Marketing Second Generation Biofuels

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Energy Independence and Security Act of 2007

- RFS-2 created an opportunity – 36 billion gallons of renewable fuel by 2022 of which only 15 can come from 'conventional' fuel derived from corn starch.
- Of the 21 billion gallons from advanced biofuels, 16 must come from cellulosic biofuels.
- Projected gasoline use of 160 billion gallons in 2022 with E10 fuel standard would only use 16 billion gallons, well short of the mandate

EPA E15 standard will help

- EPA – "Allowing the introduction into commerce of gasoline containing greater than 10 vol% ethanol and no more than 15 vol% (E15) in Model Year 2007 and newer light-duty motor vehicles, which includes passenger cars, light-duty trucks, and medium-duty passenger vehicles."
- Could generate demand for 22.5 to 24 billion gallons of ethanol, still short of the 36 billion gallon mandate in RFS-2

E85 could be key to demand growth

- Currently less than 1% of the gasoline market.
- Would require more aggressive move into flexible fuel vehicles (FFV), and significant investment in infrastructure.

2008 Farm Bill Provisions to assist in development of biofuels

- Title VII. Research – Bio-energy research programs
  - $75 million/yr for Sun Grant Research Initiative
  - $50 million/yr for Bio-energy Feedstock and Energy Efficiency Research and Extension Initiative

2008 Farm Bill provisions

- Title IX. Energy
  - $2 million/yr for Bio-based Markets Program
  - $245 million for Bio-Refinery Assistance Program
  - $35 million plus $15 million/yr authorized for Repowering Assistance
  - $1 million/yr for Biodiesel Fuel Education Program
  - $118 million plus $35 million/yr authorized for Biomass Research and Development
  - Such CCC funds as necessary for Biomass Crop Assistance Program
  - $15 million/yr for Forest Biomass for Energy

2008 Farm Bill provisions

- Title XV. Trade and Tax Provisions
  - Tax credit of $1.01 per gallon for production of cellulosic biofuels

Ethanol is also going Global

- "We're on target to export 300 million gallons this year." Geoff Cooper of the Renewable Fuels Association
- European Renewable Energy Directive (RED) calls for 10% of the transport fuel to be from renewable sources by 2020. Anticipate meeting the RED with imports accounting for 50% of bioethanol use and 41% of biodiesel use in 2020.

Conclusion

- Demand continues to grow. Research and education will continue to grow this demand.
- Remaining question – how do we build the market infrastructure to handle this growth.

Building the Market

- Iowa E85 – City to Region Market Development
  - Retrofitting strategically located fueling stations
  - Notifying the local market about the availability of E85 fueling stations.

Orange Juice – Opportunity Knocks

- Oranges were grown primarily for the fresh market prior to development of technology in 1947 that developed Frozen Concentrated Orange Juice which launched the industry into becoming the largest agricultural product in Florida, an industry valued at $16 billion.

Orange Juice – The Problem

- Oranges grown from the southern tip of Florida to north of Orlando, creating a logistical problem for growing, assembling, processing and selling orange juice.

Orange Juice – Opportunity Captured

- Opportunities for market growth inspired investment in growing and processing
- Growers invested in trees and land and also invested in processing and marketing infrastructure to take advantage of the opportunity the product afforded.

Orange Juice

- Private investors and farmer cooperatives have developed the industry into an important agricultural segment

How growers market oranges

- Through grower cooperatives where product is pooled and returns paid out on the average net value of the pool.
- Cash market
- Forward contracts

Biofuels face an equally bright future awaiting on growers and refiners to organize.

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