



Focus 2011: Business at the Border Conference Ethanol – An overview

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Overview

1. Who we are and what we do
2. Ethanol backgrounder
3. The biorefinery of the future



Greenfield is Canada's biofuels leader



- GreenField is Canada's largest Ethanol producer.
- We produce and distribute over half a billion litres per year of corn ethanol fuel, industrial and beverage grade alcohol.
- We own and operate four dry mill corn ethanol plants in Ontario and Quebec.
 - Johnstown, Ontario
 - Chatham, Ontario
 - Tiverton, Ontario
 - Varennes, QC
- We also have industrial alcohol packaging and distribution facilities in Canada and the US.
- GreenField is committed to research and development. Our Centre of Excellence is located in Chatham, Ontario.

GreenField buys local

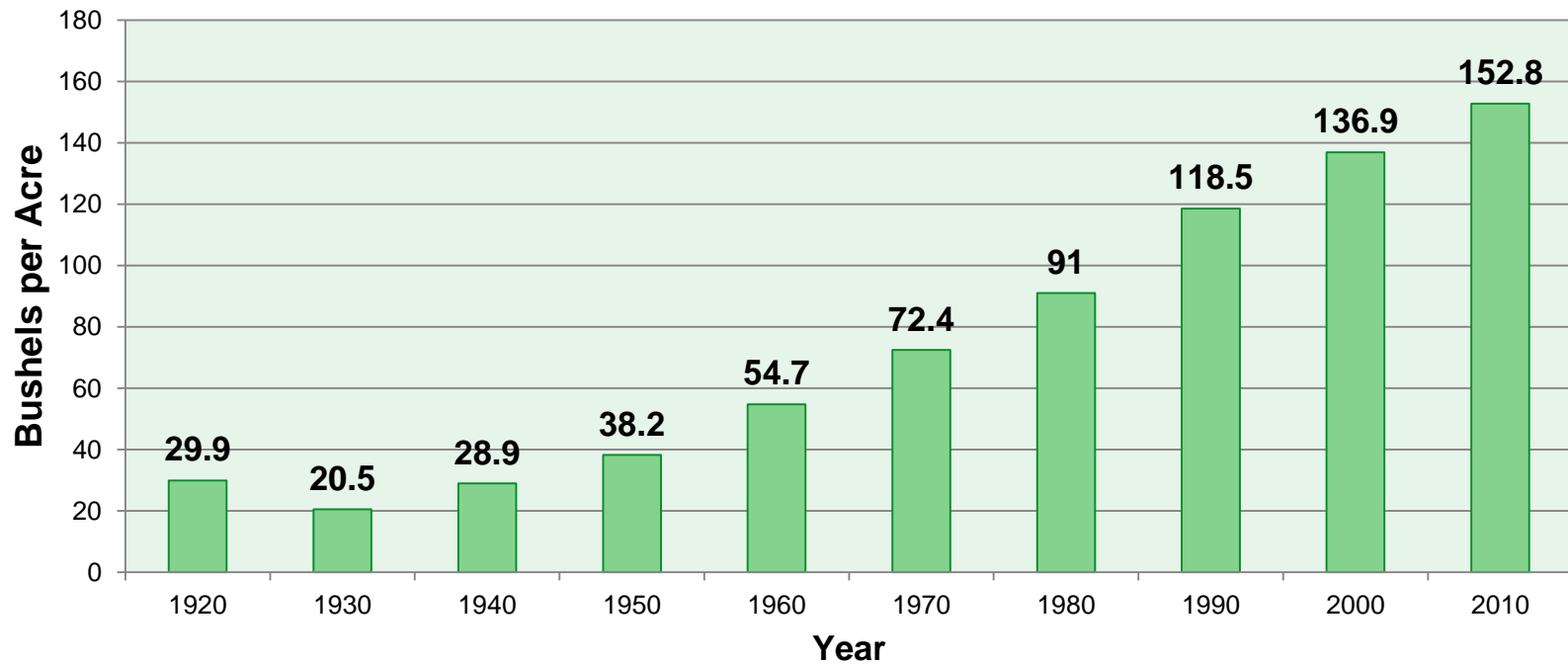


- **At GreenField we buy local corn. Over \$400 million dollars of corn will be purchased this year to make ethanol in Ontario**
- **Ethanol positively impacts at least 15,000 farms in Ontario**
 - Higher farm gate income due to local basis value for corn.
 - Ethanol created a new Ontario market for 83 million bushels of corn.
- **Farmers now have direct market access to the industrial customer through programs like GreenField's 'Buy Direct' program, which offer a variety of risk management tools for the grower.**



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Yield, Bushels of Corn per Acre (U.S.A.)



