

Beef Production in the New Era of Higher Prices and Higher Costs: Do the Old Rules Apply?

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Overview

- Factors impacting current beef profitability
 - U.S. biofuels policy
 - U.S. and global recession
- Role of economics in genetic selection
- Do the old rules apply in a new era?

Things to Remember About Economists

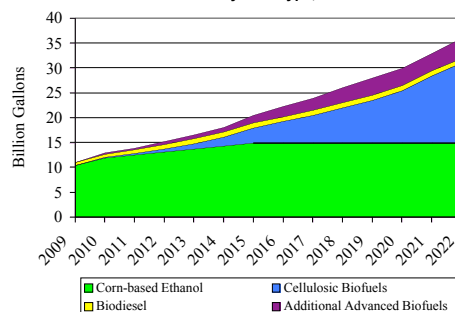
- *We have a firm grasp of the obvious*
- *We are better at predicting history than the future*

Biofuels Policy

US Biofuels Policy

- Energy Independence and Security Act
 - Passed congress in August 2007
 - Signed by President Bush December 2007
 - Established the Renewable Fuel Standard (RFS) for the United States
- US is one for 40 countries pursuing renewable fuels

Renewable Fuel Standard by Fuel Type, December 2007 Energy Bill



Energy bill calls for 15 billion gallons of corn-based ethanol by 2015.

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Large Scale Models

- ISU Center for Ag Rural Development
 - At \$54/barrel oil price, ethanol production is 14.8 bgy by 2011
 - Corn is 94-million acres and annual average prices would be \$3.40/bu at that time
 - Oil at \$64 and there is no demand bottleneck
 - Acres = 112.5-million and prices \$4.43/bu.
 - Corn for ethanol increase from 5 bbu to 10 bbu,

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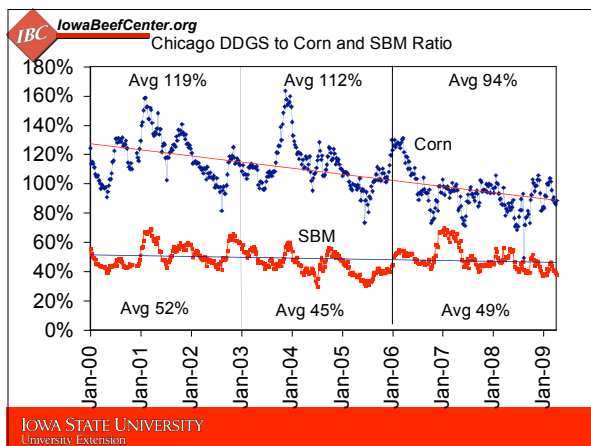
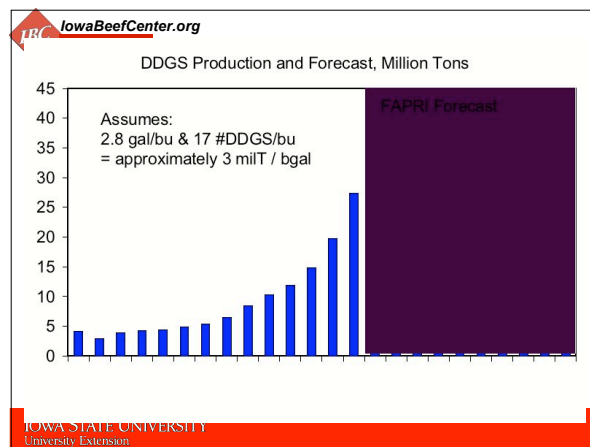
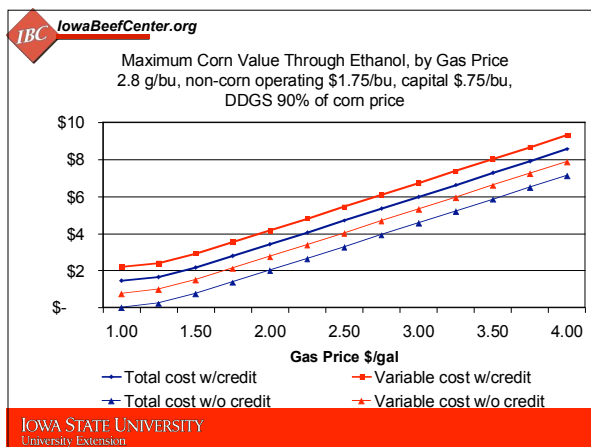
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Acres of Feedstock Harvest to Produce 15 Billion Gallons per Year of Cellulosic Biofuels by Tons per Acre and Gallons per Ton

