

**Federal Reserve Bank of Kansas City  
2014 Agricultural Symposium**



**Green Plains**

**Structural Transitions in Global Agriculture  
The Agribusiness Response  
July 15, 2014**



# Todd Becker

President & Chief Executive Officer

## **Green Plains Inc.**

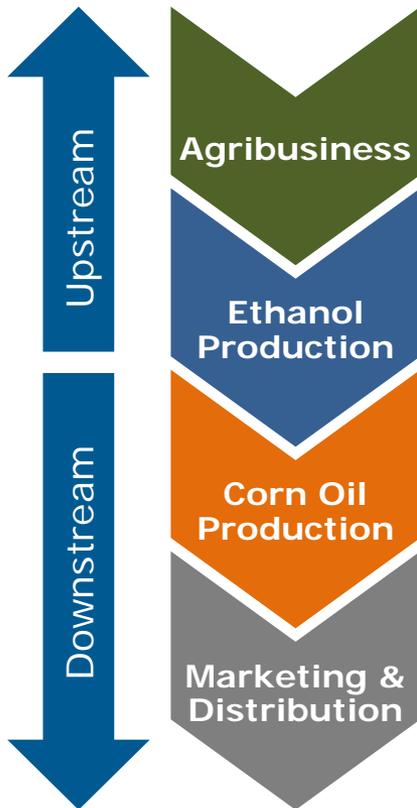
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NASDAQ: GPRE

# Green Plains at a Glance



- 34.6 million bushels of storage and handling capacity, including ethanol plant locations, Cattle Feedlot
- 12 dry mill ethanol plants in six states, with over 1 billion gallons of annual production capacity
- 250 million pounds of annual industrial corn oil production capacity
- Over 1 billion gallons of annual marketing and distribution capacity; 8 blending terminals in key markets; trading flows around 10 primary commodities
- **Green Plains is a Fortune 1000, diversified commodity processing business with grain handling and storage, ethanol production, corn oil production, a cattle feedlot and commodity marketing and distribution services**
  - The Company has a market capitalization of \$1.2 billion<sup>(1)</sup> and an enterprise value of \$1.5 billion<sup>(2)</sup>
- **Incorporated in 2004 and based in Omaha, Nebraska, Green Plains is North America's fourth-largest ethanol producer**
- **The Company has built a diversified value chain of synergistic businesses, amassing over \$1.5 billion in assets**
  - Processes approximately 10 million tons of corn (2.7x more corn than China imported from the USA in 2012 - 2013)

Source: Company filings and management

1. Based on July 8, 2014 closing price of \$34.00 and 37.41 million shares outstanding per 10-Q

2. Based on \$642.5 million of total debt and \$229.9 million of cash and restricted cash as of 3/31/2014

# The Importance of Ethanol to Modern Day Agricultural Policy



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- Reduced our dependence on foreign oil
- Created jobs in rural America and strengthened the Midwest economy
- In 2013, ethanol contributed \$44 billion to GDP and \$8.3 billion in tax revenue
- Ethanol is the single largest demand source for corn, or any commodity around the World consuming 140 million tons annually
- Corn exports at its highest level in 2007 was 68 million tons
- In 2007, corn price exceeded the cost of production for the first time in over a decade, the same year RFS2 was implemented
- Net farm income has risen 86% since 2007
- Federal payments to corn farmers in 2012 were among the lowest in 25 years and 82% lower than in 2006

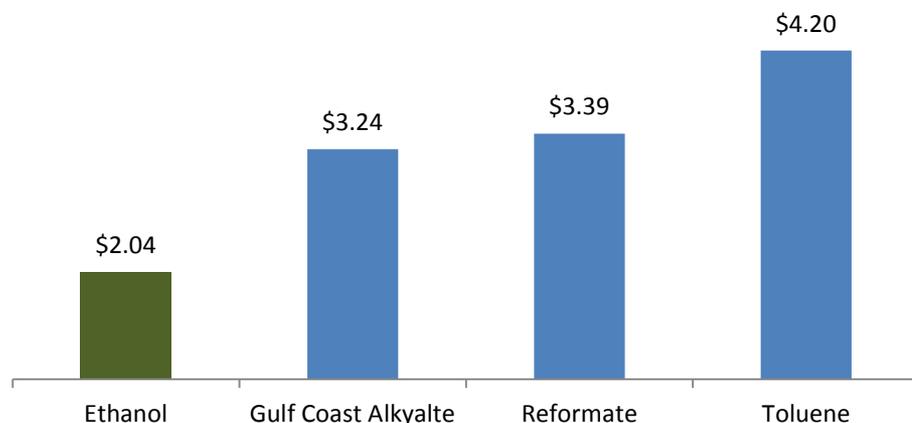
# Ethanol's Competitiveness as a Fuel Molecule