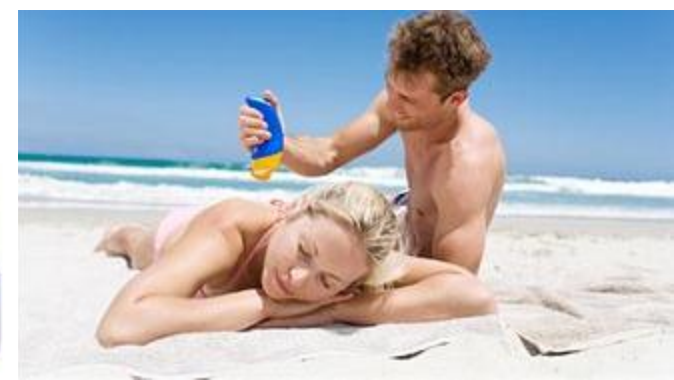
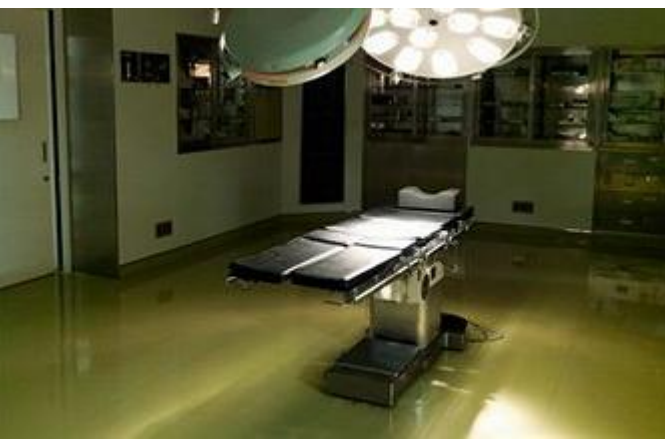
About GreenField....

Simply put, our products make your life better.

We make industrial alcohol

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- It is used to make thousands of consumer products like soaps, detergents, printing inks, paints, shampoos, sunscreens, perfumes, shaving creams and hand cleansers that help control H1N1 and many other products.
- It is a cleaning agent and disinfectant used in hospitals to clean operating rooms; or swab an arm before giving an injection.
- It is used in every single food processing plant everywhere to clean and disinfect any equipment that touches food.



GreenField is a world leader in high purity alcohol

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- GreenField's alcohol is used in the process of making plant made pharmaceutical; medicines to combat cancer, connective tissue diseases and crones disease.
- Our Clean Rooms and White Rooms are fully FDA approved.



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We make beverage alcohol

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We make fuel ethanol & high protein animal feed



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Ethanol fuel provides many benefits compared to gasoline

Pollution reduction

Ethanol reduces every tailpipe emission compared to gasoline.

GHG reduction

A 2009 study by ChemInfo, found that ethanol from corn ethanol plants in Canada provides a 62% reduction of GHG emissions compared to gasoline. Cellulosic ethanol promises even greater GHG reductions approaching 100%.

Jobs and Rural Economic Development

Doyltech just completed a study on our Johnstown refinery and found that in addition to the income for governments through an increased tax base there is an \$89 million dollars of incremental income to the area -- \$162 if you consider the impact on corn basis in the area.

Energy Security

Ethanol displaces foreign oil imports.

