



MPB: 10 things we have learned

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Pacific NorthWest Economic Region - 26th Annual Summit
July 17- 21, 2016
Calgary, Alberta

1. Harvest affected stands fast



- Prompt harvesting helps avoid loss of value
 - Trees die quickly after MPB attack leading to moisture loss, checking and eventually decay and loss of timber value
 - Economic shelf life of standing timber varies and depends on site characteristics
 - Uneconomic sites become the landowners' problem...who pays to rehabilitate these? What about GHG effects?
 - Rapid response may help to slow the spread of MPB attack



2. Understand marginal stands



- As stem/log quality drops, stands lose their economic value
 - Marginal stands have higher economic risk, which is a disincentive for harvesters
 - Need to accurately understand the quality of standing timber - not easy because checks are not always visible
 - Good decision support tools/models can help determine if sites can be economically harvested
 - Incentives may help offset costs/risks and be cheaper in the long term



3. Leave the junk in the bush



- With low quality fibre, reducing costs is of paramount importance
 - Need to understand “marginal log” characteristics and avoid bringing uneconomic stems/logs to the mill yard
 - High productivity mechanized harvesting and processing approaches are essential
 - Cut-to-length (CTL) systems widely adopted in BC. Pros and cons of processing at roadside vs. at the stump
 - CTL minimizes saw log costs but makes utilization of harvest residuals a greater challenge



4. Maximize log truck payloads



- Transportation costs can be 50% of total delivered log cost
 - Dead, dry stems may make it difficult to maximize truck payloads
 - BC adopted special permits to allow higher volume loads
 - Larger truck configurations can significantly reduce costs



5. Log grading can be tricky



These logs both have checks that are the same depth

Detectable



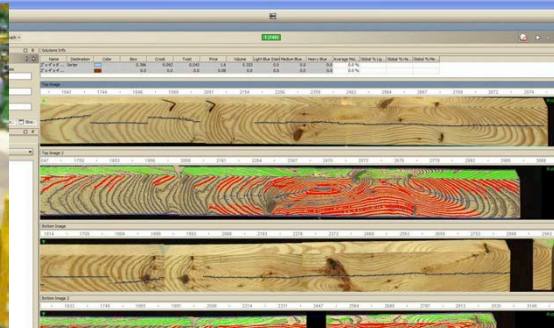
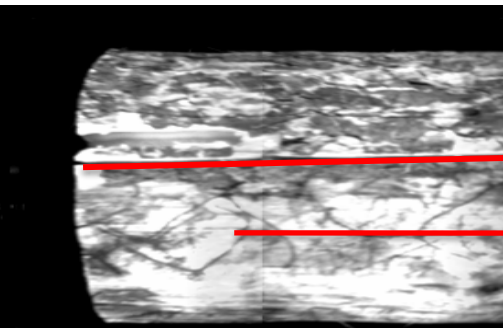
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6. Upgrade mills to maximize grade



- Better technology can help process MPB logs
 - High productivity to reduce costs
 - Log and board scanners with check/defect detection
 - Primary breakdown systems must accurately position logs
 - Automatic lumber graders more accurate and reduce costs
 - Material handling systems to remove broken boards and pieces in both sawmills and planer mills
 - Planners important



7. Control dust in mills



- Processing dry logs creates fine dust and increases the risk of fires and explosion
 - Two mill explosions in BC resulting in fatalities and injuries
 - Industry/government task force
 - New regulations and monitoring program brought in by WorkSafe BC
 - Dust control equipment widely adopted and housekeeping practices improved



8. Don't over dry lumber



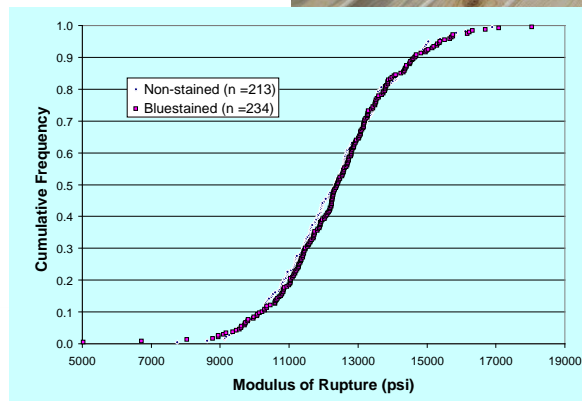
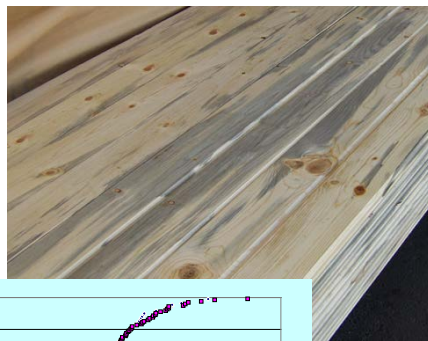
- Standard lumber drying schedules will not work
 - Over drying will increase grade losses
 - Need to separate dry and wet lumber in the sawmill. More sorter bins may be required
 - Standard Heat Treatment (HT) schedules will over-dry lumber. Custom schedules should be developed and implemented.



9. Need markets for low grade lumber



- Lower quality logs increase volume of low-grade lumber
 - Important to find markets that will accept low-grade lumber at acceptable price levels (BC => China)
 - Educate consumers about blue-stained lumber, risk of pests



Canadian Wood Council

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Technical Notes D-1

Blue Stain and Construction Lumber

Construction lumber may be discolored for various reasons. Some lumber species are known to have characteristic coloration, wet lumber often looks different from dry lumber, and weathered lumber contrasts with freshly-cut wood. In some cases, discoloration may signal the presence of decay or mold and possible concerns about its effects on lumber. In other cases, discoloration has little or no effect on the performance of construction lumber.

One specific example of benign discoloration is Blue Stain, a common stain fungus sometimes seen on construction lumber, pine in particular, with streaked blue, black or grey markings. Blue Stain is considered effectively harmless to one's health, and does not detract from the use of lumber in building construction.

What is Blue Stain?

Blue Stain often results from the action of beetles on standing timber. The Mountain Pine Beetle is an example of a carrier of the blue stain fungus, and due to recent widespread outbreaks of the beetle in parts of British Columbia, more blue stained wood is making its way into the market.

The cross section of a pine log in Figure 1 shows the penetration of blue stain in the wood. When the beetle attacks a tree, it introduces fungal spores that quickly germinate and infect the sapwood. As the fungus grows the sap flow



10. Understand future timber supply



- Many rural communities rely on forest sector jobs
 - Areas with high percentage of Lodgepole Pine may see increased fibre supply in the short term but reduced fibre supply in the medium term (E.g. BC)
 - Impacts on jobs, businesses and communities
 - Long term vulnerability of Lodgepole Pine forests to fire, insect attack and climate change?



Good luck!



Thank you!

For further information, please contact:

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