ADVANCING ENERGY CROP SUPPLY SYSTEMS IN THE SOUTHEASTERN UNITED STATES

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Almost half of the nation's supply of advanced biofuels, as mandated by the renewable fuels standard, will be met with the lignocellulosic resources of the southeast. While producing roughly 10 billion gallons of alternative fuels is well within the region's capacity, a considered and thoughtful transition is needed to insure a sustainable supply of biomass for this new industry. Short rotation woody crop (SRWC) systems are expected to be an important source of biomass for the production of advanced biofuels in the region. Although a number of hardwood species are being evaluated as potential candidates, hybrid poplar has been advanced as a model energy crop, and is the target of considerable research and development.

The Southeastern Partnership for Integrated Biomass Supply Systems (The IBSS Partnership) has recently established several trials and demonstration plots in Tennessee, North Carolina and Alabama using state-of-the-art genetic material. Over 40 poplar varieties are being evaluated for growth and yield, as well as quality characteristics. In addition, coordinated trials in Auburn and Huntsville, Alabama, and Knoxville, Tennessee include the same varieties at three different planting densities allowing direct comparison of site effects. This poster will summarize the effect of spacing on biomass yield for the different poplar varieties after three growing seasons in east Tennessee. Results from chemical analysis of both the organic and inorganic components of selected samples will also be reported and discussed in terms of biomass quality for conversion processes. The information from these plots has guided the selection of varieties for a recently installed commercial planting in the region.

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Preferred Topic: SRWC production alternatives (Fiber, timber, and bioenergy)

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