

Lessons Learned: Commodity Market Impacts from Biofuels Production

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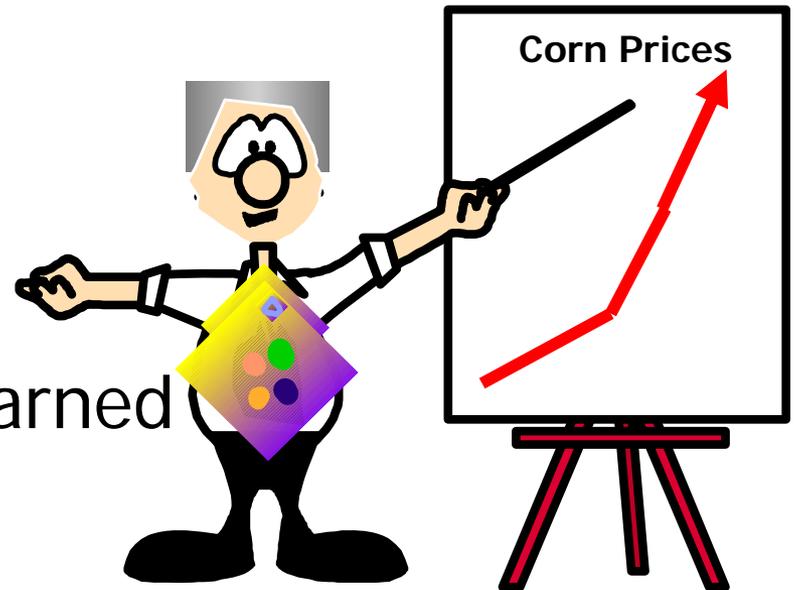
International Conference on Sorghum for Biofuel
Houston, Texas

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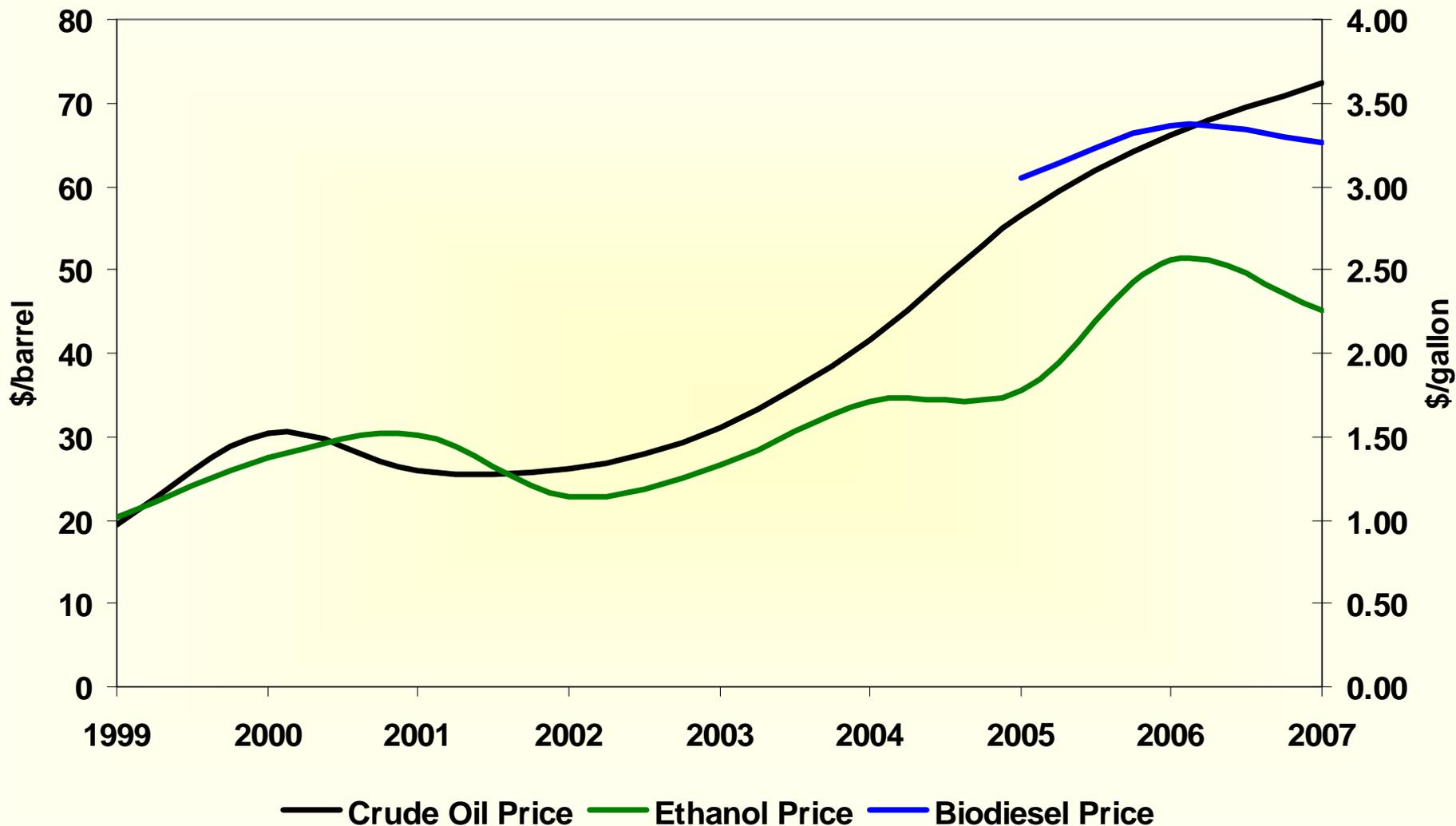


