

BC Coastal Hem-Fir Initiative – 2012/13

Project Title	Cedar Pulp, Paper and Bio-product Applications
Project Number	C.07
Project Leader	Shannon Huntley
Project Team	Gail Sherson, Doug Singbeil, Andrew Goodison, Tom Browne
Total Budget	\$50,000

Need(s)

Western Red Cedar is well known for its extractives that provide decay resistance to cedar wood products. Cedar oil extracted from the wood has the potential to provide high value chemicals (such as the tropolone family of chemicals) with applications in pharmaceuticals, flavors & fragrances, pest repellents, antioxidants and nutraceuticals.

To take advantage of the unique properties of cedar oil there is a need to analyze the oils for chemical components and to evaluate the market potential of those components.

Objectives & Approach

1. Analyze cedar oil samples provided by a collaborating coastal company to identify potential high value chemicals
2. Conduct market analysis of some of the most promising chemical components to gain a better understanding of the market potential

Benefits

1. High value bio-chemicals can bring additional revenue streams to improve the competitiveness of the forest sector. While markets for specialty chemicals and pharmaceuticals are orders of magnitude smaller than markets for commodity pulp and paper products, the product prices are orders of magnitude higher. For example the relative selling prices (order of magnitude) are:
 - o Biomass-derived commodities – US\$1/kg
 - o Biomass-derived specialty chemicals - \$US\$10-1000/kg
 - o Biomass-derived pharmaceuticals - \$US\$1000-10,000/kg
 - Source: Esteban Chornet, presented at “Towards a Technology Roadmap for Canadian Forest Biorefineries”, Industry Canada Workshops held in Montreal and Edmonton, November 2005.
2. The Bio-economy will contribute 10—14 new drugs per year by 2015, and it will be responsible for 10 percent of chemical production by 2030. From: The Bio-economy to 2030: designing a policy agenda, Organization for Economic Co-operation and Development (OECD)

Project Tasks and Outputs – Current fiscal year

Tasks / Outputs	Expected Delivery Date
Analyze cedar oil samples provided by a collaborating coastal company	Three months from receiving oil samples
Conduct market analysis of some of the most promising chemical components. Report on potential products including market analyses	March 2013

Performance Measures

Key Success Factor	Key Performance Indicator	Target	How the outcome of the Project supports the Program objectives
Key chemicals in cedar oil samples identified	Potential high-value products identified in cedar oil	2 products	Greater value from BC's cedar resource
Identification of market opportunities for selected high value chemicals	Market analyses completed on selected high value chemicals	2 products	Greater value from BC's cedar resource

Communication Strategy for Information Dissemination

Results will be shared in presentation format with industry and ministry contacts, at the semi-annual Steering Committee meetings and appropriate industry and public forums. Commercially sensitive details will be restricted to the potential commercialization company.

Collaboration – Research Partners

TBD

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