## U.S. ethanol is the cheapest fuel molecule in the World

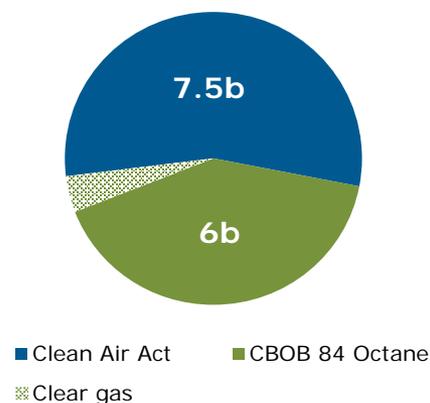
- World is octane and oxygenate short
- Ethanol has an octane rating of 113 per gallon
- Used to upgrade fuel to premium and sub-grade to spec
- Reduces CO<sub>2</sub> emissions by up to 50%; Reduces toxics by 13% (mass) and 21% (potency)
- Lowers tailpipe fine particulate matter by 50% and secondary particulate matter formation

### Ethanol Versus Other Octanes <sup>(1)</sup>



*Substitute pricing reflects current low demand and is not representative of pricing in high demand substitution scenario*

### Ethanol Demand in the U.S. Fuel Supply <sup>(2)</sup>



Base U.S. ethanol demand

- 7.5 billion gallons for Clean Air Act
- 6 billion gallons for Octane enhancement - CBOB

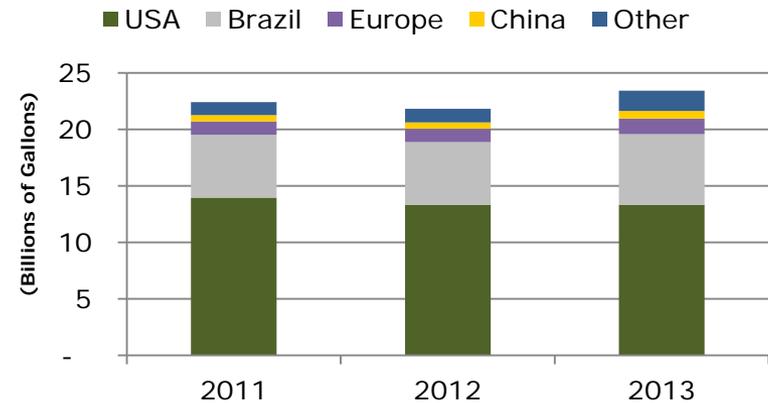
# Industry Conditions – What's Different Now



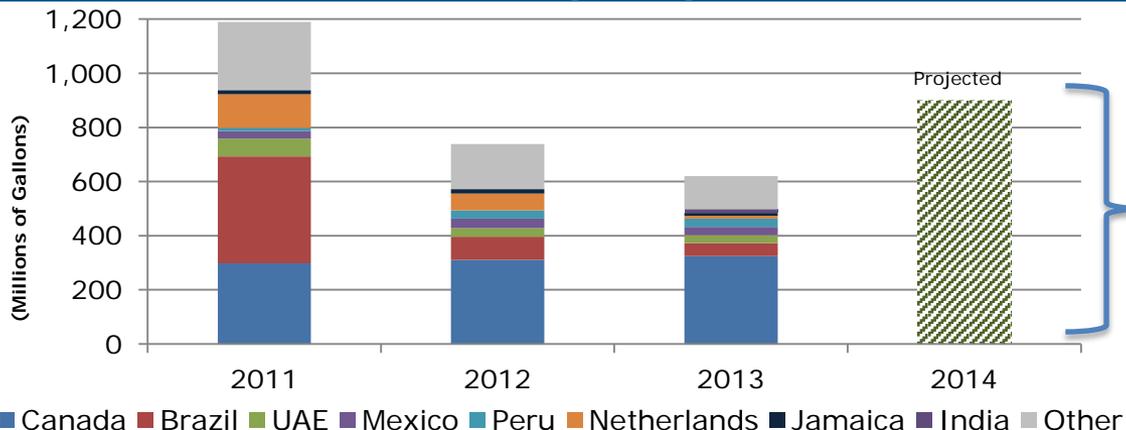
## Overview

- The global ethanol industry produced an estimated 23.4 billion gallons in 2013, 10% CAGR from 2007
  - More Countries putting renewable fuel standards in place
  - U.S. growth and demand are driven by:
    - Ongoing and increasing export demand
    - Ethanol is the most available oxygenate and octane
- Higher ethanol blends are coming - E15

## Global Ethanol Production



## Top Importers of U.S. Ethanol



- U.S. ethanol has exported 356.6 million gallons in Jan-May, 2014
- Ethanol exports are anticipated to be between 800 million and 1 billion gallons
- World demand growing at a 2-3% annually

