FPInnovations
Creating Forest Sector Solutions

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BC Coast Forest Sector Hem-Fir Development Program

Bulletin for the Coastal Fibre (Hemlock and Amabilis Fir) Program

This quarterly bulletin provides up-to-date information on projects related to the five-year Coastal (Hemlock and Amabilis Fir) Program. It covers the areas of product development and market economics, resource characterization, manufacturing techniques, and opportunities in the evolving bio-energy and bio-refinery sectors. The overall objective of this initiative is to increase the value of the Coastal hem-fir resource and the products manufactured from it.

Steering Committee Gives Thumbs-up To Hem-fir Research Program

The Steering Committee overseeing the research program approved the direction of the program for 2008-09 at a meeting held to review the start up work.

The Committee, which includes strong industry representation, received progress reports pertaining to research underway in the areas of products and markets, resource attributes, harvesting, bio-energy, conversion and value optimization of the hem-fir resource. They discussed and debated the merits of specific projects, and provided input to the program priorities. The committee accepted the effort by managers to condense the original scope of work into final budget realities. There were a number of activities cut that the committee felt should be kept for future consideration.

• Product/Markets

Demonstration Trials To Begin On Promising Hem-fir Products

Priority hem-fir products are being identified for evaluation as a result of last year's information review and supply chain/competition benchmarking. Further business case competitiveness analyses are being conducted.

One or more will be selected for demonstration trials beginning this summer. Included in the shortlist of products/market opportunities for evaluation are:

- Treated wood (decking, deck systems, treated framing lumber; branding unique attributes such as ripple surface, eco advantage)
- Engineered composite panels (edge-glued and fingerjoined blockboard; maximizing decorative hemlock veneer; cabinet manufacture)
- Manufactured housing (possible focus on economic/disaster relief housing), and
- Hemlock timber frame component manufacture.

Collaboration and industry partners are being sought out for trials, including product development support (Harvesting and Conversion), log supply support (Resource), primary/secondary manufacture, and associations/consultants marketing support. For more information, contact Chris Gaston at chris.gaston@fpinnovations.ca.

• Harvest and Conversion For BC Coast

Barriers And Opportunities Identified

An important first step toward improving the Coastal hem-fir production and marketing process is to identify the short-, medium- and long-term barriers and opportunities that currently exist. Here are some of the general observations in the areas of log supply, market response agility and sawmill capability particularly as it relates to scanning and automation.

Harvest and Conversion continued...

Log Supply – Right log for the right product

Opportunities:

1. Potential 5-10% increase in lumber recovery possible by optimizing right log to mill at right time.
2. Excessively long logs create production down time (15% observed).
3. Harvesting of long logs can reduce delivered log costs by 5-10% ($4-$10/m^3) and give mills more flexibility to decide on end use.
4. Wrong length logs can result in the production of products worth up to 20% less ($40-$80/Mfbm).
5. Develop log allocation decision support system.

Sawmill Capability – Decisions for value

Opportunities:

1. Develop improved system for log length measurement.
2. Increase value recovery from logs with knot detection scanners (20% or more increase at edger worth well over $5M per year for 150 MMbfm mill).
3. Training of sawyers, and resaw and edger operators should yield better manual "optimization".
4. Well maintained machines result in better recovery, production and quality.
5. Need efficient way to get small clears out of mill without tying up sorter.

Market Response Agility – Consistent rapid response to customer demand

Opportunities:

1. Three- to four-week log delivery should be possible especially to conduct product trials.
2. Improved communication between marketing, manufacturing and log supply can have major cost and value benefits.

For more information, contact Bruce Lehman at bruce.lehman@fpinnovations.ca.

• Bio-energy and Bio-refinery

Researchers Get Handle On Biomass Volumes

Forest biomass represents a potential new income stream for forest companies as part of the growing bio-economy. The possibility of constructing new bio-energy facilities is expanding both locally and globally.

A project is underway with a goal to produce an inventory of the forest biomass from harvesting operations, sort yards, and legacy piles on coastal BC, with associated data in production cost, distance from transportation and conversion centres. Using information from this project, planners will be able to assess the amount and delivery cost of biomass available for various catchment areas on the BC Coast.

So far, a classification system has been developed for residual biomass left at roadside, classified by harvesting system, bucking practices, species and age. The coastal logging region has also been divided into logical operating areas, including point sources such as legacy hog/residue piles. This approach has been validated against data available from one BC Coastal company's annual harvest plans.

For more information about progress on this project, contact Jack MacDonald at jack.macdonald@fpinnovations.ca.

• Resource Characteristics

Focus Now On Second Growth Hem-fir

The Steering Committee directing the BC Coast Program confirmed that characterizing the resource attributes of second growth hem-fir is a priority.

Product potential will be determined by species, tree age class, site index and stem spacing. Over the next three years, the following tasks and tests will be conducted on second growth hem-fir:

- stand and tree growth simulation
- internal CT scan imaging and sawing simulation
- basic wood properties
- pulping properties and suitability for composites
- treatability using preservatives
- machining properties

The information gathered about second growth hem-fir as to its potential competitive attributes and advantages will be shared with the products and markets group in their effort to recommend new products to industry.

For more information about progress on this project, contact Gerry Middleton at gerry.middleton@fpinnovations.ca.

For more information about this program, please contact spokesperson John Talbot at (250) 308-9955 or jmtalbot@van.forintek.ca

FPInnovations brings together Feric, Forintek, Paprican and the Canadian Wood Fibre Centre of Natural Resources Canada, to create the world's largest private, not-for-profit forest research institute. With over 600 employees spread across Canada, FPInnovations unites the individual strengths of each of these internationally recognized forest research and development institutes into a single greater force.

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