WOOD BIOENERGY SYSTEMS IN CANADA

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The development of woody short-rotation intensive-culture (SRIC) biomass productions systems is just beginning in Canada and presents a unique opportunity to engage farmers in growing a different crop. Bioenergy production systems are feasible in Canada but will depend on selecting the right clones that are suitable to our climate zones and soils but that also produce satisfactory yields. Whether these systems can be sustainable in the long term is still uncertain as we have no trials to evaluate potential long-term productivity and nutrient cycling; however, current research suggests that fertilization may not be necessary in the short term when plantations are established on agricultural land. Among the obstacles for producer involvement in bioenergy systems is first of all changing the farmer mindset that growing a crop for longer than 1 year is not an impediment to earning money. At one time or another, most farmers in the prairies have removed woody biomass on their farms to increase their capacity for growing crops and are reluctant to go back into "woody" systems. However, the newer generation of farmers may be less reluctant to do so because of an ability to take more risks, a greater environmental consciousness and better education. High initial establishment costs (>$10,000/ha) may also deter producers from participating in woody biomass systems without government incentives or other mechanisms to reduce up-front establishment costs. Finally, having a stable, growing industry that can utilize this material is essential in order for producers to see the value in committing to growing woody biomass for the long term.

KEY WORDS: woody biomass, farmer perceptions, sustainability

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