Presentation Outline

- Crops and Fuels are Commodities
- Food and Feed vs Fuel Research
 - Factors Affecting Food and Feed Prices
 - Ethanol
 - Biodiesel
 - Crops vs Livestock Effects
 - Distillers Grains
- Sorghums Have A Lot to Offer
- Conclusions – Lessons Learned



Crude Oil, Ethanol, and Biodiesel Prices, 1999 to 2007



Source: EIA (WTI: Cushing, OK), Hart Energy Publishing, FAPRI

The Effects of Ethanol on Texas Food and Feed



David P. Anderson, Joe L. Outlaw, Henry L. Bryant, James W. Richardson, David P. Ernster, J. Marc Raulston, J. Mark Welch, George M. Knapek, Brian K. Herbst, and Marc S. Allison

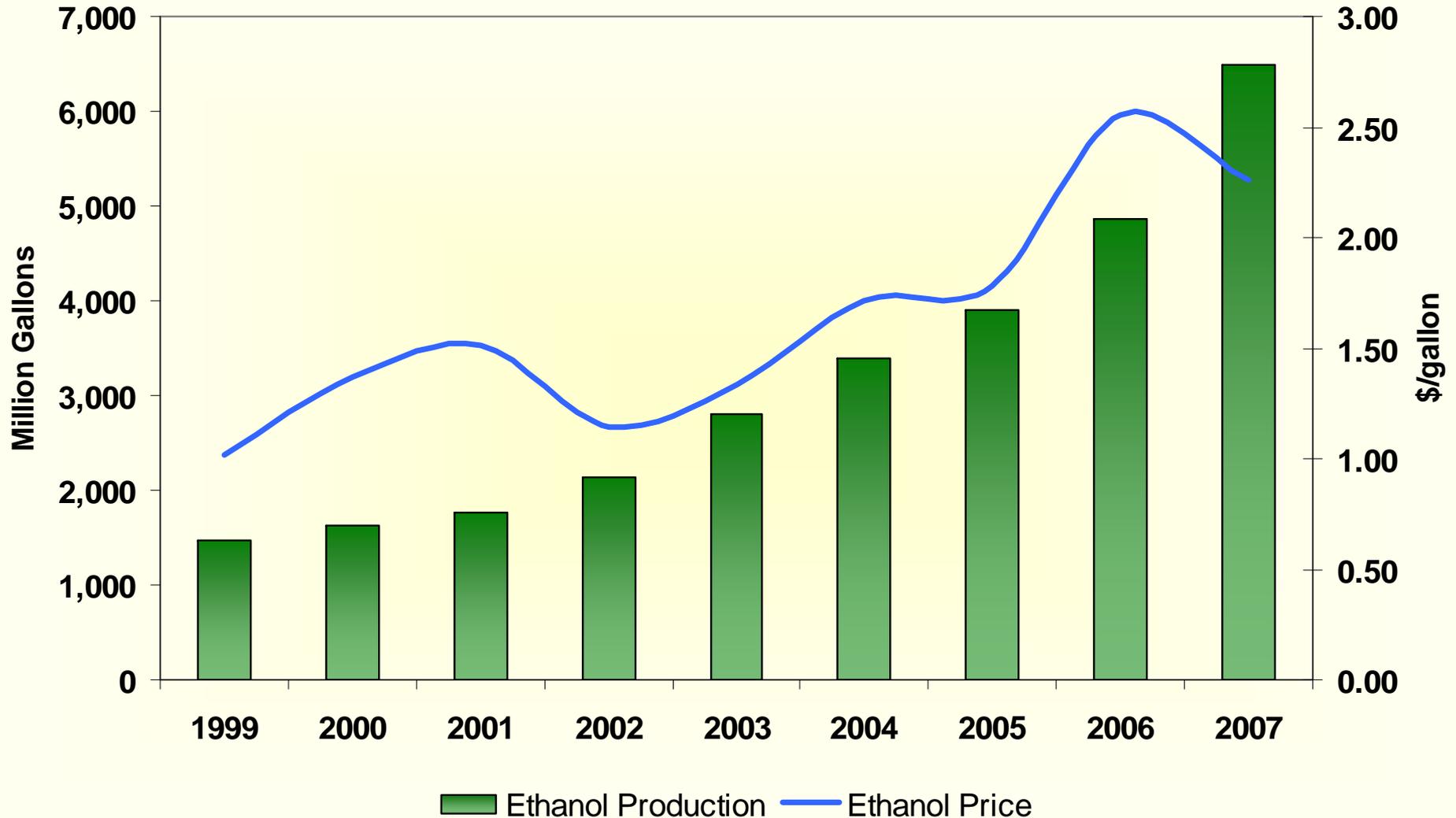
Factors Affecting Food and Feed Prices

- Strong global economic growth
- Weak dollar relative to many foreign currencies
- Recent crop problems (i.e. wheat)
- Increased volume of trading in commodities by funds
- Biofuels
- Higher energy prices

What Makes Corn Different?

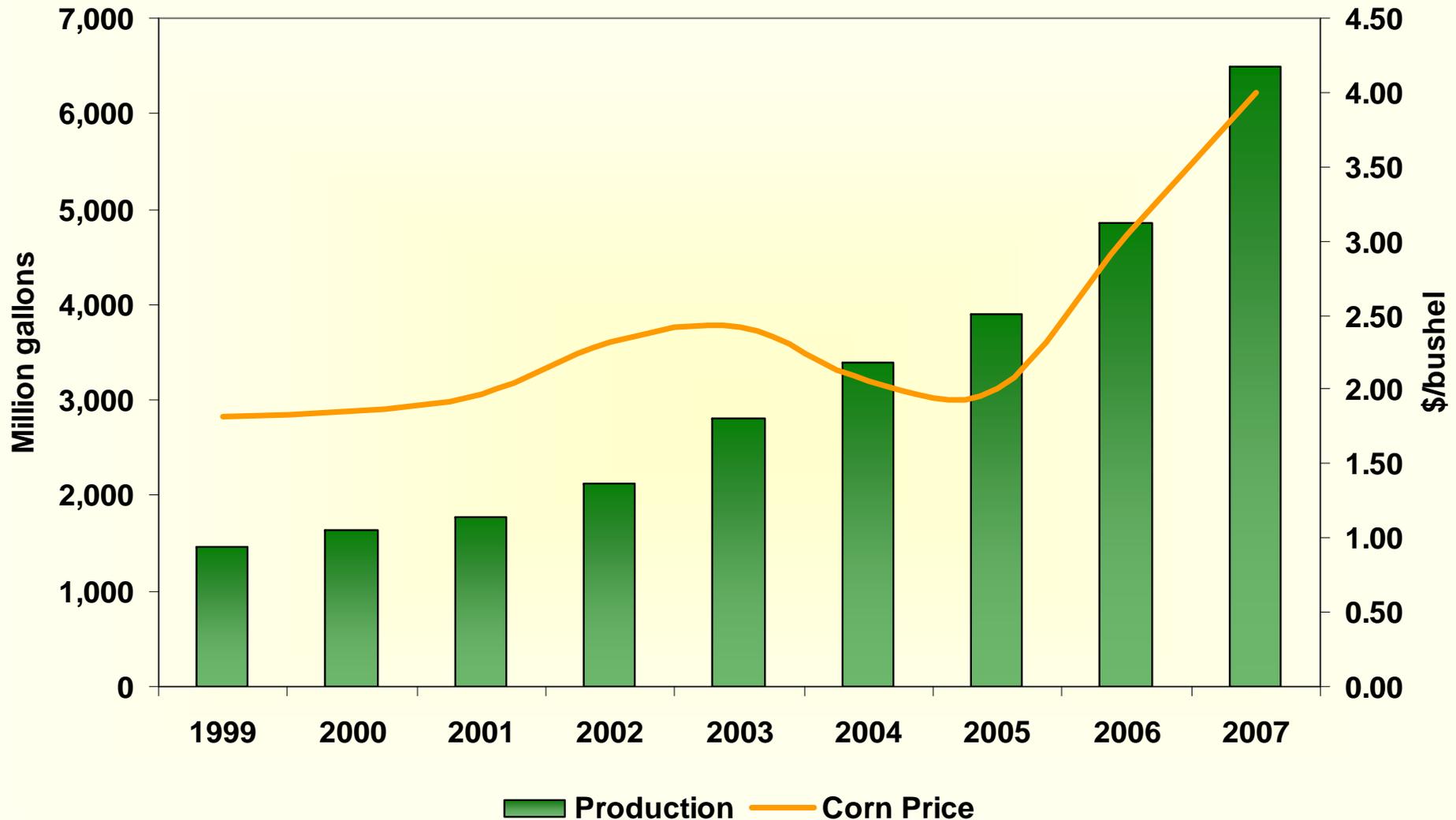
- #1 most competitive U.S. crop
- Price of corn relative to prices of competing crops drives planted acreage
- U.S. seen as a residual supplier for the World
- Prior to ethanol 2/3 of crop went to livestock feed
- Traders