# Corn versus Sugar – Advantage USA!



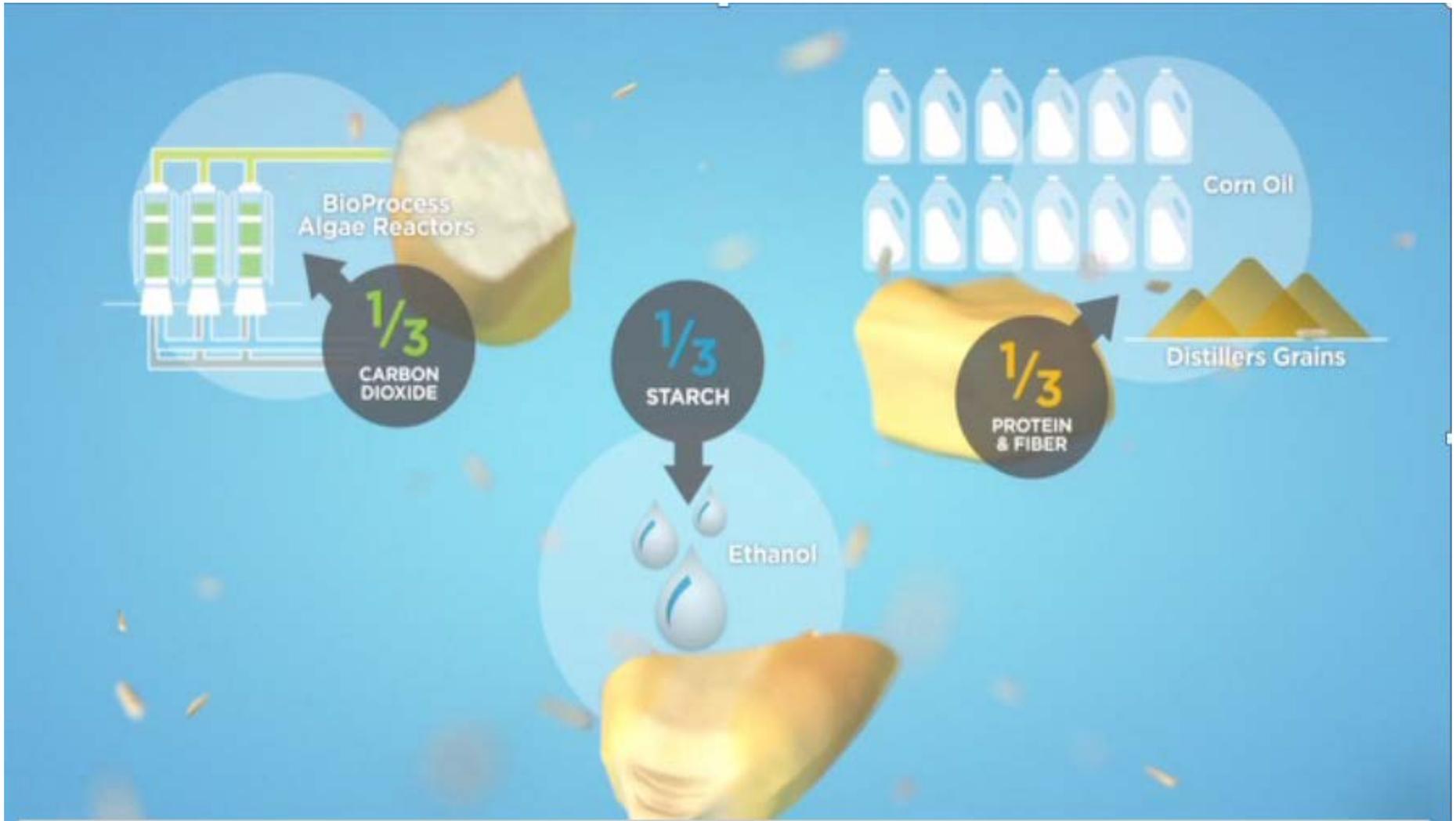
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- You have heard that Brazil was the cheapest producer because they convert sugar into ethanol
- It may be true their cost of conversion is cheaper, but what is their starting point?
- The fundamental purpose of a U.S. ethanol plant is to convert starch into sugar
- At \$4 corn, we produce 9 cent a pound sugar
- World sugar currently trading at 17.6 cents per pound
- This allows U.S. ethanol to compete head to head with Brazil

# How we think about the corn kernel



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# Why an Ethanol Producer Bought a Cattle Feedlot



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- We believe that a cattle feedlot is an adjacent business for what we already do
  - We buy commodities and extract value to make more commodities
- We produce 3 million tons of livestock feed (ddgs) annually and another 250 million pounds of corn oil that is also fed to livestock
  - 66% of the 50 million tons of ddgs produced by U.S. Ethanol is used for beef production and dairy operations
- Our success in the ethanol industry comes from managing the ethanol crush volatility; we believe we can use that same disciplined approach managing the cattle crush
- A steer in a feedlot is a corn processing unit
- Extends our corn origination network and enhances our intelligence around a large industry consumer of our products



Any Questions?