

## **Poplar tree improvement for biomass production in the PNW**

### **Carlos Gantz**

Managing Director, Global Tree Improvement, Biological Research Group  
GreenWood Resources Inc.  
Portland, Oregon

GreenWood Resources Inc. (GWR) has developed a poplar tree improvement program for the PNW and other countries, which involves both a long term and short term strategy. In the long-term strategy recurrent breeding of four key species employed in poplar hybridization is used to improve future hybridizing value of parents for the next cycle of inter-specific breeding. The breeding process incorporates multiple populations using growth, stem straightness and specific gravity as selection criteria, to respond to a variety of markets, including biomass production. In the short-term strategy, non-recurrent, F<sub>1</sub> inter-specific crossing is used to develop hybrid varieties for immediate deployment to different sites and end products. While the main focus of varietal selection in the PNW had been for solid wood products, clonal trials for biomass selection have been more recently established. Genetic parameters obtained from these trials, will be presented and their impact on the breeding strategy discussed. Clonal variation for other wood properties related to biofuels production will be discussed.