Ethanol Production and Prices, 1999 to 2007



Source: Renewable Fuels Association, Hart Energy Publishing

Ethanol Production and Corn Prices, 1999 to 2007.



Source: Renewable Fuels Association, NASS

Ethanol Breakeven Table

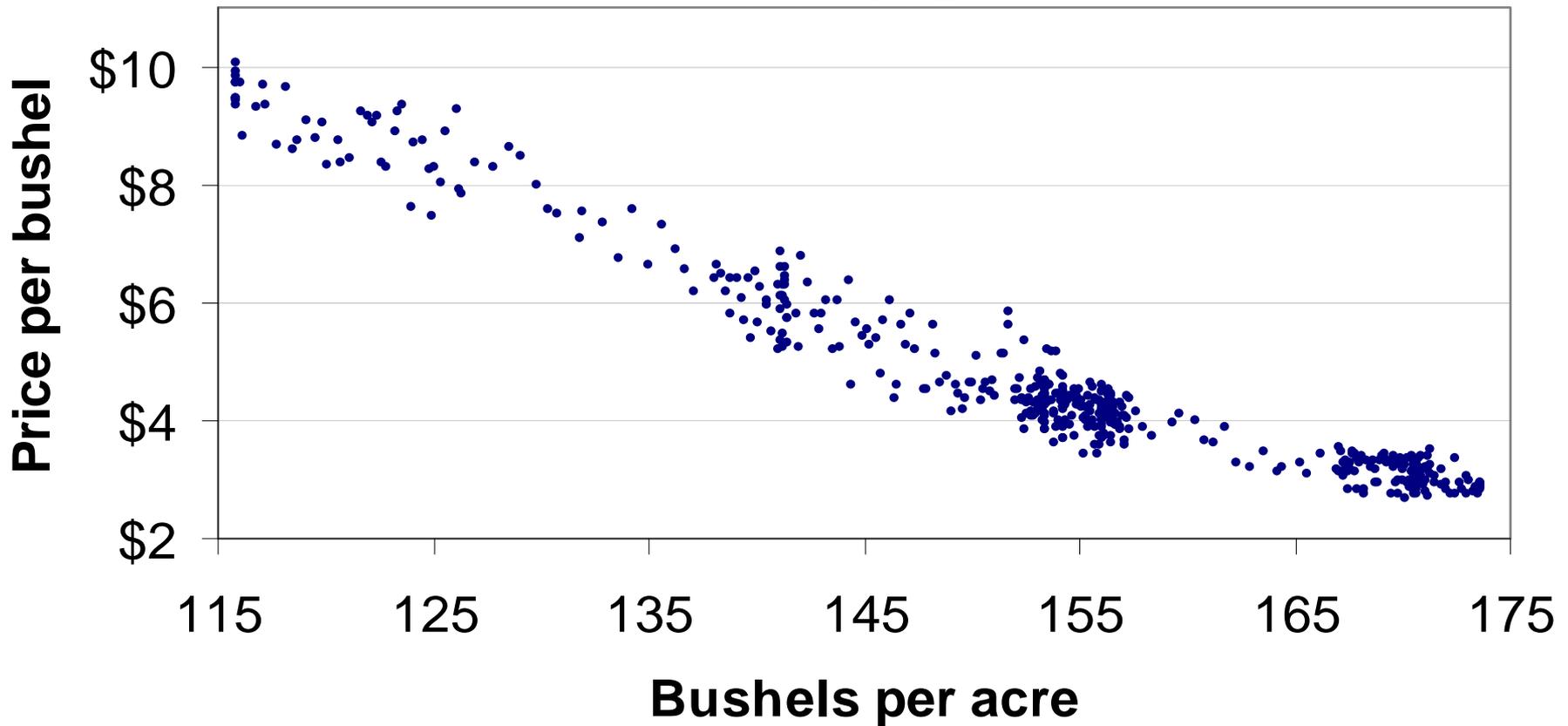
Corn Price (\$/bu, FOB)

