestry.org
The main advantage of finger joint moulding (FJ) is that it is less susceptible to moisture than MDF and is more cost effective in smaller dimensions. MDF, on the other hand uses wood more efficiently and is an inexpensive alternative in larger dimensions.
There is a strong competition between domestic and offshore markets in relation to prices. The price difference is likely to continue to decrease in the future.

Prices are directly influenced by:

- Different moulding and quantity requested

The change in these mouldings profiles, or the configurations of the production, with the fixed costs, carries price increases.

Since July, 2007 US Imports of certain profile products (frames and jambs) from Brazil, subject to a 3.2% duty
Moulding Types

- Architrave
- Baluster
- Corner guard
- Casing
- Chair rail
- Handrail
- Newel
- Riser Moulding
- Tread Moulding
- S4S Moulding
- Base Cap
- Crown Moulding
- Wainscot Moulding
✓ 70% of the total plywood production in Brazil is Softwood

✓ Brazil’s focus is on production for the international market (5th biggest player)

✓ In 2007, the US imported more than US$ 2 billion of Brazilian plywood

✓ Main countries that compete with Brazil in the American market are: Canada, China, Chile and Mexico.

34% Construction

45% Furniture

17% Packaging

Major markets for Brazilian softwood plywood: European Union (31%) and the United States (50%).
2007:
Reduction of production: **16.6%**
Reduction of exports to US: **61%**

2007, Market share declines:
Brazil: 74%  Canada: 37%

Source: FAS Commodity Aggregations (2008)
Between 2004-2006, Brazil was the Biggest Player in Value of U.S imports soft plywood.

In 2007, it dropped significantly, staying at third place.

Source: FAS Commodity Aggregations (2008)
In less than 11 years China's market share grew from 1% in 1997 to 54% in 2007.

Volume (Cubic Meter)

Source: FAS Commodity Aggregations (2008)

World Forest Institute  http://wfi.worldforestry.org
US Plywood Imports in General (Value)

1997: US$758 million
2006: US$2.2 billion
2007: US$2 billion

Source: FAS Commodity Aggregations (2008)

World Forest Institute  http://wfi.worldforestry.org
✓ Structural panels (OSB, Plywood and LVL)
✓ Non structural panels (Plywood, MDF and Particleboard)
The use of OSB in housing is projected to continue growing at a steady rate.
Softwood Plywood - Prices

☑ OSB prices have been cheaper than alternative panels

Since July, 2005 US Imports of certain southern yellow pine plywood from Brazil (HTS 4412.19.40) will continue to be subject to an 8% duty

☑ The wood products market behaves like a commodities market

☑ Strongly affected by currency exchange rates
Relation between US Housing Market and BR Plywood Exports to US

Source: U.S. Department of Commerce Census Bureau and FAS Commodity Aggregations

World Forest Institute  http://wfi.worldforestry.org
The Brazilian Currency (Real), rose 2.5% against the US Dollar on last April 30, 2008.

Today, US$ 1 = BR$ 1.667
Housing Starts in U.S.A (1990 - 2007)

Source: U.S. Department of Commerce Census

World Forest Institute  http://wfi.worldforestry.org
In 2006, forest products trade in China increased 23% over 2005

- Forest products imports increased 10% over 2005
- Forest products exports increased 34%
- Hardwood Moulding & Plywood exports from China have grown very rapidly

Analyses of China’s forestry sector predict continued rapid growth:

- Major forestry reforms involving land tenure
- Foreign investment and transferability of land assets evolving over next 3-5 years

Source: Cintrafor
Distribution

Average for delivery takes 60-75 days and medium cost for customs fees is around U$ 15/m3.
Producers must redefine their products and services, using key factors like:

- Greater durability
- Superior quality (PNQC)
- New applications and process improvements
- All combined with aggressive pricing
Conclusion

A global vision is essential to meeting the changes and challenges facing the wood products industry

- Keep your eyes on the prize, even during difficult economic times
- Many forecasts predict good news in the medium term
- The current economic downturn is a reminder that one must plan for both good and bad times
- Diversification of key markets would help to mitigate declines in specific markets
Sustainable Plantation Forests is critical to Brazil’s economy and environment
Angie DiSalvo – WFI
Sara Wu – WFI
Steve & Diane Brice – American Family
Brazilian Family (Parents, Sisters & Brothers)
Angela Baroni
Weyerhaeuser Group
Gintrafor
The University of Georgia
Oregon State University
IWPA (International Wood Products Association)
AIFP (American International Forest Products)
All WFC Equip

All WFI Fellows
Leroy Otteson (Timber Products)
Stimson Lumber Company
World Forest Investment
Flake board
The Parr Company
Plum Creek
OSAF (Oregon Society Association Foresters)
Jeld-Wen (Window & Door)
Hancock Timber Resources
Caxuana S/A – Eduardo Sortino
Guararapes Industry – Ricardo
Braslumber - Armando
Paledson Madeiras

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