Guyana Forestry Commission

Wood Processing Standards and Procedures for Sawmills, Sawpits, Lumberyards and Timber Depots

18th September 2007

www.forestry.gov.gy
The full development of a forest products industry is directly linked to the implementation of an efficient set of standards and practices to guide the processes in the industry.

The Purpose of today’s meeting is to discuss a proposed range of standards and practices the GFC is considering implementing from beginning 2008 to guide the development of the wood processing sector.
Background

• GFC has expended considerable time and resources on enhancing Forestry Operations - Codes of Practices, tagging, new permits, new stations, databases, enhanced monitoring, inventory, GIS, mapping etc.

• Recognised the need to also focus on procedures and guidelines to enhance the processing operations
Since 2005 GFC has placed advertisements in the press indicating the need for sawmills, lumberyards etc. to operate in a more structured manner in keeping with guidelines already established. This has been followed up with numerous meetings and discussions.

Approximately 200 persons trained as Timber Graders and Inspectors.
Old sawmilling machinery with very few spare parts available.
High % of sawn timber produced for the local market in few standard sizes and in a mix of species.
Little timber precision trimmed.
Low quality standards set by/ for the local market (captive local market).
First in – First out cutting program. Few log yards of size.
No standardisation of cutting/ profile sizes
How Guyana is Viewed

• Little attention to standards.
• No drying
• Few kilns and little knowledge about kilning and further industrialization.
• Wood moulded/ dressed green
• Few industrial plants of a reasonable scale/size.
• Very high focus on few species though other good species exist.
Little automatization. Hardly any fork lifts found
Lack of customer loyalty
Poor response time
Poor safety standards
Erratic pricing
First shipment good, next shipment poor
Time for Change

• At a time of high demand for wood products and competitive prices there is need to implement changes to continue to develop the sector.

• Wood resources are not unlimited – species getting scarce, land availability reducing, more infrastructure required, global changes.
No Mechanisation
Mill Run – Poor Standards
Old Technology – Poor Quality
Old Technology
Cleanliness Lacking
Poor Trimming & Safety
No Stacking Area
HOW IT IS DONE IN ELSEWHERE
(Belem)
Kiln Drying
Air Drying
Stacking/ Air Drying
Air Drying - All Sizes
Air Drying – Large Volumes
Proper Staff & Sanitary Facilities
Modern Machinery
Simple Band Sawmills
Proper Flooring
Floor
Packaging
Packaging & Storing (Small SM)
Organised Milling Environment
Treatment
Log Quality - Same as Guyana (Wadara)
Log Quality - Same as Guyana
(Mora & Bulletwood)
Log Quality - Same as Guyana
Modern Facility
Recovery – Garden Tiles
Product & Packaging
Packaging
Labeling

NUMBER: T:566

SPECIE: TAUARI

WIDTH: ( ) 34.2 X 3500 ( ) 34.2 X 6000 ( ) 34.2 X 6500

DESTINATION: MONTOIR

AVERAGE MC: MADE IN BR
Safety
GFC PROPOSED GUIDELINES TO BE IMPLEMENTED FROM 2008
Sawing and Cross Cutting

• All lumber must be sawn with care so as to obtain the nominal sizes when the moisture content is 20%.

• Sawing must be regular, for each dimension, over the whole of the piece.

• Edges must be parallel and perpendicular to the faces.

• Ends must be perpendicular to the longitudinal axis of the piece.
Sawing and Cross Cutting

• From 2008 the Guyana Forestry Commission (GFC) would give preference to the licencing of sawmills and processing facilities utilizing Band Sawing technology. Further, sawmills and sawpits must achieve the following recovery rates in order to retain their licence or for new facilities to be licenced:
  • 2008 - 50% recovery rate
  • 2009 - 60% recovery rate
  • 2010 - 70% recovery rate
  • 2011 - 75% recovery rate
SAWPITS (CHAIN SAW OPERATIONS)

• As a result of the above recovery rates, sawpits (chainsaw operations) would only be permitted to process lumber 101.6 mm (4 inches) in thickness or width and greater.

• Species restrictions may apply
End Protection

• The ends of all sawn lumber must be waxed or sealed with an appropriate sealant so as to prevent splitting and end checking from occurring.
Stacking and Racking

- All wood must be stacked, under cover, as quickly as possible (24 hrs), after coming off the saw.
- Each layer of lumber must be separated by stickers of adequate thickness to allow for air circulation.
- The base layers must be placed pallets or skids at least 152.4 mm (6") above the ground.
- The storage area must have a hard surface, be well drained, stable and free from sawdust and any other wooden debris.
Stacking and Racking

- The date of stacking must be marked on each stack of lumber so as to allow for adequate drying time.
- Rough Sawn wood must remain stickered and stacked until it has achieved a moisture content of 20% or less.
- Only lumber that has been dried to a moisture content of 20% or less should be stored in Racks or without stickers.
- All sawn and processed lumber in storage must either be in stacks or racks.
GRADING

• All logs for sale (local & export) must be graded
• All lumber for sale (local & export) must be graded
• All graded wood products (logs & lumber) must be properly labelled indicating species, grade and dimensions
• As far as is practicable species should be segregated
Specifications for Rough Sawn Lumber

• It is important that rough sawn lumber be cut with adequate oversize tolerances to allow for shrinkage to achieve the standard nominal size at 20% Moisture Content.

