



One vision.
Global competitiveness.

Jennifer Rice
NEW VALUE FOR A
CHANGING MARKETPLACE



Marketing Community
Forest Wood

#1 Understand your fibre

- Volumes
- Quality
- What markets and products can this fibre serve?



Species Factsheets



LODGEPOLE PINE
Botanical Name:
Pinus contorta var. *latifolia* Engelm.

Lodgepole pine is the single most plentiful tree species in British Columbia. It grows throughout most of the interior of the province from sea level to sub-alpine sites. On average 24 metres in height and 25 cm in diameter, lodgepole pine is typically found in dense, even-aged stands formed as a result of forest fires.

Common Uses

Lodgepole pine, spruce, and fir are marketed together as a single species group (S.F.P.). Kiln-dried S.F.P. lumber is used as a structural framing material in all types of residential, commercial, industrial and agricultural building applications. Saw wood S.F.P. lumber is also used extensively in the manufacturing of prefabricated housing, trusses and other structural components.

Lodgepole pine is a good species for the manufacture of composite board due to its natural wood density, a tendency to plasticize when compressed at high temperatures yielding panels with a smooth surface, no gluing resin, and a uniforming density.

Lodgepole pine is firmly established as a first class joist wood for lumbers, windows, doors and shutters, paneling, edge glued decking, siding, mouldings, and other architectural elements and joist joists. Other uses of lodgepole pine include telephone poles, fence posts, and coral rock. Because of its small diameter and lack of knots, veneer timbers, cabinet tops, and tool.

Lodgepole pine is used with spruce and fir for producing 100% bleached kraft pulp and dense thermo-mechanical pulp (DTMP).

What about Mountain Pine Beetle killed lodgepole pine?

British Columbia is currently undergoing an unprecedented infestation of mountain pine beetles in lodgepole pine forests. In attacking the inside of the bark the beetle also introduces a natural staining fungi into the tree. This fungi turns the sapwood a blue/grey colour. While this wood looks different than non-stained lumber it is safe to use and is equivalent to non-stained lumber. Contrary to what many believe the stain is a fungi, not a mould, and poses no threat to human health. In addition, once the lumber has been processed and

VIBRANT PROPERTIES	
Humorless	Light yellow to reddish-brown; yellow
Shedder	Black; white
Humorless / Joyous / Content	Light yellow to mid-brown; white, just defined, content is closer to the humorless
Unhappy / Joyous / Content	The area around growth, eye distinct, definitely two shades of yellow to brown from lavender; subject is almost in regular eyes; and more is less strong in eye-growing with regular head.
SOUND	
This sound is generally straight-going with a fairly easy tonal pattern.	
<p>Personality: history of a story or vision; Director, with subtle lowered tones; light; quiet; open; open.</p> <p>Characteristics: history or quiet; direct; easy.</p> <p>Notes: When you get into the historical pattern, it defines a preliminary; direct; direct. Notes can be directly pattern, it can be more with exploration on the pattern; direct, but not as directly as the pattern on the pattern on the pattern.</p>	
EFFECTS	
The effects are interplay and generally small and light, but directly distinct.	
<p>Words of direction: light has a subtle color and appears when green is in moderately soft and light.</p> <p>Notes: When you get into the historical pattern, it defines a preliminary; direct; direct. Notes can be directly pattern, it can be more with exploration on the pattern; direct, but not as directly as the pattern on the pattern on the pattern.</p>	

PERSONAL PROPERTIES	
DENSITY (kg/m ³)	670
	At 0°C
SPECIFIC GRAVITY (20°C/4°C)	0.41
WATER-TO-OIL RATIO	Standard
	End
REF. INDEX	1.490
	At 0°C
REF. INDEX	1.4800
	At 0°C
COMPRESSION PARALLEL (kPa)	70.0
	At 0°C
COMPRESSION PERPENDICULAR (kPa)	40.3
	At 0°C
SOLUB. INDEX	0.54
GLYCEMIC INDEX (Miles)	520
SOLUB. INDEX	0.74
Oil-soluble (g)	Temperature (°C)
Oil-soluble (g)	Volume (mL)
Oil-soluble (g)	Volume (mL)
Oil-soluble (g)	Volume (mL)

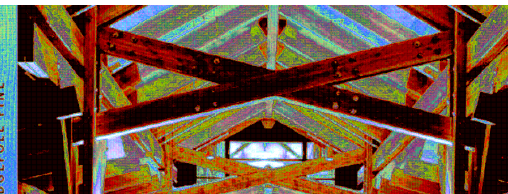
dried the fungi is killed and will not progress further. Mechanical tests of blue stained lodgepole pine confirm that the fungi do not reduce the strength values of the wood (MOE and MOR).