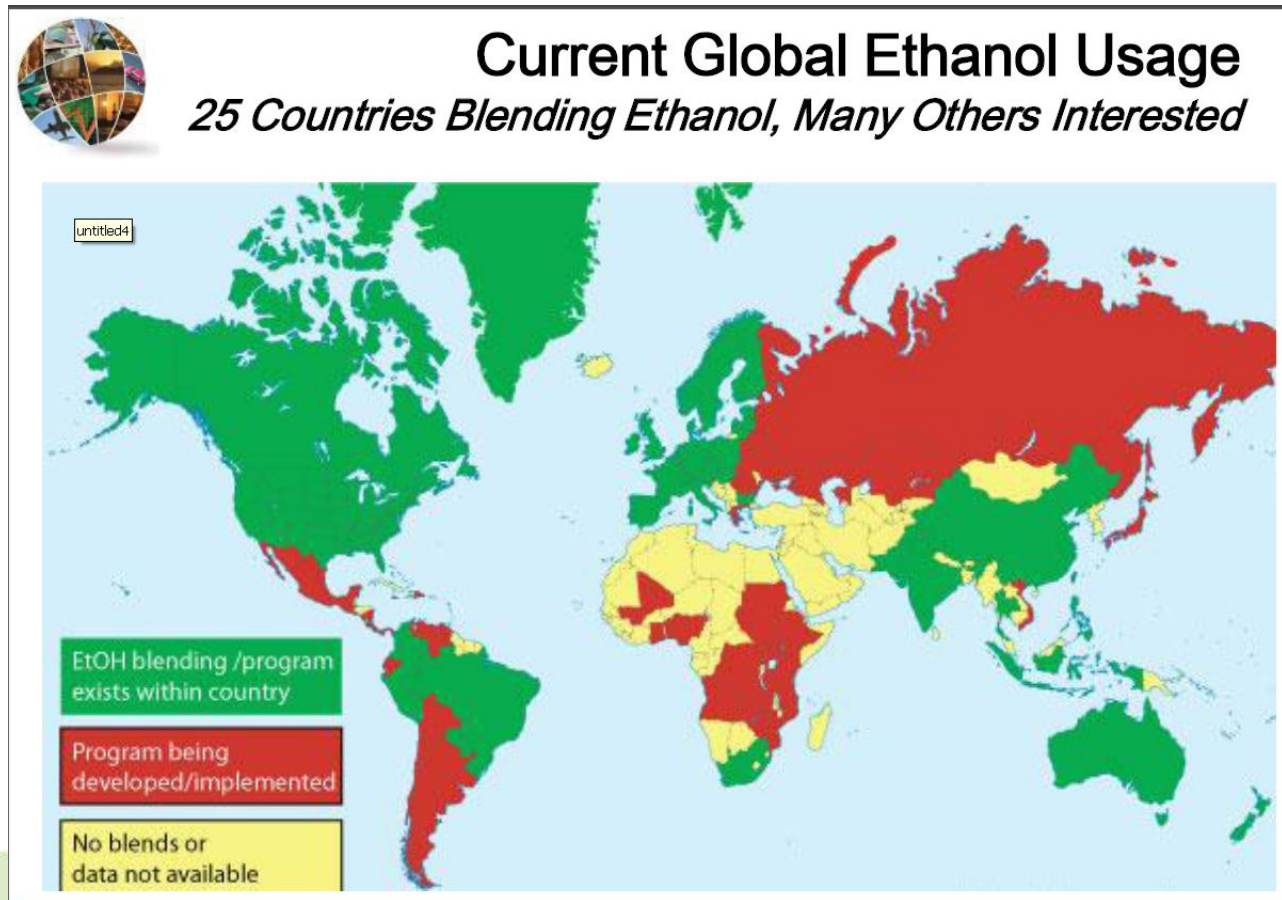
Octane enhancement

Ethanol provides octane for gasoline without the harmful additives like benzene.

