



20 years

Institute for Agriculture and Trade Policy

Celebrating 20 years 1986-2006



Working to strengthen rural economies through a thriving agriculture, sound land use, and thoughtful development strategies

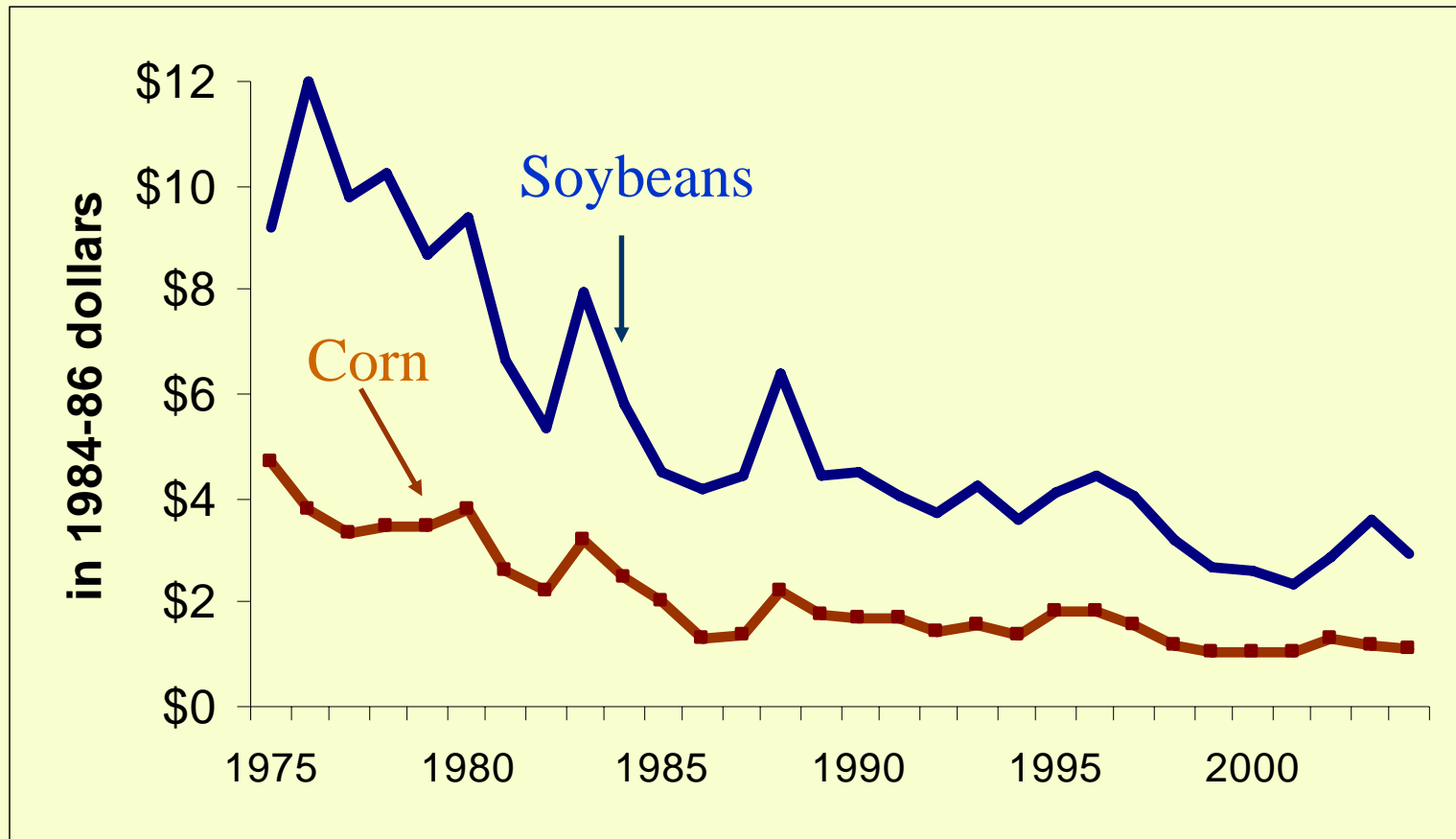
National Academy of Sciences

July 2006



- Ethanol produces only 25% more energy than consumed
- Only 12% reduction of greenhouse gas emissions compared to fossil fuel
- All of U.S. corn can offset just 12% of gasoline use

How to Reverse the Price Slide?



