FastTRAC Meeting
Proof of Concept of Genomic Selection in Tree Breeding

(Open to all conference participants, Thursday June 29, PM)

Tree improvement practitioners have heard of advanced genetic technologies employed in Brazil and the southeastern United States. Now there is opportunity to see a practical example of marker systems to assist tree breeding in eastern Canada. *FastTRAC* represents a "proof of concept" for genomic selection in spruce improvement programs from Eastern Canada. Real users are bringing real genetic resources to the development and use of new methods based on genomics.

FastTRAC (Fast Tests for Rating and Amelioration of Conifers) is a three-year project funded by Genome Canada, Génome Québec, and multiple partners through the Genomics Applied Partnership Program (GAPP). The project brings together scientists, tree breeders, foresters, and economists to demonstrate and apply genomic-assisted selection in eastern Canadian tree improvement programs. Project partners will use FastTRAC models to rate candidate trees for productivity and resilience attributes, thereby accelerating the selection and reforestation of improved and adapted stock.

The CFGA session will present the thrust of *FastTRAC*, its focus on genetic gain through genomic selection in white and Norway spruce, the commitment and roles of user-partners, the benefits to be realized and corresponding resources required (including genetic resources). Economic and financial perspectives will cover silvicultural scenarios for cost-benefit analysis, impacts on costs of production, valuation of volume and quality gains, integration of genomic selection with conventional breeding, and analysis of deployment with or without somatic embryogenesis.

The session is designed to encourage discussion of questions such as: what would it take to adopt this approach in other breeding programs? What is needed in the field to make use of genomics tools? What might change in approaches to field testing? What genetic resources do we have to work with? What factors might influence business decisions to adopt genomic technologies? What are the economic barriers to adoption, how could they be overcome?

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FastTRAC Workshop at CFGA Meeting (June 29th 2017)

1:00 – 1:10 PM	Welcoming remarks and workshop objectives
1:10 – 1:40 PM	The *FastTRAC* Project: The implementation of Genomic Selection (GS) in conventional tree breeding programs in Quebec and New Brunswick
1:40 – 2:00 PM	Discussion • What are the perceived technical obstacles for integration of GS in breeding programs? • What is needed to make operational use of genomic tools?
2:00 – 2:25 PM	Financial and economic assessment of the implementation of GS in conventional tree breeding programs
2:25 – 2:50 PM	Discussion • What are the perceived factors influencing business decisions to integrate genomic tools into tree breeding programs? • What are the perceived financial barriers to adoption? • How could they be overcome?
2:50 – 3:00 PM	Concluding remarks

Further information

Program Website: www.fasttracproject.ca.