COMMERCIALIZING WILLOW BIOMASS CROPS FOR BIOENERGY AND BIOPRODUCTS IN THE NORTHEASTERN AND MIDWESTERN UNITED STATES

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Interest in the commercial production of willow biomass crops has developed rapidly due to changes in prices of fossil fuels, concerns about energy security, and growing pressure to address issues related to global climate change. Several bottlenecks to commercialization are being addressed, including the production of willow planting stock at Double A Willow in western New York and a new harvesting system being developed in conjunction with Case New Holland. Catalyst Renewables installed the first commercial willow acreage in North America in the spring of 2006 and has a goal of establishing several thousand acres over the next few years. At the market end the first commercial-scale test of willow biomass crops in North America is under way at the Lyonsdale Biomass combined heat and power (CHP) plant in upstate New York with several thousand tons of willow biomass. Several other power and CHP projects as well as small-scale heating projects are being developed with willow as a component of the feedstock. Two pilot wood-based biorefineries are being built in upstate New York and willow has been successfully tested in both of these processes as well as several other conversion processes.

Modification of the Conservation Reserve Program and the Conservation Reserve Enhancement Program, the federal biomass tax credit for closed-loop biomass, and the New York Renewable Portfolio Standard have all placed value on some of the environmental and rural development benefits associated with willow biomass crops. The combination of these improvements has created a solid foundation for the commercialization of willow biomass crops in the northeast and midwest United States. However, there is a lack of experience with the establishment and management of willow biomass crops at a commercial scale. To avoid large-scale failures or disappointing production early in the development of the crop, an ongoing outreach and research program to support the commercialization is being conducted.

KEY WORDS: Salix, short-rotation woody crops, willow harvesting systems, biorefinery

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*** **INVITED SPEAKER** ***