SBF lumber is seasoned uniformly in dry kilns to a moisture content of 19% or less. Kiln drying inhibits natural staining of the wood, improves its strength and stiffness, enhances its appearance and increases its resistance to decay and attack by insects.

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Species Factsheets



Commercial Availability

Lodgepole pine is produced predominantly as S-P-F in structural grades according to National Lumber Grades Authority (NLGA) rules for dimension lumber. Select Structural, #2 and better, and stud grades are the most common grades produced. Specialty in-house grades, lametock, and export grades are also available. Lodgepole pine is the largest component of the SPF species mix that is available preservative-treated.

Appearance grades are also produced according to NLGA rules. Clears, shop lumber, and moulding stock are most common, though there are many potential appearance grades that can be produced.

* Marked as structural timber in the S-P-F (Spruce-Pine-Fir) species mix. SPF includes: lodgepole pine, white spruce, Engelmann spruce, red spruce, black spruce, jack pine, balsam fir, and white fir.

For more information on the availability of lodgepole pine and SPF products, please contact:



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#2 What markets can your fibre serve?

Sector Factsheets



Sector Overview

In 2004 close to 90 million doors were demanded in the US. Residential demand makes up the majority of the door market, accounting for 79 million units in 2004.

Wood holds a 13.8% market share for residential entry doors and a 96% market share for residential interior doors. However, there are two common but distinctly different types of wood doors used. The stile and rail door is a solid wood core door making heavy use of softwoods. Flush doors contain much less wood and feature a wood veneer skin most often made of hardwoods and imported species. Therefore, the stile and rail door market for interior and exterior residential doors should be the main focus for softwood producers. Flush doors do, however, use finger-jointed softwoods for frame material.

Canada's combined wood window and door sector shipped C\$1.6 billion (U.S.\$1 billion) in 2002. Approximately 25 to 30% of Canadian shipments are exported to the U.S. The combined U.S. industry had shipments worth U.S.\$10.9 billion in the same year.

Material Use

Wood Door Construction, 2001		
	Value (con/thous. million)	Rate (million)
RESIDENTIAL		
Entry	0	2
Interior	55.8	4
Total	55.8	6
NON-RESIDENTIAL		
Entry	0	0.7
Interior	3	0.7
Total	3	0.4

U.S. DOOR MARKET (RESIDENTIAL), 2004		
	UNITS (MILLION)	MARKET SHARE
GLASS DOORS		
Wood	2	13.0%
Steel	10	69.0%
Fiberglass	2.5	17.2%
INTERIOR DOORS		
Wood	61.7	96.0%
Other	2.6	4.0%

U.S. DOOR MARKET (NON-RESIDENTIAL), 2004		
	UNITS (MILLION)	MARKET SHARE
ENTRY DOORS		
Wood	0.2	6.3%
Metal	2.9	90.6%
Other	0.1	3.1%
INTERIOR DOORS		
Wood	3.2	41.0%
Metal	4	51.3%

Total

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Sector Factsheets

Wood Use

SPICES	EXTENSION	INFILTRATION
Douglas fir and Hemlock	51%	12%
Ponderosa Pine	8	13
Redwood Pine	5	35
Other Pines	2	9
Other Softwoods	1	0
Hardwoods	31	31
Total	100%	100%

Grades and Components

Lumber grades typically vary based on the end use of the finished door. If components are being cut in-house from lumber a combination of clear, Shop 1, Shop 2, and Shop 3 can be used to cut the necessary sizes to meet the range of finished product sizes. Many stile and rail doors are veneered. This allows for lower cost finger-jointed core material to be used. Full panel doors use finger-jointed lumber almost exclusively.