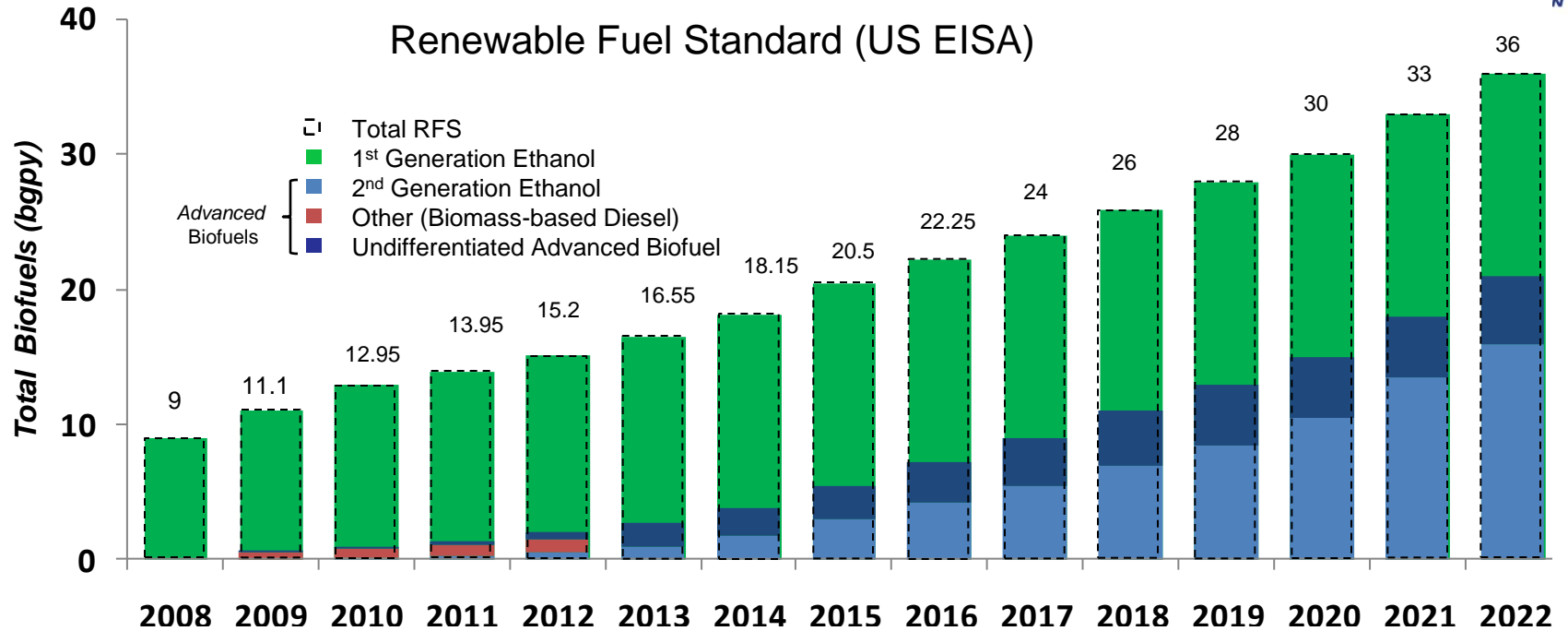


The ethanol industry is growing around the world

Annually, 89 billion liters of biofuels are produced globally – this will more than double by 2015



Ethanol demand is set to increase in the USA



Future value will be seen in the cellulosic ethanol market

Canada's Biofuel Industry

- **There are 28 renewable fuels plants in Canada (16 ethanol plants).**
 - These plants produce a total of 2.25 billion litres of renewable fuels annually.
 - They generate gross annual economic benefits of \$2.139 billion to the Canadian economy across Canada.
 - These operations are creating 1,038 direct and indirect jobs annually.
- **In September 2010, the Canadian Renewable Fuels Standard mandating 5% ethanol content will come into force.**
 - There is currently no public policy in place to grow the industry capacity.

Canadian Ethanol Plants, 2010	Capacity (ML per Year)
Aylmer, Ontario	162
Chatham, Ontario	162
Collingwood, Ontario	50
Havelock, Ontario	80
Johnstown, Ontario	225
Ottawa, Ontario (R&D facility)	4
St. Clair, (Sarnia) Ontario	225
St. Clair, Ontario (expansion)	225
Varennes, Quebec	132
Minnedosa, Manitoba	130
Belle Plaine, Saskatchewan	150
Lanigan, Saskatchewan	12.5
Lloydminster, Saskatchewan	130
Unity, Saskatchewan	25
Weyburn, Saskatchewan	25
Red Deer, Alberta	40