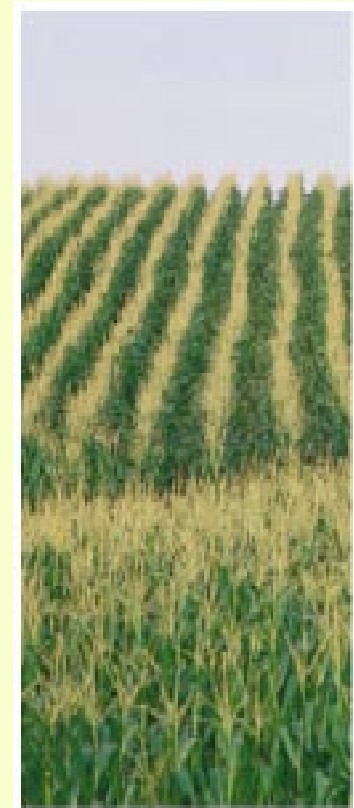
Source: USDA Economic Research Service

1. Ethanol is one of the few large-scale, rural Midwest success stories

- Five-year average annual return on dry mill ethanol plant – 23%
- Increases the overall price of corn by 10 to 15 cents
- Farmer-owned plants provide a hedge against volatility

Source: Iowa State University

2. Biofuels are far and away better than fossil fuels for the environment, the economy and national security



3. Ethanol has tremendous upside potential

20 Years Ago,

- Ethanol had a negative energy balance
- DDGS had almost no economic value
- Cellulosic ethanol no more than a distant vision
- Industry was not viable without subsidies

In 1970, a bushel of corn could purchase 5.5 gallons of gasoline.



Today, a bushel of corn purchases $\frac{3}{4}$ gallon of gasoline.

Concerns for the Future

1. Retain economic benefits in local communities
2. Grow the industry as communities face water availability problems
3. Address the environmental issues with crop production practices

Ethanol's Surge

States	Total Forecasted 2008 Capacity (mmgy)	Percent of 2005 Corn Production
Illinois	1411	31%
Indiana	743	31%
Iowa	2595	44%
Minnesota	926	29%
Missouri	245	27%
Nebraska	2036	59%
North Dakota	259	62%
South Dakota	703	55%
Wisconsin	338	29%
Total	8.7 Billion Gallons/Year	Over 30% of US corn



*Data from USDA and NCGA compiled for IATP factsheet
Ethanol's Impact on Midwest Corn Exports*

Forecasted Corn Exports from Midwest States



Sources: historic state exports from USDA ERS state export data, ethanol production numbers and proposed plants from Renewable Fuels Association and BBI



Assumes continued 0.78% increase in corn yield, 2.8 gal per bu, constant corn acreage, constant feed and other uses.

Changing Scale and Ownership

Shift to Corporate Ownership

- Under 10% of the new capacity and expansion under construction are farmer-owned

New plants are larger

- up to 275 mmgy capacity

Standard & Poor's Rating Services

“Most ethanol industry projects fall into the highly speculative grade-B category.”

Water = Energy = Grain



Ethanol's Water Use

- 3-5 gallons of water per gallon of ethanol
- For new, large plants being constructed, that means 300-900 million gallons per year
- What are the economic benefits per gallon of water used?

What uses of our water provides the greatest economic and societal benefits?



A Hungry Crop

Conventional production is input intensive

- Fertilizer
- Herbicide/Pesticide
- Water
- Fuel



IATP Joins



Sustainable Principles

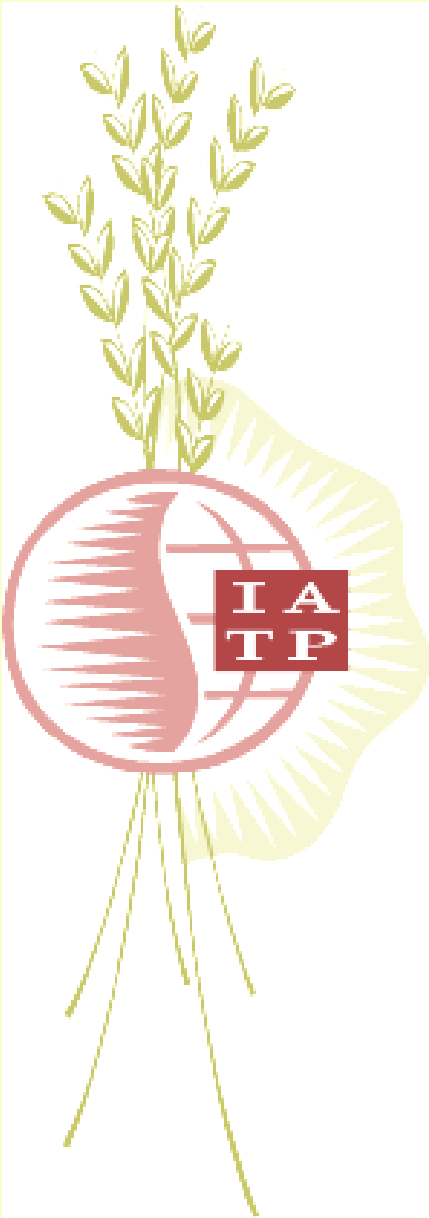
- 1. Strengthening the Soil**
- 2. Protecting the Air and Water**
- 3. Sound Nutrient Management**
- 4. Resource Efficiency and Use of Renewable Resources**
- 5. Promoting Biological Diversity and Nature**

Sustainable Principles

- 6. Respecting Social and Cultural Heritage**
- 7. Economic Sustainability**
- 8. Safe and Healthy Working Conditions**
- 9. Safe Packaging, Transportation and Storage**
- 10. Stakeholder Participation, Transparency and Simplicity**

Moving Forward

- Promote policies that support local ownership
- Create a market for sustainable feedstocks
- Through policy and market demand, support R&D for cellulosic ethanol





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