Ton/Acre	4	6	8
Gal/ton	Million Acres		
80	47	31	23
90	42	28	21
100	38	25	19

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Biofuels Summary

- Ethanol and now feed price tied to oil price
- New demand for corn and eventually forage
 - Higher more volatile prices for feedstuffs
- RFS will put supply larger than current E10 + E85 demand
 - EPA has comment period open for E15

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Recession and Consumer Demand

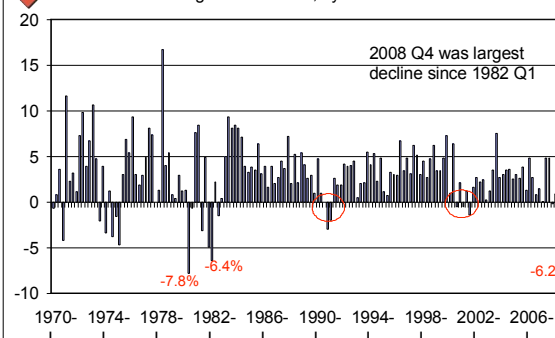
It is better to be a mile from Hell headed out than a 100 miles out headed in.

Earl Butz

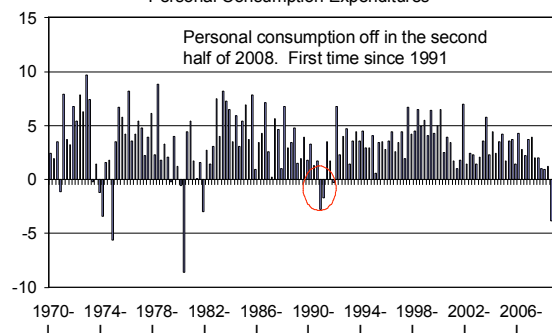
Recession Worse Since 1982

- GDP -6.2% in 4thQ, -6.1% in 1stQ
- Unemployment largest in history in number of people and percent 8.3%
- Personal spending down first time since 1991 and biggest drop since 1980
- Personal savings that were near 0% increasing

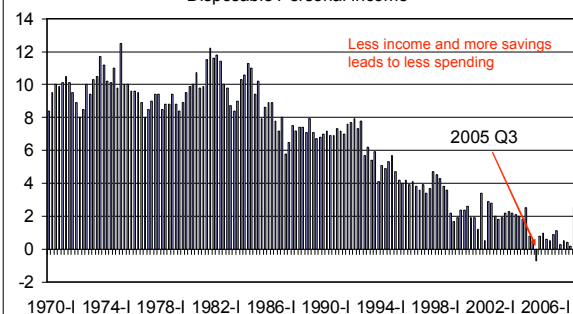
Percent Change in Real GDP, by Quarter 1970-2008

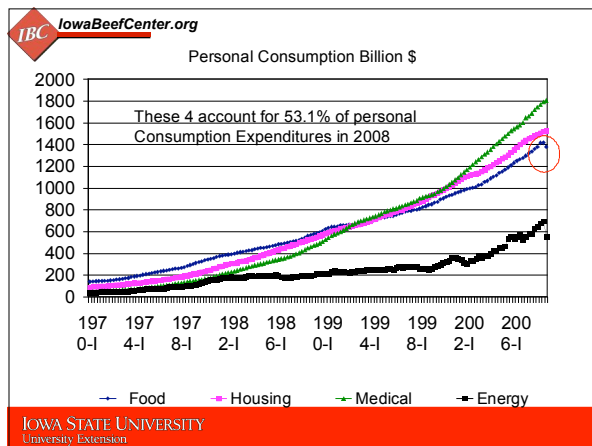


Percent Change in Real Personal Consumption Expenditures



Personal Saving as a Percentage of Disposable Personal Income



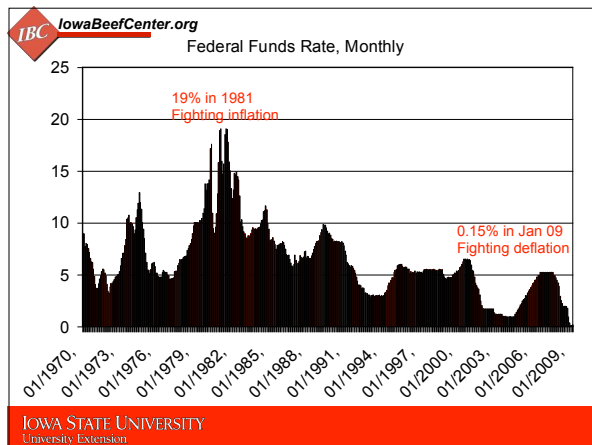


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So What, People Still Eat

- Beef is highest priced protein in the case
- Food expenditures are down
 - Less restaurant traffic and \$ volume
 - Value shopping at grocery store
 - Middle meats down more than ground beef
 - Dec, Jan, Feb compared to year before
 - Prime-Choice spread narrowed 39%
 - Branded-Choice spread narrowed 57%
 - Choice-Select spread has narrowed 21%