**Ethanol
\$/gal**

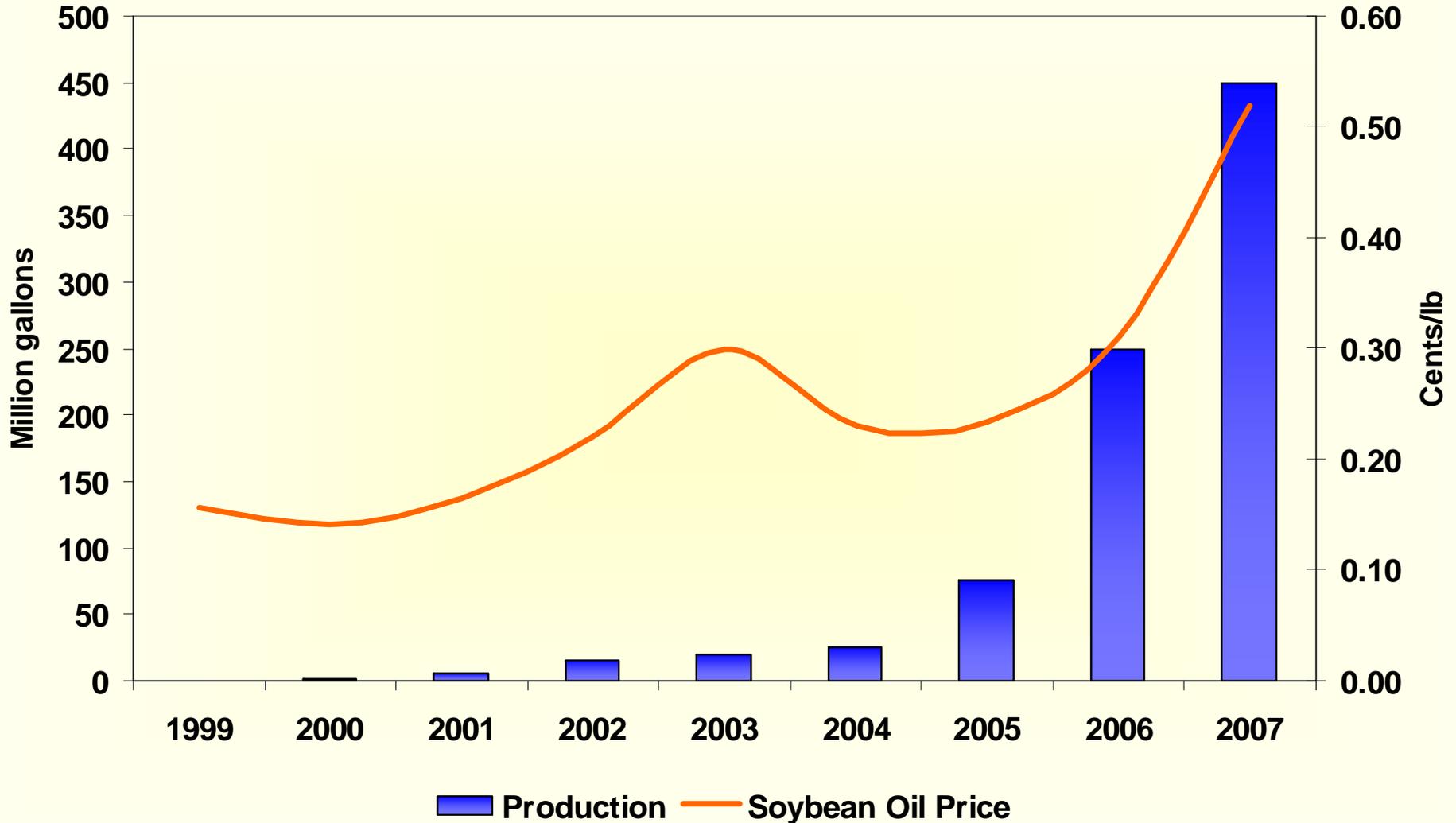
	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50
1.50	(0.12)	(0.26)	(0.40)	(0.54)	(0.68)	(0.81)	(0.95)	(1.09)
1.75	0.13	(0.01)	(0.15)	(0.29)	(0.43)	(0.56)	(0.70)	(0.84)
2.00	0.38	0.24	0.10	(0.04)	(0.18)	(0.31)	(0.45)	(0.59)
2.25	0.63	0.49	0.35	0.21	0.07	(0.06)	(0.20)	(0.34)
2.50	0.88	0.74	0.60	0.46	0.32	0.19	0.05	(0.09)
2.75	1.13	0.99	0.85	0.71	0.57	0.44	0.30	0.16
3.00	1.38	1.24	1.10	0.96	0.82	0.69	0.55	0.41