• The GFC expects all industry stakeholders to adhere to the standard sizes specified in the table below:
## Cutting Sizes - Thicknesses

<table>
<thead>
<tr>
<th>Ordered Size (Nominal)</th>
<th>Recommended Sawing Size (off the saw)</th>
<th>Maximum Oversize</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metric (mm)</strong></td>
<td><strong>Inches</strong></td>
<td><strong>Metric (mm)</strong></td>
</tr>
<tr>
<td>Under 25.4</td>
<td>Under 1</td>
<td></td>
</tr>
<tr>
<td>25.4</td>
<td>1</td>
<td>28.58</td>
</tr>
<tr>
<td>31.75</td>
<td>1 1/4</td>
<td>34.93</td>
</tr>
<tr>
<td>38.1</td>
<td>1 1/2</td>
<td>41.28</td>
</tr>
<tr>
<td>44.45</td>
<td>1 3/4</td>
<td>47.63</td>
</tr>
<tr>
<td>50.8</td>
<td>2</td>
<td>55.56</td>
</tr>
<tr>
<td>63.5</td>
<td>2 1/2</td>
<td>68.26</td>
</tr>
<tr>
<td>76.2</td>
<td>3</td>
<td>80.96</td>
</tr>
<tr>
<td>88.9</td>
<td>3 1/2</td>
<td>95.25</td>
</tr>
<tr>
<td>101.6</td>
<td>4</td>
<td>107.95</td>
</tr>
<tr>
<td>127</td>
<td>5</td>
<td>133.35</td>
</tr>
<tr>
<td>152.4 and over</td>
<td>6 and over</td>
<td>161.92</td>
</tr>
</tbody>
</table>
Recommended sawing sizes for widths of Rough Sawn Timber to allow for shrinkage when wood is dried to the nominal sizes at 20% Moisture Content.

- **Below 152.4 mm (6”)** ............................... 6.35 mm (¼”) oversize (off the saw)
- 152.4 mm (6”) to below 203.2 mm (8”) .......... 9.53 mm (3/8”) oversize
- 203.2 mm (8”) to below 254 mm (10”) .......... 12.70 mm (½”) oversize
- 254 mm (10”) and over ............................. 5.88 mm (5/8”) oversize

- **Lengths** of Rough Sawn lumber, unless specified differently in a contract, should rise in intervals of 304.8 mm (12”) with a maximum oversize of 152.4 mm (6”).
Specifications for Dressed Lumber

- All dressed lumber profiles must be consistent for all processing facilities (later slide)

- All rough sawn lumber to be dressed or used in the furniture industry must be dried to a moisture content of 20% or less before dressing is carried out.

- The following rough sawn lumber sizes are the specified cutting sizes for lumber to be further processed i.e. dressed two sides:
# DRESSED LUMBER - Thicknesses

<table>
<thead>
<tr>
<th>Rough Sawn Lumber</th>
<th>Dressed Lumber</th>
<th>Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metric (mm)</td>
<td>Inches</td>
<td>Metric (mm)</td>
</tr>
<tr>
<td>9.53</td>
<td>3/8</td>
<td>4.76</td>
</tr>
<tr>
<td>12.7</td>
<td>½</td>
<td>7.94</td>
</tr>
<tr>
<td>5/8”</td>
<td>5/8</td>
<td>11.11</td>
</tr>
<tr>
<td>19.05</td>
<td>⅔</td>
<td>14.29</td>
</tr>
<tr>
<td>25.4</td>
<td>1</td>
<td>19.05</td>
</tr>
<tr>
<td>31.75</td>
<td>1 ¼</td>
<td>26.99</td>
</tr>
<tr>
<td>38.1</td>
<td>1 ½</td>
<td>33.34</td>
</tr>
<tr>
<td>44.45</td>
<td>1 ¾</td>
<td>38.1</td>
</tr>
<tr>
<td>50.8</td>
<td>2</td>
<td>44.45</td>
</tr>
<tr>
<td>63.5</td>
<td>2 ½</td>
<td>57.15</td>
</tr>
<tr>
<td>76.2</td>
<td>3</td>
<td>69.85</td>
</tr>
<tr>
<td>88.9</td>
<td>3 ½</td>
<td>82.55</td>
</tr>
<tr>
<td>101.6 and over</td>
<td>4 and over</td>
<td>95.25 and over</td>
</tr>
</tbody>
</table>
Visit GFC For Specifications for:

- Tongue & Groove Flooring
- Secret Nail Flooring
- Channel Lining
- Tongue & Groove Siding
- V-Joint Lining
Tongue & Groove Siding (not drawn to scale)
V-Joint Lining (not drawn to scale)

4.76 mm or $\frac{3}{16}$"
Preventative Treatment

- The following species must be chemically treated, by spraying or dipping with an approved chemical, as soon as they are converted to rough sawn lumber to prevent attack from fungi and insects.

- Simarupa
- Ulu
- Kereti
- Baromalli
- Futui
- Iteballi
- Maho
- Dalli
- Dukali
- Limonaballi
- Muneridan
- Haiariballi/ Crook
HEALTH & SAFETY

• Employee Safety Gears
• Facilities for Employees
• Employee Training
• NIS
• Machine Safety
• Guards on Machinery
• Signage
• Restricted Areas
• Fire hazards
• Waste Disposal
Thank You