BC Coastal Hem-Fir Initiative – 2012/13

Project Title	Log Allocation Support Software
Project Number	R.07
Project Leader	Joel Mortyn
Project Team	Jack MacDonald
Total Budget	$80,000

Need(s)

In a complex environment such as a coastal forest company that obtains timber from many areas with different characteristics, that moves the logs through a complex transportation network, and that supplies many mills, developing operating plans with manual methods can be overwhelming or generate suboptimal results. Previous work in this project developed software that generated an optimized annual operating plan for overall corporate objectives, but that omitted scheduling. This proposed work will further develop the software to generate optimal harvesting plans by month, mill, and operating area.

Objectives & Approach

Use linear programming optimization software to process data derived from the cooperating company's harvest planning database, mill recipes, product value tables, and other sources, and generate an optimal log allocation solution. Once an optimal solution has been identified, the user can modify the model parameters and re-calculate to test the system sensitivity.

Benefits

Integrated planning systems from other jurisdictions have been shown to improve value substantially over the supply chain, with 15% improvement being reported by some corporations. However, operational experience in BC is limited and estimates are required. Conservative estimates are that harvesting and transportation costs could be improved by 1% through better planning, and that improved log allocation decisions will result in 5% higher return-to-log values. These equate to annual gains of $3M and a $9.7M respectively when applied to 25% of the coastal hem-fir harvest.

Project Tasks and Outputs – Current fiscal year

Tasks / Outputs	Expected Delivery Date
Reach agreement with cooperating company to partner with FPInnovations to produce the software package.	May 2012
Develop and test the monthly planning package.	March 2013

Status and Major Accomplishments – Previous year

The core optimizing procedures for this project were developed by Prof. Eldon Gunn while on sabbatical from Dalhousie University. Upon completion of Prof. Gunn`s sabbatical, the user-interface development was taken up by Joel Mortyn, the current project leader. A functional prototype was developed and tested using data supplied by the cooperating company.

This project was initiated with a collaborating company that later decided to expand on the concept of log allocation over the full value chain in a private opportunity. FPInnovations is currently developing a relationship with a second coastal company to complete the project.

Performance Measures

Key Success Factor	Key Performance Indicator	Target	How the outcome of the Project supports the Program objectives
Model generates improved log allocation decisions	Higher corporate profit from a plan generated a plan generated with the log allocation software compared to a plan generated manually	5% increased profit	Matches mill requirements with logging division supply to send the right log to the right mill and maximize fibre value.

Communication Strategy for Information Dissemination

Software will be developed in close association with cooperating company. Software will be described in an article in the coastal bulletin. Demonstrate the software to other coastal and Interior companies.

Collaboration – Research Partners

TBD – see above