Corn Price Volatility

Scatter Plot of Possible Price and Yield Combinations in 2008

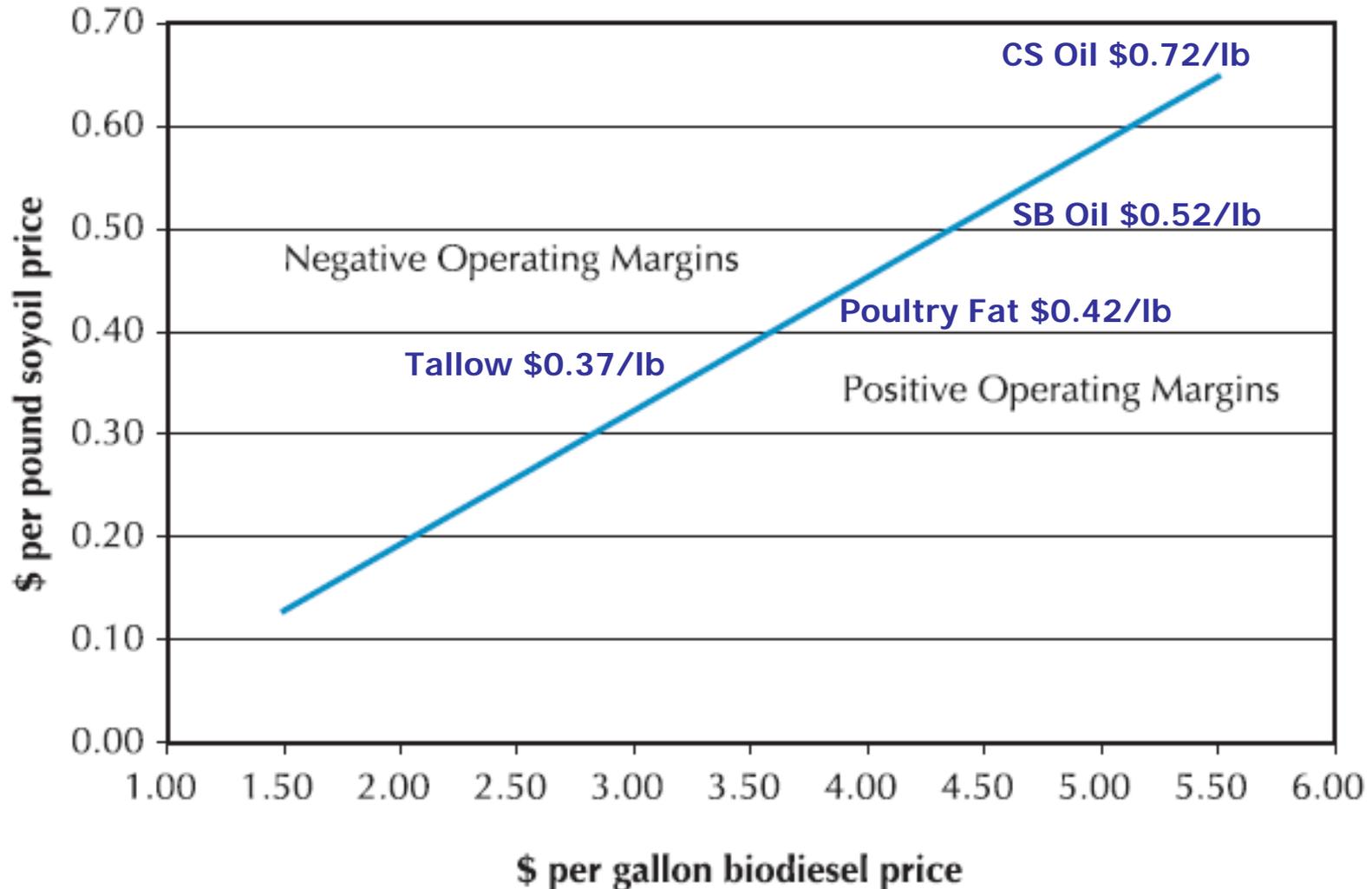


Biodiesel Production and Soybean Oil Prices, 1999 to 2007



Source: National Biodiesel Board, USDA-ERS)