All material must be dried to 6 to 12% moisture content, based on client specifications, and conditioned for stress relief.

Window and door manufacturers consume an average 20% of total material input to component manufacturers. The share of component outsourcing is higher for U.S. window and door producers than for Canadian producers (34% and 18%, respectively).

COMPARATIVE SPECIES' PROPERTIES					
		POUNDEROSA PINE	BAUDWIN PINE	DOUGLAS-FIR	HEMLOCK
Density (kg/m³)	Green	399	429	459	420
	Air Dry	431	461.6	487	429
Specific Gravity		0.59	0.62	0.65	0.62
Hardness (N)	Stiff	2648	2188	2889	2780
	End	3989	3389	4029	4410
MOR (MPa)	Green	7789	8189	11189	10200
	Air Dry	9519	10209	13519	12300
MOR (MPa)	Green	39.3	40.1	52.0	46.0
	Air Dry	79.3	85.7	88.6	81.1
Shrinkage	Radial (0C)	4.6%	3.4%	4.9%	5.4%
	Tangential (0C)	5.4%	6.4%	7.4%	6.5%
COI - oven dry					
	Radial (0C)	10.5%	10.2%	11.9%	13.0%
	Tangential (0C)	10.5%	10.2%	11.9%	13.0%
WV - air dry 12%					
	Radial (0C)	6.1%	5.6%	7.0%	6.1%

Terminology

DEFINITION OF COMMON DOOR DESIGN

DOOR DESIGN	DESCRIPTION
Flush door	Flush door construction consisting of a core, stile, rail, edge banding, and two face panels. Flush doors can be solid or hollow core.
Stile and rail door	Door with longitudinal, transverse horizontal strips (stiles) under vertical strips (rails) with the result being a three-dimensional appearance.
French door	Door consisting of panes of glass separated by vertical and horizontal framing members.
Patio door	Glass entrance door that may either be hinged or sliding.
Insulator door	Door with a series of slots, usually arranged horizontally and fastened between vertical structural pieces.
Exterior entrance door	Wood exterior entrance doors are commonly of stile & rail construction. An exterior door must be finished on both its inside and outside surfaces and manufactured of materials that are weather resistant.

Source: NWMA

COMMON DOOR GRADES

GRADE	DESCRIPTION
Clear Grade	Lumber must be grain and colour matched, and free of defects that affect the appearance of the door. Significant discoloration (bleeding) is allowed, except for blue stain is allowed. No repair patches, knots, or blemishes.
Select Grade	Lumber for select, clear, grain, and colour match, and free of defects that affect the appearance of the door, except that not more than one well-represented knot or blemish per door face maximum "4" in length may be included. Significant discoloration (bleeding) is acceptable, except for blue stain. No repair patches.
Standard Grade	Lumber shall be grain and colour matched with 50% of the door face allowing the grain limit separate knot and blemish per door face maximum of 2 per door face allowed. It is a maximum of 4" in length. Significant discoloration (bleeding) is acceptable. Significant blue stain to 20% of the door face is acceptable. No repair patches.
Patio Grade	Lumber shall be of any grain and colour. Multiple patches allowed, to repair knots and blemishes. Blue stain acceptable to 10% of the door face. Brown stain not acceptable. Engineered finger joints are acceptable for some door applications, such as insulator doors and garage entrance doors. Knot patches allowed.

Source: NWMA, 2007

Associations and Standards

ASSOCIATIONS	WEBSITE
Canadian Window and Door Manufacturers Association	www.cwda.ca
Window and Door Manufacturers Association	www.wdma.com
Association of Millwork Distributors	www.amdweb.com
Wood Components Manufacturers Association	www.wcma.com

Standards

There is no single building performance standard for wood windows and doors in Canada and the U.S.; thus all standards are voluntary. The weight and importance of standards stems from their inclusion in building codes and architectural plans.

Voluntary standards in Canada made with CSA International. In the U.S. the WDMA administers a set of voluntary standards and test methods.

Wood doors come in three architectural performance classes: standard duty, heavy duty and extra heavy duty. There are two appearance grades, the higher of which requires no wood defects.

