

Poplars and Willows on the Prairies

Joint Conference of Poplar Council of Canada, IPC Environmental Applications Working Party, and Poplar Council of the United States

Fantasyland Hotel, West Edmonton Mall, Edmonton, Alberta, Canada
18-24 September 2011

CONFERENCE PRESENTATIONS

(Click on individual title to view presentation in PDF format)

Tuesday, September 20th

Plenary Session - Poplar and willow breeding and genomics

Keynote Speakers:

Richard Hall, *Iowa State University*, **Pierre Perinet**, *Ministère des Ressources naturelles et de la Faune, Québec* and **Brian Stanton**, *Greenwood Resources Inc.* – ‘North American poplar breeding: good news/bad news’ [[Presentation 1](#), [Presentation 2](#)]

Stephen P DiFazio, *West Virginia University*, **Gancho T Slavov**, **Eli Rodgers-Melnick**, **Rose Strickland-Constable**, **Wellington Muchero** and **Gerald A Tuskan** - ‘[Pathways to Populus Improvement in the New Genomics Era](#)’

Technical Session – Poplar and Willow Breeding

Stefan Schreiber, *University of Alberta* - ‘[Genetic variation of hydraulic and wood anatomical traits in hybrid poplar and trembling aspen](#)’

Fahad Rasheed, *INRA, France*, **Béatrice Richard**, **Cécile Barbaroux**, **Eric Paillassa**, **Franck Brignolas**, **Didier le Thiec** and **Erwin Dreyer** - ‘[Are genetic differences for \$\delta^{13}C\$ stable with tree-age and do they reflect differences in transpiration efficiency in poplar \(*Populus xeuramericana*\)](#)’

Raymond O Miller and **Bradford A Bender**, *Michigan State University* – ‘[Spacing effects on stand development and tree growth of seven hybrid poplar clones after four years in a replicated trial in Escanaba, Michigan \(an interim report\)](#)’

Georg von Wuehlisch, *Institute for Forest Genetics, Germany* – ‘[Sustainability in bio-energy production of poplar and willow compared to other bio-energy crops](#)’

Carl Douglas and **Shawn Mansfield**, *University of British Columbia* – ‘[POPCAN: Genetic improvement of poplar trees as a Canadian bioenergy feedstock](#)’

Parallel Session A – General Topics on Poplars and Willows (Room 6)

J J Brown, **A Rodstrom**, **A Del Pozo** and **J Niedbala**, *Washington State University* – ‘[Minimizing insect pest damage](#)’

David Henkel-Johnson, **Edward Bork**, **Ellen Macdonald** and **Barb Thomas**, *University of Alberta* – ‘[Influence of weed composition, abundance, and spatial relations on hybrid poplar trees within plantations](#)’

Vincent Maurin and **Annie DesRochers**, *Université du Québec en Abitibi-Témiscamingue*, - ‘[Physiological effects of pruning on hybrid poplars](#)’

Raju Y Soolanayakanahally, *AAFC-AESB Agroforestry Development Centre, Indian Head*, **Robert Guy** and **Salim Silim** – ‘[Photoperiodic competency and phenological mismatch complicates adaptation of balsam poplar at high-latitudes](#)’

Scott X Chang, **Zheng Shi**, **Daniel Saurette** and **Barb Thomas**, *University of Alberta* – ‘[Using hybrid poplar trees to sequester carbon in Western Canada’s Boreal Region](#)’

Julien Toillon, *INRA, France*, **Bénédicte Rollin**, **Erwin Dallé**, **Jean-Charles Bastien**, **Franck Brignolas** and **Nicolas Marron**, – ‘[Optimization of wood production in bioenergy plantations: Through the use of adequate plant material in terms of resource use efficiencies](#)’

Gary Bank, *Alberta Agriculture and Agri-Food Canada*, **Doug Macaulay**, **Florance Niemi** and **Nora Paulovich** – ‘[Silvopasture and alley cropping opportunities with hybrid poplar in northern Alberta, Canada](#)’

Michelle Sulz, *Alberta-Pacific Forest Industries Inc.* – ‘[Hybrid poplar as an industrial feedstock in Alberta](#)’

Parallel Session B – Genomics

Richard P Pharis, *University of Calgary*, **Raju Y Soolanayakanahally**, **Chang-Yi Xie**, **Leonid V Kurepin**, **Ruichuan Zhang**, **Loeke Janzen**, **Robert D Guy**, **Shawn D Mansfield**, **Virginie Pointeau**, **Faride Unda**, **Barb R Thomas** and **Salim N Silim** – [‘Plant hormone markers for inherently rapid stem diameter & height growth in balsam poplar and hybrid poplar genotypes growing in Canada’s Prairie Provinces’](#)

Adriana M Almeida-Rodríguez, *University of Alberta* – [‘Influence of evaporative demand on aquaporin expression and root hydraulics of hybrid poplar’](#)

