

J.D. Irving Ltd. counting on small changes to account for big gains to the bottom-line

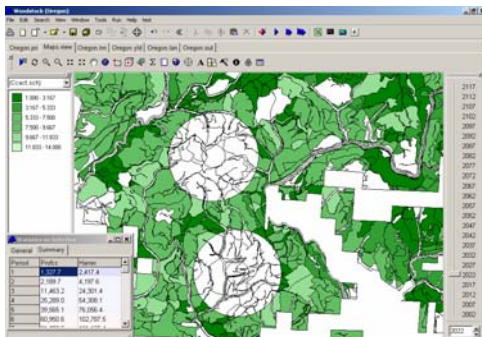
Company sees new software as key to better resource utilization and greater profitability

New Brunswick-based forestry giant JD Irving, Limited is counting on seeing much more money from its forestry operations in Atlantic Canada and the North-East US in the coming years.

But rather than coming from capital investment in land, equipment or facilities, the forest products company is instead making supply chain management changes that it expects could result in more net cash flow – as much as 10% above current annual operating income – from its existing operations.

Specifically, the company is changing how it (and when) it decides to allocate logs to manufacturing facilities, what products to produce and what markets to sell them in.

"What we are talking about is optimizing the allocation of wood fibre with the aim of maximizing net cash flow from across all of our operations," explains Ian Taviss, JDI Management Forester, who is spearheading the program to change wood allocation decision-making within the organization.



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The Allocation Problem

For companies like JD Irving the problem of wood allocation is far more complex than it might initially appear. Long gone are the days of cutting a tree and sending the log to the nearest mill. Today's forestry companies have literally thousands of choices to make between the forest and finished product and the wrong decisions are tantamount to millions of dollars in lost revenue.

Consider what Mr. Taviss's team faces by way of example: They source fibre from a large and varied wood basket - six million acres of land in four jurisdictions in the Maritimes and Maine in the North-East US, as well as from external suppliers.

Outputs from these forests supply 80 mills and manufacturers – including some 20 JDI facilities – all having different processing options, speeds and efficiencies – with dozens of products ranging from saw logs for any number of different purposes (flooring, lumber), or wood chips for a variety of grades of pulp.

There is also the common industry practice of fibre exchanges between mills to consider. Add to this the ecological and environmental considerations of when, where and how responsible harvesting can and should take place.

The finished products (of which there can be multiple options from the same log) dictate how a tree is cut and where and how it is transported, and are themselves dependent on the facilities' order books, capacities and inventories, commodities prices and market demand.

Considering these decision variables – plus the costs and revenues associated with each – and it is evident how the fibre allocation decision can quickly become a decision matrix, with minor missteps costing thousands of dollars or more.

"We can now ask 'What do we want our land to produce?'" Mr. Taviss explains.

"In the past, these kinds of decision were made from the gut and in isolation. What we are saying is 'Let's make these decisions at a strategic level, from a broader, more integrated perspective'.

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New Technology Makes it Possible

What has made this sea change in fibre supply chain management possible is software produced by Remsoft Inc. a long-time JDI supplier.

The software product, *Allocation Optimizer*, was developed with integrated forest product companies in mind, enabling them to address – rather than avoid – these problematical fibre allocation decisions.

Because the software is a linear programming (LP) solution, it produces allocation options that best meet the objectives specified by planners and allows all combinations and iteration of decisions to be analyzed.

The optimal results can be incorporated into strategic-level plans so that the allocation decisions are considered in conjunction with contingent decisions, such as harvest schedules or land investment decisions.

Selling the System

At JDI, Mr. Taviss is currently doing the rounds within the organization making the case for optimization in the fibre allocation decision-making process.

"We have always had buy-in from the very senior levels of our organization who have faith in optimization as a decision-making tool throughout the organization. But now we are working with people in the facilities and at the operations-level to convey the importance of this step and the benefits to both them and the company" he explains. "The reception so far has been very positive."