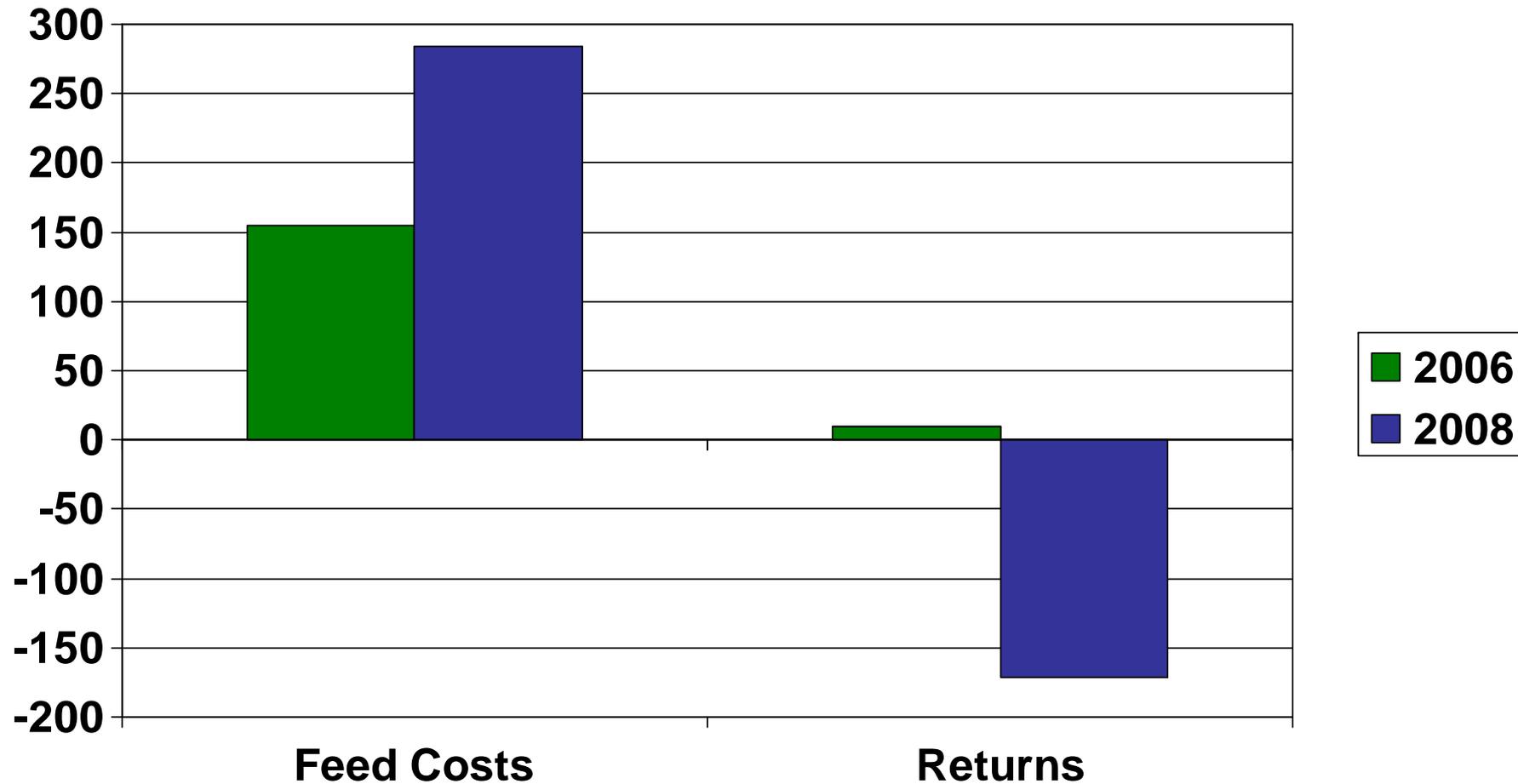
Biodiesel Break-Even Points at Alternative Soybean Oil and Biodiesel Prices