Sector Factsheets

Prospect Summary

Stile and rail doors make heavy use of solid and finger-jointed softwoods. These doors represent a premium product in the exterior door market. In this market, wood comes against steel and new wood-look fiberglass doors. Stile and rail doors are made of domestic softwoods and are often semi-custom in nature making them the top domestic prospect.

The advent of the wood-look fiberglass door is both a threat and opportunity to wood. It is a threat if it further displaces wood in the market. However, its more likely to threaten the steel door market where durability and price are factors. Further, as homeowners become more cognizant of "wood look" doors and wood doors may benefit as a prestige item.

Insulator doors are almost all made of wood. However, less than 10% are stile and rail doors. Due to the sheer volume of insulator doors in a house, this still accounts for 4.9 million stile and rail doors. These doors can be painted or stained but are most often made of non-dominant species. Mass volumes of exterior stile and rail doors are now being imported from China.

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SOLUTIONS for WOOD
Your Competitive Edge

Compiled by:
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Canadian Wood Products Association

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AFRI
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Hemlock

- Structural Lumber
 - US Dimension
 - Japan Post and Beam



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Hemlock

- Boards and shop lumber
 - Low pitch, clears, colour
 - Windows, Doors, Mouldings



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Hemlock

- Treated Wood

- Decking
- Lattice
- Fencing



Red Cedar

- Shakes Shingles and Siding



Red Cedar

- Decks, landscaping, and fences



MPB Lodgepole Pine

- Structural Lumber



MPB Lodgepole Pine

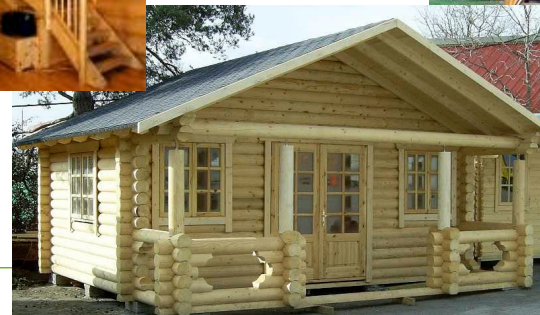
- MPB pine treats better!



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MPB Lodgepole Pine

- Log Homes



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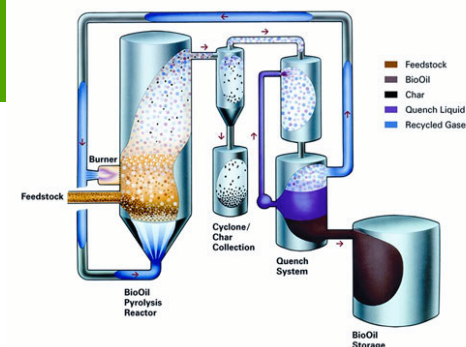
MPB Lodgepole Pine

- Niche Finished Items



MPB Lodgepole Pine

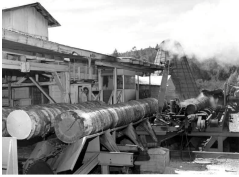
- Energy?



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#3 Understand your capital

- Existing capacity



- \$\$\$ to invest



- Human capital



#4 Understand your (potential) customers



#5 Understand your competition

- Same fibre
- Different fibre
- Different material
- Different places to spend your money!

#6 What is your unique selling proposition?

- Forest certification



- Community forest branding



- Partnerships and trade

Establishing the Brand

- Brand: a name, term, symbol, or any other unique element of a product, which identifies one firm's product(s) and sets them apart from the competition
 - It is a relationship, a promise
- Successful branding is about promoting your strengths “brand values”
- You also need to match these brand values to your customers' requirements
- Consistency of the message is important

Supporting the Brand

- Product and Product Lines
- Quality control
- Service
- Quantity and continuity of supply

This is a process of narrowing in on your target...

- Select several product ideas to pursue
- Assess products for overall fit
- Discard and/or refine ideas
- Move to more extensive business planning

Keep in mind....

- Product vs. product line
- Need to find a home for all fibre in your woodpile
- When do you further process fibre and when do you sell it?
- What processes can you outsource to allow to enter a market or to grow?
- How can you spread out your risk?

Species

- <http://www.bcforestinformation.com/ProductDirectory/default.aspx>



Creating forest sector solutions

www.fpinnovations.ca
www.forintek.ca