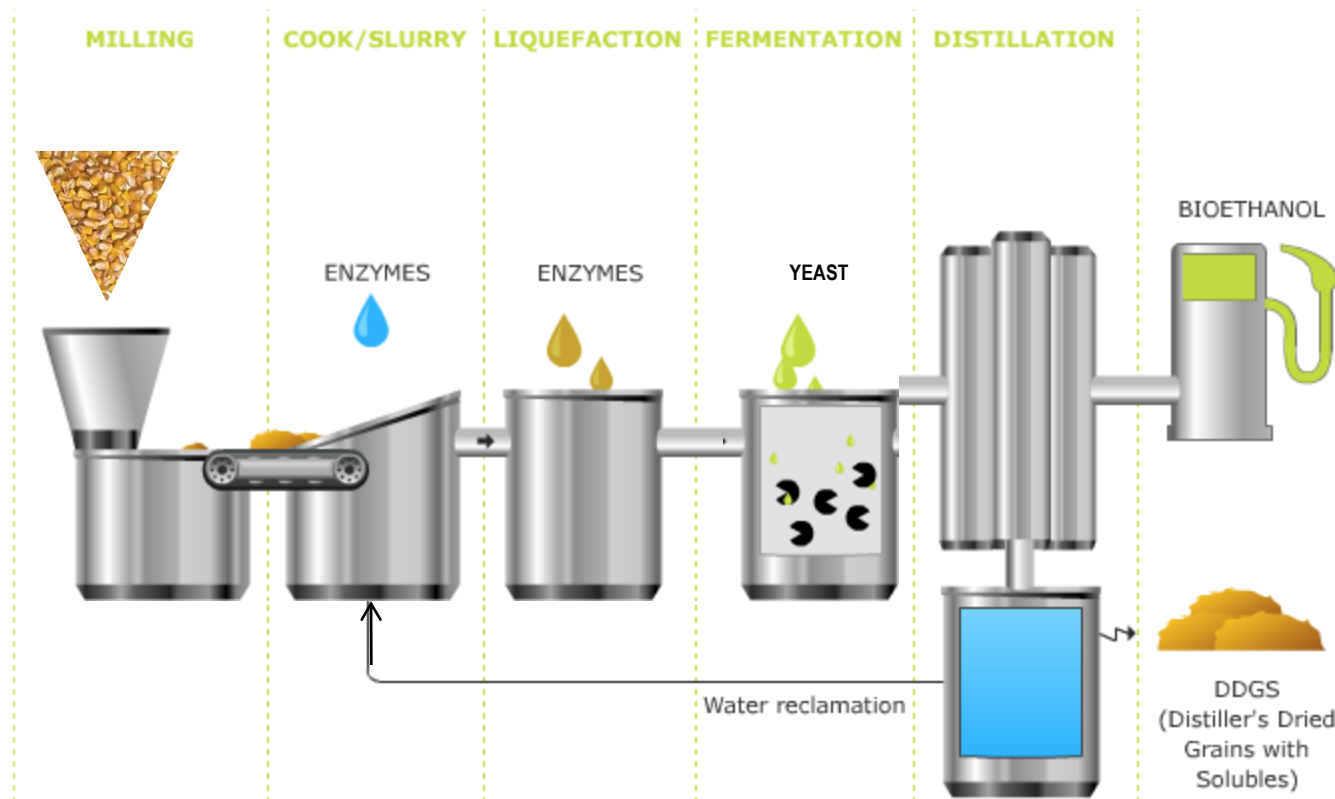
GreenField is investing in the biorefinery of the future

The first step is ethanol from non traditional feedstock's...

