PCC 2005 UNIVERSITY REPORT
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Overview (Status)

- Poplar/Willow research in Canadian universities is expanding, especially in the areas of tree farming, growth and yield, modeling, genomics and genetics; as well as second transformation and value-added processing.
- Reports received from university scientists are summarised in the following slides.

Overview (Hot issues)

1) WESBOGY : Western Boreal Growth and Yield Association (Chair, Dr. Phil Comeau, Department of Renewable Resources, University of Alberta). The association is focusing on development and dissemination of growth and yield modeling technology and information for both natural and regenerated stands in the western boreal mixedwood region, primarily aspen and spruce. Current membership includes forest companies and provincial/territorial governments (Alberta, Saskatchewan and the Northwest Territories).

Overview (Hot issues)

- 2) 2-year project led by Dr. Shawn Mansfield (University of British Columbia) to evaluate different **hybrid poplar clones for value-added processing**. Recently funded (March 2005)
- 3) Development and use of phenotypic and molecular markers for **improving disease resistance in hybrid poplars** (Louis Bernier and Damase Khasa, Université Laval; Selvadurai Dayanandan, Concordia University), funded by FQRNT-Fonds Forestier(2004-2007)

Overview (Hot issues)

- 4) Development of short rotation plantation/agroforestry systems for energy production and greenhouse gas reduction (A. Gordon and N.V. Thevathasan, University of Guelph; D. Sidders, Natural Resources Canada) by ten research centres under the auspices of the Canadian Biomass Innovation Network (CBIN).

Overview (Hot issues)

- 5) Development of intercroppping/alley cropping agroforestry system with hybrid poplar in Quebec (Alain Olivier and Damase Khasa, Laval University; Robert Bradley, University of Sherbrooke, Alain Cogliastro, University of Montreal).
- 6) Aspen research (suckering, physiology, seedling quality, management) by the Centre for Enhanced Forest Management (Investigators: Simon Landhausser, Victor Lieffers, Janusz Zwiazek)

Overview (New developments)

- The new initiative for establishing a **Canadian Tree Farming Network**. This project was submitted to the Network Centres of Excellence in September 2005 (project Director: Dr. Louis Bernier, Laval University)

Technical/Scientific Information (new, Trends, Trials, Research)

- **International Project on Poplar: "Poplar Genome Based Research for Carbon Sequestration in Terrestrial Ecosystems**" by the Office of Biological and Environmental Research (OBER) of the Office of Science (SC), U.S. Department of Energy (DOE).

International Project on Poplar (Continued)

"Poplar Genome Based Research for Carbon Sequestration in Terrestrial Ecosystems"
Research should build on the recently completed genomic sequence of a female black cottonwood tree (*Populus balsamifera* L. ssp. *trichocarpa* (Torr. & A. Gray ex Hook.) Brayshaw, clone Nisqually-1) and, when relevant, the availability of a growing number of microbial genomic sequences to obtain the scientific understanding needed to select, breed, or manage trees to meaningfully enhance sequestration of carbon in tree biomass and/or the soil.

Sector Organization

- See previous reports and information above (Hot issues) to learn about Canadian university scientists involved in poplar/willow research.

Events (both past and planned)

Conferences , Worshops and Symposiums

1) **"IUFRO Tree Biotechnology 2005"** in Johannesburg, South Africa from 6 to 11 November 2005. Detailed Scientific Programme available at http://www.iufro.up.ac.za

2) **Conservation and Sustainable Management of Boreal Forests: A Canadian – Russian Perspective**. This workshop will be held in St. Petersburg State Forest Technical Academy from May 30 to June 3, 2006, with special emphasis on poplar and aspen resources. It is co-organized by five universities: two in Canada (U. Laval and U. of Alberta) and three in Russia (St. Petersburg State Forest Technical Academy, Moscow State Forest University, Petrozavodsk State University).

Reports and Publications

- WESBOGY : Western Boreal Growth and Yield Association Reports (Contact: Dr. Phil Comeau, Department of Renewable Resources, University of Alberta)
- Lignes et Cultures: Published by Ligniculture-Québec (contact: Brigitte Bigue, Forest Biology Research Centre, Pavillon Marchand, Laval University)

Key People

- List of Contacts (in addition to the report presenter)
- See previous reports