



## FIA–FSP Forest Science Corner

# Conference discusses timber growth and values

by Davide Cuzner, Extensionist, Forest Dynamics

The current status and local knowledge of research on forest timber growth and values was the focus of a conference held in February by the Bulkley Valley Research Centre for Natural Resources Research & Management in Smithers, British Columbia.

More than 70 researchers and practitioners attended “The Timber Growth and Value Conference”—an area of key research focus for the Forest Investment Account–Forest Science Program (FIA–FSP). The conference was chaired by **Dr. Dave Wilford**, Research Hydrologist with the BC Ministry of Forests and Range (MFR). A total of 28 speakers presented their findings and results of research applications related to and/or funded by FIA–FSP.

The following is a summary of some of the presentations that relate to the latest applied research results and that address developing overall priorities for future research proposals:

### Dr. Bill Bourgeois, Chair of the Forest Science Program

Bourgeois presented the framework used in administering the FIA–FSP, its accomplishments over the last three years, and expenditures. He identified the work being conducted to harmonize First Nations interests into the FIA–FSP program and the challenges ahead for 2008–09. Some of these challenges include the following:

- Pressure to deal with emerging issues and to maintain multi-year commitments with insufficient increase in funding and lack of continued MPB funding
- Addressing First Nations priorities for research and extension
- Lack of an efficient conduit to First Nations communities
- Maintaining 10% administrative costs while supporting a rigorous priority-setting process and business plan approach to new programs (Growth and Yield Modelling Program, Future Forest Ecosystems Initiative)
- Achieving active collaboration

### Alan Vyse, Chair for the Timber Growth and Value Program Advisory Committee

This presentation identified the program’s goals and projected planning framework for the coming fiscal year and reported on the results and key

findings from research completed during the last fiscal year. Some of the strategic changes in research priorities for the Timber Growth and Values Program include the following:

- Climate change research related to tree growth and early stand development
- Timber losses to environmental or biotic factors
- Marketing strategies for non-timber resources
- Analytical design models of silvicultural harvesting systems

One example presented was the work researchers are conducting on assessing and mitigating losses to timber growth due to the mountain pine beetle (MPB) and other factors (i.e., Dothistroma). It was also noted that researchers and practitioners are less interested in short-term projects and that there is a need for more multi-year funding opportunities.

### Dr. Roderick Negrave, Research Silviculturist, MFR

Negrave presented the preliminary results from a 15-year partial cutting experimental research study established in Rennell Sound on the Queen Charlotte Islands (Haida Gwaii). This study targeted stands using a variety of partial-cut harvesting systems with the following criteria:

- Single-tree selection (single tree removal)
- Group selection using helicopter and grapple-yarding harvesting trees with:
  - 0.2–0.3 ha openings
  - 60–70 cm diameter at breast height x 30–35 m height
  - Orientation parallel to contours
- Clearcuts limited to 9-ha openings

The study shows that the natural ingress of hemlock clearly dominates the regenerating stands. On shallow soils and steep slopes in the Coastal Western Hemlock very wet hypermaritime (CWH vh2) sub-zone, the study compared the competition between regenerating spruce and cedar and hemlock. Some of the preliminary findings show that there is a high degree of variability in the competition between hemlock and cedar due to deer browsing, even when seedling protectors such as Vexar are used. Regenerating spruce seems to compete with hemlock much more effectively in single-tree and group-selection harvesting systems that use retention levels between 25 and 50%.

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The study recognizes that partial harvesting methods may increase the number of danger trees and windthrow, which creates worker safety issues. However, from a wildlife perspective, these practices seem to encourage productive habitat for goshawk and marbled murrelet. Recognizing that the findings are preliminary, further research of a similar nature is needed in other areas of the Coast; however it is unclear at this time if continued research in this area is going to be a priority of future funding criteria with FIA-FSP.

### Wendy Cocksedge, Co-ordinator, Research and Extension, Centre for Non-Timber Resources

This presentation summarized the latest research on non-timber forest products (NTFPs) and their spatial and temporal relation to traditional and cultural use paired with assessing the quality of the products as well. The spatial and temporal aspect of the presentation considered the overlap of NTFPs with past harvesting patterns, current logging practices, fire, and the extensive MPB outbreak.

Some of the main observations from the presentation were:

- There is little to no baseline information and extensive work needed in this area.
- The current knowledge on NTFPs and traditional use is held in pieces by many First Nations groups and is not readily available at this time.
- Quality is very difficult to assess. NTFPs quality is subjective and depends on objectives of use, i.e., low-quality NTFPs are difficult to assess since many of the salal and vaccinium are too difficult to access or are on steep terrain.
- Gaps in traditional knowledge exist. It has been difficult to predict the volume of First Nations knowledge that has been lost over past generations.
- Quantity is not equal to quality, e.g., abundance of salal shrub does not necessarily mean large amounts of berries, i.e., shrub leaves versus berries.
- Currently there is little to no revenue generated for the Crown from NTFPs. The questions arising from this are:
  1. Should there be legislation and mechanisms to collect revenue from NTFPs?
  2. If so, who should they apply to depending on commercial purpose versus traditional use?

There is an obvious need for further research on NTFPs as it relates to traditional use. Access to funding is proving to be almost as difficult as collecting the baseline information.

### Kathy Lewis, Associate Professor, Ecosystem Science and Management, UNBC.

Lewis presented the work the University of Northern British Columbia and its associates have done on the tree-infecting fungus, *Dothistroma septosporum* (Dorog.) Morelet in the Skeena-Stikine Forest Region. Their research focuses on the possible relationship between localized climate conditions and the epidemic outbreak of the fungus on second-growth stands. So far, their research indicates that the climate of moderately warm, moist summers and cool, wet fall and winters creates ideal conditions for the fungus *D. septosporum* to infect the needles of mainly pine trees, causing premature defoliation, reduced growth, and in severe cases, death.

The research's main objectives are to look at specific site conditions and monitor the variations of the diseased trees, identify the range of temperatures and humidity, and examine the spatial relationship that site-specific factors have to larger water bodies, slope, and elevation.

Some of the key observations made during the study found that:

- peaks in precipitation correspond with high outbreaks, and
- in sexual reproduction, genetic re-combination occurs.

Unfortunately, it is too early to determine if site-specific factors and proximity to water have a direct correlation to the fungus outbreak and the extent of its severity. UNBC is currently working on establishing a site-hazard assessment for the Skeena-Stikine Forest Region.

### Additional speakers

There were many well-prepared and professionally delivered presentations that allowed for researchers, practitioners, and the natural resource management community to discuss timber growth and values in an open forum on relevant and current topics. For more information, please visit <http://www.bvcentre.ca/html/Events/Conferences/TimberGrowth/Home.htm>

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Erica Close, Soil and Vegetation Scientist at the Bulkley Valley Research Centre was one of the speakers at the conference.