



Biofuels, Food & Feed Tradeoffs

April 12-13, 2007 St. Louis, Missouri

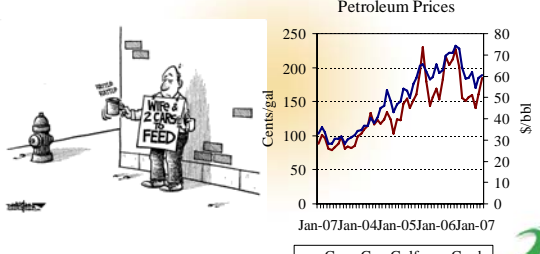
Farm Foundation | USDA's Office of Energy Policy and New Uses | Rural Development

Economic Consequences of Biofuels Expansion

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Why biofuels? First and foremost simple economics.



Petroleum Prices

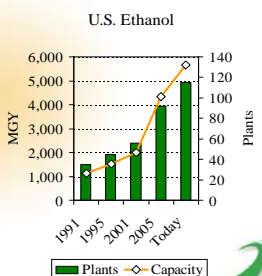
Date	Conv Gas, Gulf (Cents/gal)	Crude (\$/bbl)
Jan-07	~80	~40
Jan-04	~100	~50
Jan-05	~120	~60
Jan-06	~150	~70
Jan-07	~200	~80

How do biofuels affect the economy?

- ❖ Increased economic activity (GDP, income, jobs)
- ❖ Reduced dependence on imported petroleum products and smaller dollar outflows
- ❖ Higher farm prices and improved farm income
- ❖ Potentially higher food prices

Biofuels represents a new and growing manufacturing sector industry.

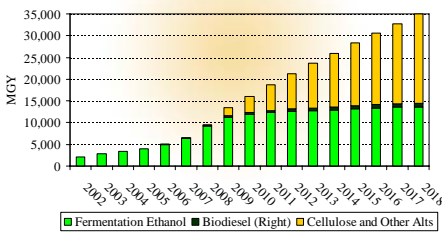
- ❖ Ethanol production has increased five-fold in the past 15 years.
- ❖ 115 ethanol plants currently have annual capacity of 5.7 billion gallons.
- ❖ Biodiesel production has grown from less than 500,000 gallons to more than 100 MGY last year.



U.S. Ethanol

Year	Plants	Capacity (MGY)
1991	~10	~1,000
1995	~15	~1,500
2001	~25	~2,500
2005	~40	~4,000
Today	~115	~5,700

The Bush proposal for 35 billion gallons of alternative fuels by 2017 will stimulate another new industry – cellulose.



Alternative Fuels Production (MGY)

Year	Fermentation Ethanol	Biodiesel (Right)	Cellulose and Other Alts
2002	~2,000	0	0
2003	~3,000	0	0
2004	~4,000	0	0
2005	~5,000	0	0
2006	~6,000	0	0
2007	~8,000	0	0
2008	~10,000	0	0
2009	~12,000	0	0
2010	~14,000	0	0
2011	~16,000	0	0
2012	~18,000	0	0
2013	~20,000	0	0
2014	~22,000	0	0
2015	~24,000	0	0
2016	~26,000	0	0
2017	~28,000	0	0
2018	~30,000	0	0

Source: LECG LLC

The ethanol industry provides a significant contribution to the American economy. In 2006 the ethanol industry:

- ❖ Spent \$6.7 billion on grain, other inputs, goods and services to produce 4.9 billion gallons of ethanol. An additional \$410 million was spent to transport ethanol from the plant to the terminal where it is blended with gasoline.
- ❖ Added \$23.1 billion to the nation's GDP.
- ❖ Supported the creation of more than 163,000 jobs and \$6.7 billion in household income.
- ❖ Generated \$2.7 billion in Federal revenue and \$2.2 billion in State and local government revenue. (The VEETC cost \$2.5 billion)

The biodiesel industry also provides a positive contribution to the economy. In 2006 the biodiesel industry:

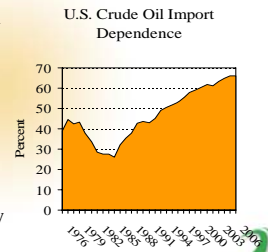
- ❖ Spent \$383 million on feedstocks, other inputs, goods and services to produce biodiesel
- ❖ Added \$793 million to the nation's GDP.
- ❖ Supported the creation of more than 7,900 jobs and \$31 million in household income.
- ❖ Generated \$121 million in Federal revenue and \$95 million in State and local government revenue.

Where does the economic impact come from?

- ❖ Spending on goods and services for construction and annual operations.
 - Every dollar spent represents the purchase of final demand from other industries.
 - These dollars circulate through the local and national economy several times.
 - The effects are measured by applying industry-specific impact multipliers for the relevant supplying industries.

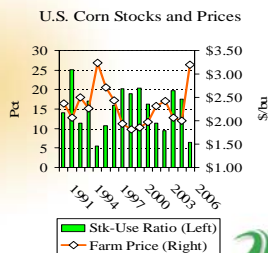
Biofuels enhance our energy security.

- ❖ In 2006 ethanol and biodiesel displaced 208 million barrels of crude oil valued at \$12 billion.
- ❖ Biofuels kept this \$12 billion in the American economy.
- ❖ Without biofuels our dependence on imported crude would have been nearly 70% compared to 66%.



Biofuels demand has pushed corn prices to the highest levels since 1995.

- ❖ Ethanol demand now accounts for 18% of corn use and will soon surpass exports as the second largest demand component.
- ❖ Stocks are at their lowest level since 1995.
- ❖ Farmers will plant 90 million acres of corn this Spring.



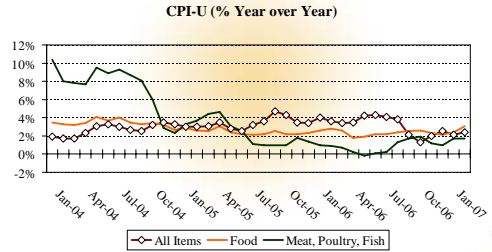
Biofuels will support market driven increases in farm income.

- ❖ Cash receipts for both crop and livestock producers will benefit from higher commodity prices.
- ❖ Government payments will decline saving taxpayer dollars.
- ❖ Cash expenses will increase due to increased plantings.
- ❖ Farm communities and supplier industries will directly benefit.

However, what is good for grain farmers is not always good for livestock producers.

- ❖ Sharply higher corn and soybean prices have increased production costs for livestock and poultry producers and dairymen.
- ❖ A strong economy is supporting higher market prices but profitability is deteriorating.
- ❖ Beef and dairy producers are being hit by a combination of high forage/alfalfa and higher corn and soybean prices
- ❖ Red meat and poultry production is likely to continue to expand, but at slower rates.

Higher feed prices have not yet resulted in higher consumer food prices.



In conclusion ...

- ❖ Biofuels represent the development of a new and vibrant manufacturing sector industry.
- ❖ Increased biofuels production expands the economy, creates jobs, and generates additional tax revenue. The biofuels industry more than pays for itself.
- ❖ Biofuels enhance U.S. energy security.
- ❖ Higher prices provide market support for farm income.
- ❖ American consumers will continue to enjoy the lowest food prices of any developed economy.

Finally, this just could happen!

