

WOODY BIOMASS CROPS IN THE MIDWESTERN UNITED STATES: PAST, PRESENT, AND FUTURE

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Hybrid poplar research has a long history in the Midwest beginning with the pioneering work of Dave Dawson at the U.S. Forestry Sciences Laboratory in Rhinelander, Wisconsin, in the 1970s. Since that time, research has been under way by a number of organizations throughout the region, including the US Forest Service, Iowa State, and the University of Minnesota. This foundation of existing research in the region eventually led to the commercial application of hybrid poplar plantations to supply fiber to a paper mill in central Minnesota. A plantation program was started in 1995 by Champion International and is being managed by Verso Paper, the current owner of the mill at Sartell, Minnesota. This project consists of more than 23,000 acres at this time. Research in poplar culture and genetic improvement accelerated in Minnesota with the formation of the Minnesota Hybrid Poplar Research Cooperative in 1996, which has carried out an aggressive program of breeding and field testing on Verso Paper property as well as other sites throughout Minnesota. Results of yield tests in commercially managed stands indicate that yields of current poplar clones can be expected to range from a minimum of 3.5 tons ac⁻¹ yr⁻¹ to 5.5 tons ac⁻¹ yr⁻¹. Large-scale genetics field tests show promise for improvement of yield in the future with superior clones oftentimes exhibiting yields of 1.5 to 2.0 times that of current commercial hybrids. The history of poplar research and commercial application will be presented along with a discussion of current activities and needs for the future.

KEY WORDS: hybrid poplar, tree improvement, productivity, breeding

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*** INVITED SPEAKER ***