



# news release

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**Winfield Resources Limited**

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**ETHANOL PRODUCTION FROM CELLULOSE**

The current crisis of global warming is largely due to the release of greenhouse gases from man-made sources into the atmosphere. Carbon dioxide generated from the consumption of fossil fuels in motor vehicles is one of the major culprits. The use of biologically derived fuels or biofuel in vehicle engines diminishes the accumulation of carbon dioxide in the atmosphere and, therefore, reduces the impacts of global warming. Fuel-grade ethanol is an important biofuel. Winfield Resources is committed to developing fuel-grade ethanol facilities to supply the rapidly expanding North American markets, currently standing at 2 billion USG per year. To this end, Winfield will be constructing a fuel-grade ethanol facility in High Level, Alberta. The plant will utilize conventional technology and locally grown cereal grains, such as wheat and barley, as the feedstock.

President G.W. Bush is calling for a ten-fold increase in biofuel production to combat global warming. Such an increase in production from food sources, notably corn and wheat, would initiate an intolerable escalation in the prices of these vital food sources. Currently, about 1/2 of all the corn production in the USA is dedicated to ethanol production and is already leading to alarming increases in prices. A ten-fold increase in the consumption of these food sources would be intolerable. An alternative feedstock for the production of fuel-grade ethanol is urgently needed and Winfield is, therefore, turning its attention to the abundant low-cost sources of biomass from plant material. Biomass is largely composed of cellulose, which can be converted to ethanol. Substantial research activity is underway directed at the development of a commercial process.

Because there is no commercially viable process for the conversion of cellulose to ethanol, Winfield's priority is to participate in the R&D of a suitable technology under development and, thereby, secure a commanding technical position for the early construction of a plant. Three promising proprietary technologies have been identified and discussions are underway with the process developers. The first option employs a high temperature and pressure dissolution of the biomass in a solvent. The process steps recover lignin suitable for use in producing a binder for use in the production of oriented strand board and plywood. The sugars remaining in solution are converted to ethanol using conventional fermentation techniques and a high value sugar substitute currently sold in North America.

The other two processes under evaluation both begin with a high temperature gasification of the biomass to syngas. Syngas is composed of hydrogen, carbon monoxide, and carbon dioxide. These two process options utilize the syngas to produce ethanol by different routes. One uses a catalyst operated at high temperature and pressure while the second employs a low temperature fermentation step for the conversion.

During the next month, Winfield will be selecting one or two of the three options for detailed evaluation and preliminary negotiations with the owners of the technology. An investment will be made in one of the R & D programs to fund the construction and operation of a pilot plant. Winfield has engaged TDI Technology to undertake the evaluation of the three options and represent Winfield in the piloting phase.

Sixty Million Dollars in the form of a segregated capital pool is available to Winfield Resources Limited on a draw down basis, subject to acceptance of a full feasibility report.

On behalf of the Board

**Robert Michael Foley**  
President and CEO

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