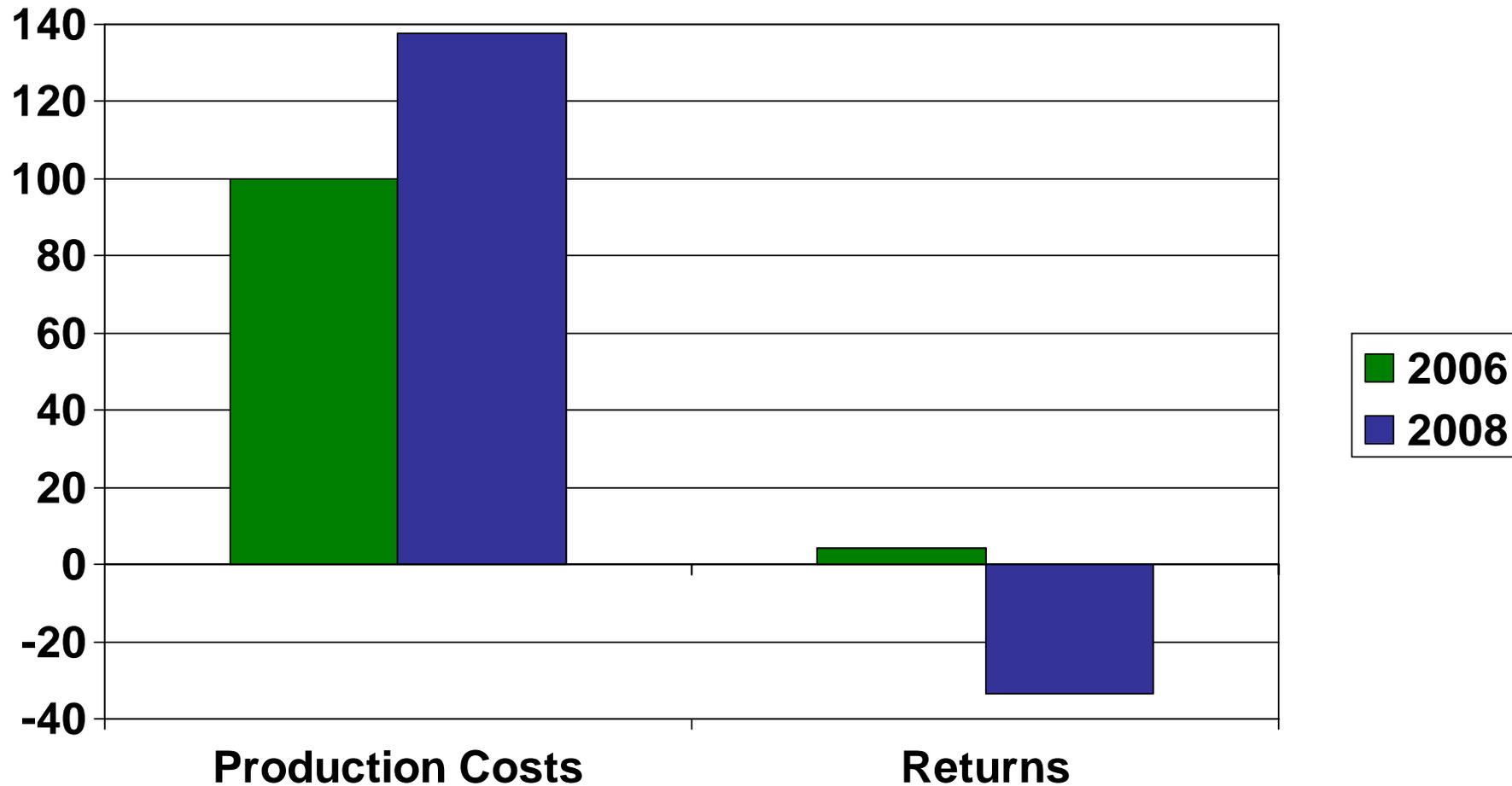
Ag Production Costs

- Costs Are Higher For Crop Production
 - Fertilizer, fuel
- Higher For Livestock Too
 - Feed, Fuel

Cattle Feeding Costs and Returns Per Head



Hog Finishing Costs and Returns Per Head



Distiller's Grains

- A lot of people misjudged the impact of this feed source
- Livestock Feeding Issues
 - Advantages and disadvantages
 - Inclusion rates
 - Geographic distribution

Sorghums Have A Lot to Offer

- Nature of product will resist commoditization
 - Bulky and moisture content
 - Regional or plant specific production
 - We view it generally grown under contract
 - Little reason for a future's market
 - Priced on a cost plus basis – otherwise plant will go out of business
- Very little or at least lower opportunity costs

Conclusions – Lessons Learned

- Think it is fair to say – there wasn't much consideration of what might happen
- Costs of production for biofuels made from alternative feedstocks will determine end results
- Sorghum has a role as a relatively low cost source of large quantities of biomass

Thank you...

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