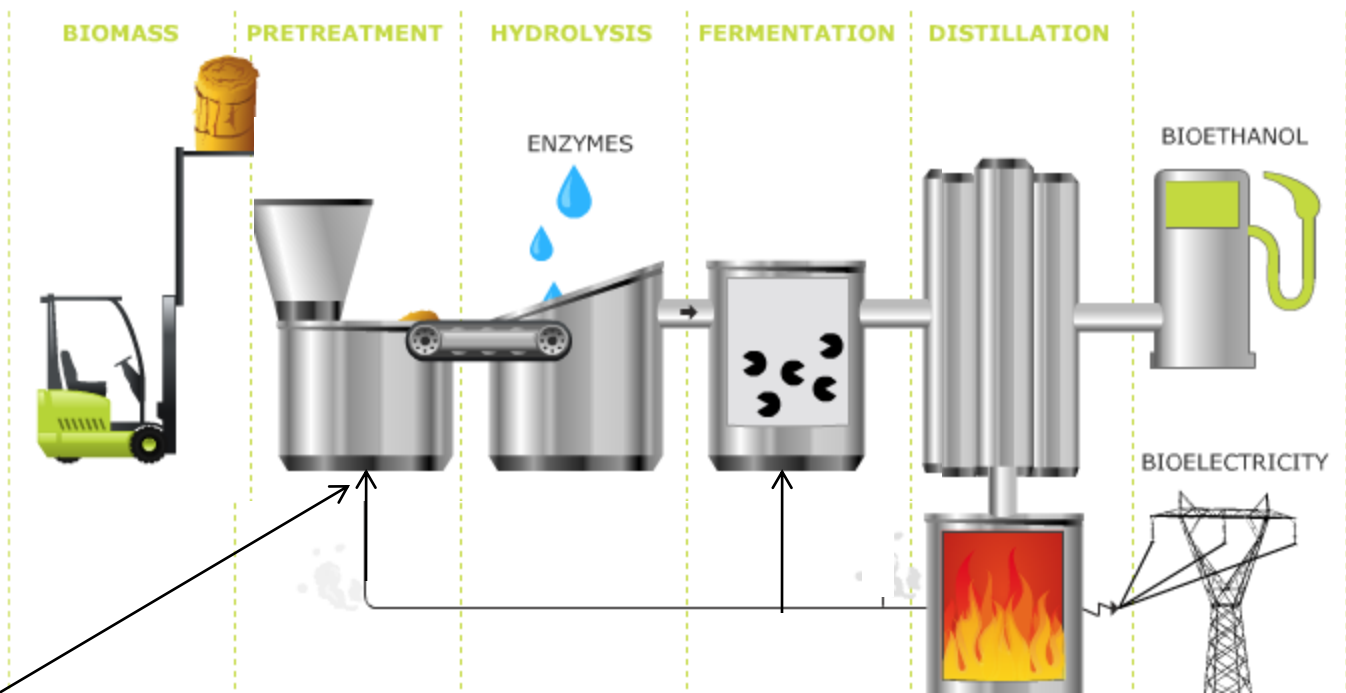
- **Cellulosic Ethanol using fermentation to convert biomass to ethanol.**
 - Today we can create ethanol from corn cobs. This is GreenField's patented technology. This technology is the foundation for making ethanol from other agricultural and forestry waste.
- **Cellulosic Ethanol using Gasification to convert municipal solid waste to ethanol.**
 - GreenField is in partnership with Enerkem. Enerkem's first plant is being built in conjunction with the City of Edmonton waste diversion department.
- We have two test plots in South Western Ontario to test energy crop potential for Sorghum (one of the top 5 cereal crops in the world, along with wheat, oats, corn & barley).



Today our ethanol is made from locally grown corn using a dry distilling process



Cellulosic requires a pretreatment of the feedstock



**GreenField's
patented
process**

GreenField's Centre of Excellence



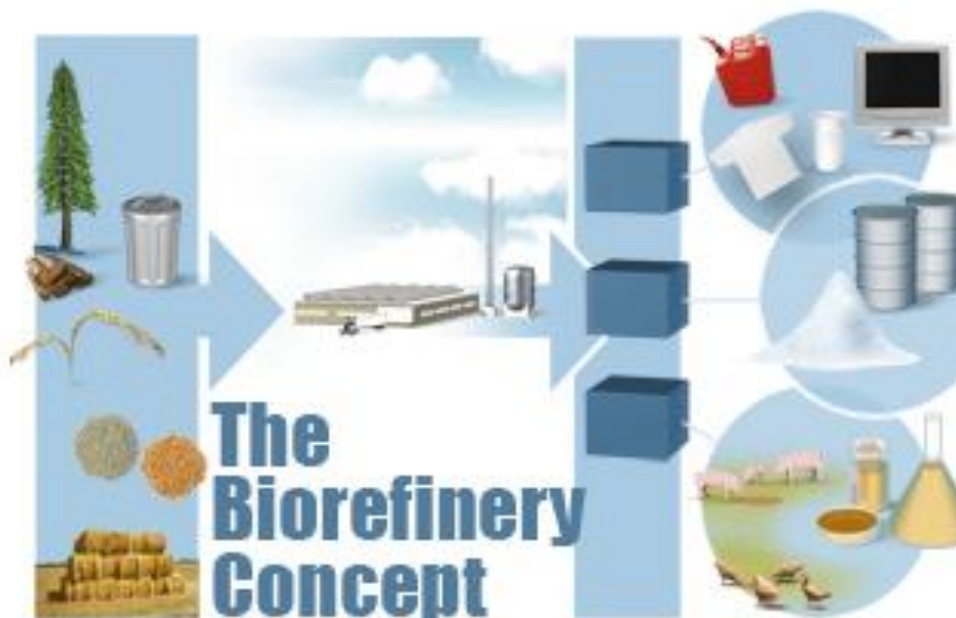
14 scientists and a 10,000 sq ft Facility

We will bolt-on” this new technology to our existing plants



- Creating biofineries across rural Ontario and Quebec
- Leveraging the current infrastructure to create efficiencies.

