

EVALUATING WILLOW AND HYBRID POPLAR CLONES FOR BIOMASS VOLUMES

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Biomass consumption by various end users in Saskatchewan is on the verge of unprecedented growth. The emerging co-generation, wood pellet, and ethanol industries are exploring both economical and sustainable sources of raw products. Willow and hybrid poplar biomass plantations in other jurisdictions have been shown to produce a substantial amount of wood fiber per acre. In Saskatchewan the use of willows has been limited mainly to shelterbelts. During last several years, interest has increased in the potential use of short-rotation woody crop (SRWC) biomass from willow and hybrid poplar. The Nipawin Biomass Ethanol New Generation Cooperative Ltd. currently has a project in its final stages that is evaluating a catalyst for use in its woody biomass gasification process. Once this catalyst is proven it will substantially increase the demand for using woody biomass to produce ethanol. The Saskatchewan Forest Centre project will evaluate several hybrid willow and hybrid poplar clones at three sites in North Central and North East Saskatchewan. The purpose of this project is to evaluate the volume of each clone produced over several years. All plants will be coppiced after the first year and then a set number will be coppiced every 2 years and every 3 years. Then the volumes will be compared to the other harvesting timelines to determine whether clones harvested annually produce less, more, or the same amount as the harvest timeframe that cuts every 2 years or every 3 years.

KEY WORDS: biomass, willow, hybrid poplar, co-generation, ethanol, biomass volumes, SRWC

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