Michel Labrecque, *Institut de recherche en biologie végétale, Montreal* – [‘GenoRem: Improving bioremediation of polluted soils through environmental genomics – A new initiative supported by Genome Canada’](#)

Carl Douglas, *University of British Columbia* – [‘Genomic approaches for improvement of poplar for biomass and cellulosic biofuel applications’](#)

Larry Smart, *Cornell University*, **Michelle Serapiglia**, **Fred Gouker**, **Chris Town**, **Haibao Tang**, **Jerry Tuskan**, **Kerrie Barry**, and **Erika Lindquist** – [‘Next generation sequencing of the *Salix purpurea* genome and transcriptome: Comparisons with *Populus trichocarpa*’](#)

Wednesday, September 21st

Plenary Session - Environmental applications

Keynote speakers:

Alistair R McCracken, *Agri-Food and Biosciences Institute, Northern Ireland* – [‘Short rotation coppice \(SRC\) willow: A multifunctional crop’](#)

Michel Labrecque, *Institut de recherche en biologie végétale, Montréal* – [‘Potentials and limitations of willows to address environmental concerns’](#)

Yue (Bobby) Hu, *University of Alberta* – [‘Nutrient loading of aspen seedlings for potential out-planting in oil sands reclamation’](#)

Ian McIvor, *Plant & Food Research, New Zealand* – [‘Global warming and extreme weather events - consequences for soil conservation plantings’](#)

Richard Krygier, *Natural Resources Canada, Canadian Wood Fibre Centre* – [‘Production of short rotation woody biomass for energy feedstocks as a cost-effective solution for the treatment of industrial and municipal biosolids and municipal sewage wastewater’](#)

J G Isebrands, *Environmental Forestry Consultants*, **Chris Slattery** and **Laura Coyne** – [‘Poplar community forests for brownfield redevelopment and economic recovery in Elkhart County, Indiana, USA’](#)

Sharon L Doty, *University of Washington* – [‘Endophyte-assisted phytoremediation of PAHs and TCE with poplar and willow’](#)

Jacquette Mirck and **Bill Schroeder**, *AAFC-AESB Agroforestry Development Centre, Indian Head* – [‘Water uptake by native willows on the Prairies’](#)

Posters

P Hurdle, **R Krygier** and **M Blank**, *Natural Resources Canada* – [‘Development of a decision support tool comparing traditional engineering solutions to short rotation woody crop plantations for treatment of municipal sewage wastewater’](#)

Natalia Startsev, **Martin Blank** and **Richard Krygier**, *Natural Resources Canada* – [‘Water and solutes filtration through soil after municipal biosolids application’](#)

Natalie Ryan and **Robert Guy**, *University of British Columbia* – [‘Uncoupling intrinsic growth potential and phenology in intraspecific hybrids of *Populus balsamifera* L.’](#)

Ronald S Zalesny Jr, *US Forest Service*, **David R Coyle** and **Jill A Zalesny** – [‘Current status of the comprehensive database of North American poplar research published from 1989 to 2010’](#)

Ronald S Zalesny Jr, **Jill A Zalesny**, **Bruce A Birr** and **Adam H Wiese**, *US Forest Service* – [‘Chloride uptake of *Populus* energy crops grown with high-salinity irrigation’](#)

- Ronald S Zalesny Jr, Deahn M Donner**, *US Forest Service*, **David R Coyle, William L Headlee** and **Richard B Hall** – [‘Regional sustainability analysis of siting *Populus* energy crops in the Midwest, USA’](#)
- Ronald S Zalesny Jr**, and **Adam H Wiese**, *US Forest Service* – [‘Date of shoot collection, genotype, and original shoot position affect growth and biomass of *Populus* energy crops during field establishment’](#)
- Julien Toillon, Emilie Kartner, Bénédicte Rollin, Erwin Dalle, Laurent Roux, Laureline Besdeberc, Romain Leray** and **Nicolas Marron**, *INRA, France* – [‘Optimization of wood production in bioenergy plantations’](#)
- Jeremy Morris, John Kort**, *Agroforestry Development Centre, AESB-AAFC*, and **Richard Pharis** – [‘Enhancing biomass in *Salix* spp. with exogenous gibberellin A₃’](#)
- T Mamashita**, *Natural Resources Canada*, **G R Larocque, A DesRochers, J Beaulieu, B R Thomas, A Mosseler, D Sidders, J Major, F Tremblay, S Gaussiran** and **D Kamelchuk** – [‘Morphological responses of different hybrid poplar clones and willow species to competitive stress to maximize bioenergy production’](#)
- Bernard G McMahon, William E Berguson, Daniel J Buchman, Thomas E Levar, Craig C Maly**, *University of Minnesota – Duluth*, **Timothy C O’Brien** and **Don E Reimenschneider** – [‘*Populus* breeding and hybrid poplar development in Minnesota: 16-year update’](#)
- Birger Hjelm**, *Swedish University of Agricultural Sciences* – [‘Taper and volume equations for poplar trees growing on farmland in Sweden’](#)