The opportunities do not end with fuel...



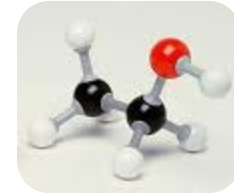
The biofuels industry helps establish the technology and the infrastructure that will make it possible to replace oil and gas in many industries:

- Plastics, lubricants and many others

GreenField's biorefinery vision



Biomass
cogeneration



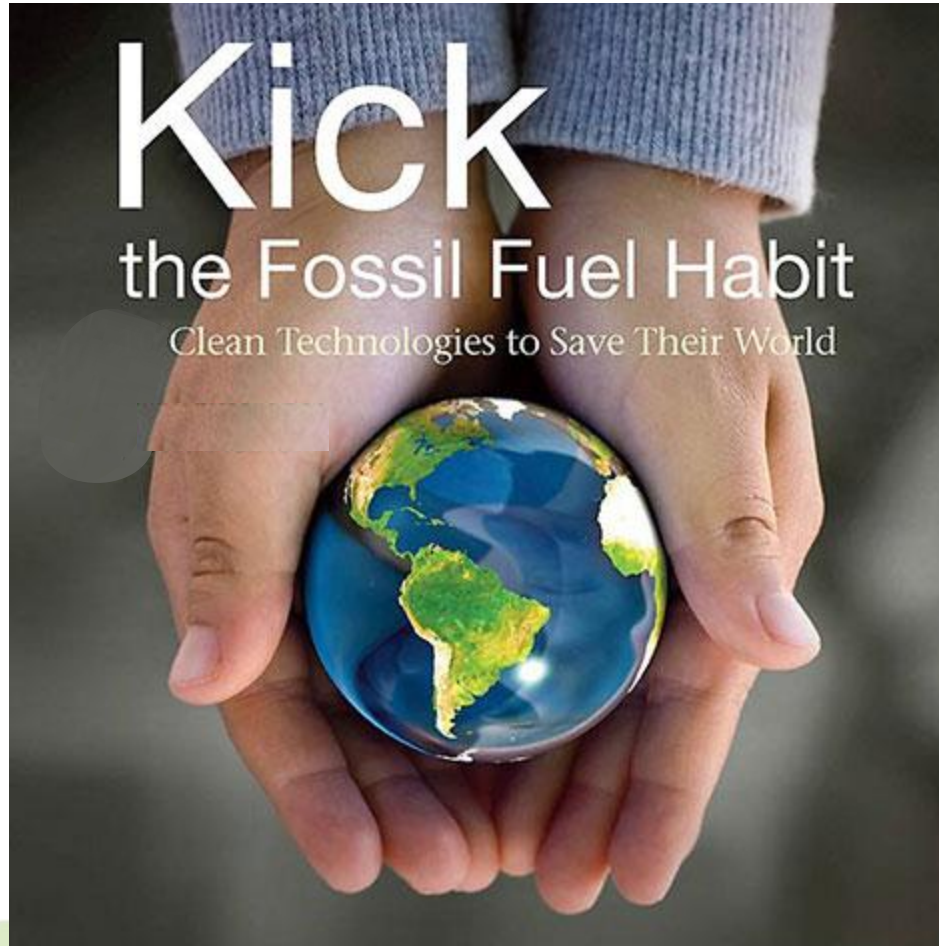
GreenField Ethanol announces the launch of G2Biochem



- On May 9, 2011 Greenfield announces the formation of G2Biochem a collaborative partnership.
- The partners are Novozymes a world leader in bioinnovation and Andritz a world leader in the design and manufacture of large equipment.
- G2Biochem has successfully processed a variety of biomass feedstocks.
- Construction of phase one of the demonstration plant is scheduled for this summer (2011).

*For more information on any of GreenField's initiatives visit
www.greenfieldethanol.com*

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