

BC Coastal Hem-Fir Initiative – 2012/13

Project Title	Implementation of Best Practice Manufacturing Technologies
Project Number	H.03
Project Leader	Joel Mortyn
Project Team	Jan Brdicko, Brian Jung, John White
Total Budget	\$250,000

Need(s)

- Global competitiveness studies show that BC Coastal sawmills have the highest manufacturing costs in North America.
- Many years of low investment spending has resulted in uncompetitive mills with old equipment, high production costs and low efficiency.
- Competing products from Europe, South America and Asia have eroded the traditionally strong market segments served by BC Coastal products.
- There is a continued need for focus on improving the productivity and efficiency of B.C. Coastal mills to improve their global competitiveness.

Objectives & Approach

- This project will continue to focus on implementing the best manufacturing practices and technologies into BC Coastal mills.
- Improving log rotation verification has resulted in significant successes and this will remain a focus. This project will compare the expected and actual rotation for a series of logs at BC Coastal sawmills and correct the turner control settings so that turning errors are minimized. As well as working with two new mills, we will revisit mills from past years to ensure that the maximum benefits identified are achieved.
- The second focus will be on improving cutting accuracy and feed speeds. We will work with two BC Coastal mills to optimize feed speeds, saw speeds and saw plate thicknesses as well as revisit mills from past years to ensure that the maximum benefits identified are achieved.
- We will use sawmill flow simulation models to increase sawmill production through better manufacturing control, waste reduction, design modification and cut program selection. We will focus on helping mills implement the findings from existing models to increase productivity.
- We will further enhance LogWorth based on user feedback to help sawmills determine diameter breakpoints for different sawing patterns.

Benefits

- Improving log rotation has been shown to increase volume recovery by 3-4%, equating to \$1.5 million annually for a typical BC Coastal mill. The first sawmill trial will be completed by September 2012 and the second trial by March 2013.
- Optimized sawing speeds, feed speeds and plate thicknesses at Coastal mills is expected to increase value recovery by \$500,000 for each mill. The first sawmill trial will be completed by September 2012 and the second trial by March 2013.

- Using flow simulation models to evaluate new cutting programs will save sawmills from conducting trials, allowing them to focus their efforts on normal production. Savings are estimated at \$500,000 per year. Work will be completed by March 2013.
- Determining optimal diameter breakpoints for different cutting programs is expected to increase value recovery by \$100,000 per year. Work will be completed by March 2013.

Project Tasks and Outputs – Current fiscal year

Tasks / Outputs	Expected Delivery Date
Report outlining findings and recommendations of log rotation calibration	Sept 2012 (1 mill) and March 2013 (2nd mill)
Report outlining findings and recommendations of sawing studies	Sept 2012 (1 mill) and March 2013 (2nd mill)
Presentation outlining findings and recommendations of flow simulation model	March 2013
Release version 3.0 of LogWorth	March 2013

Status and Major Accomplishments – Previous year

This project has already delivered significant gains to the BC Coastal industry.

- Improving log rotation was found to increase volume recovery by 3-4%, equating to \$1.5 million annually for a typical BC Coastal mill.
- A study that considered saw plate thickness in double-arbor gang saws identified a potential \$150,000 value gain for each 10 thou reduction in plate width with an estimated savings of \$1M/year for the BC Coastal industry.
- Previous years' work flow using simulation models realized \$500,000 per year in savings and identified potential production increases of 16%.

Performance Measures

Key Success Factor	Key Performance Indicator	Target	How the outcome of the Project supports the Program objectives
More accurate log rotation at a BC Coastal sawmill	Summary of potential volume gains from better calibration of log rotation	3% increase in volume recovery	Increases lumber recovery
More accurate sawing at BC Coastal sawmill	Identified cutting accuracy of different saw thicknesses	1% increase in volume recovery	Reduces sawing waste leading to increased value recovery
Greater productivity at a sawmill	Implemented simulation results at a BC Coastal sawmill to improve production	5% higher production	Increases sawmill productivity
Sawmills designing cutting programs using LogWorth	Number of sawmills using version 3.0 of LogWorth	Four operations on B.C. Coast	Increases value recovery

Communication Strategy for Information Dissemination

The results of the log rotation verification and sawing accuracy studies will be written into reports that will be provided to the collaborating sawmills. A verbal summary of the findings will also be presented to sawmill management. The findings of the sawmill flow simulation work will be compiled into a

presentation and presented to the collaborating sawmill. LogWorth version 3.0 will be delivered to existing users electronically. The added functionality of the program will be written into the User Manual and sent to users electronically.

Collaboration – Research Partners

- Western Forest Products
- Teal Jones