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Recession Summary

- Personal spending down for the first time since 1991.
 - Less spending even on food
 - Could lead to long term frugal behavior
- Growing the money supply and cutting interest rates
 - Inflation expected in the future
 - Higher interest rates to fight inflation

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Economics and Genetic Selection

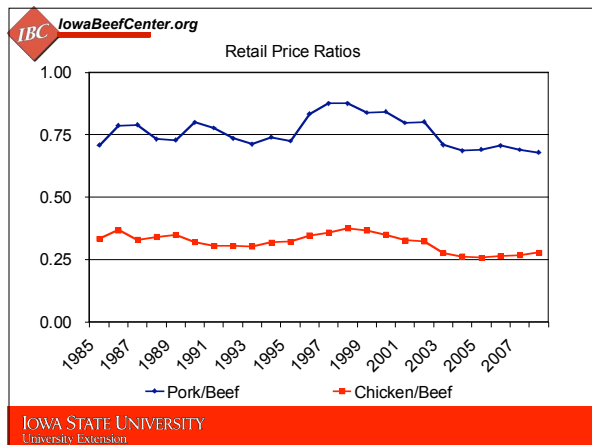
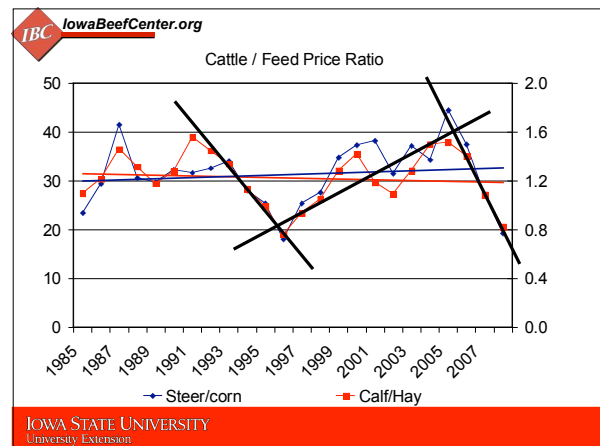
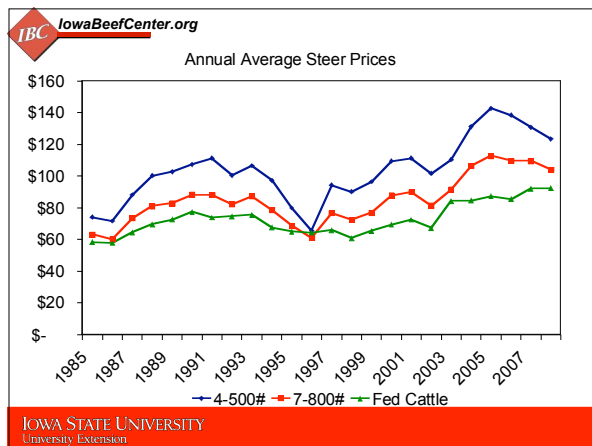
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Brief Literature Review

- Hazel (1943) "Good approximations to relative economic values often can be obtained from long-time price averages and cost-of-production figures."
- Melton (1980) and Melton and Colette (1993)
 - Maximize the present value of the stream of residual earnings and prices and interest are important
- Lazenby et al. (1998) found that changing output and input price ratios does change the optimal trait emphasis

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Long Term Price Ratios

- Relatively stable and thus more predictable than individual prices
- Short term ratios will be out of balance
 - Let management address short term prices
 - Could lead to “right” cattle at the wrong time
- Economic reason for relationship and why it tends to the mean

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Implications of Long Term Ratios

- Focus on genetic goals
 - Efficiency
 - Product quality
 - Management traits
- Progeny prediction more accurate than economic prediction.
- Long term ratios provide an economic compass rather than a road map

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Disclaimer

- More research is needed
 - Different time horizon may yield different trend
 - Costs other than feed impact annual profitability
 - Present value impacted by interest rates
- Lazenby et al. (1998) found that changing output and input price ratios does change the optimal trait emphasis
 - Ratio is important, but how much does it change

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Other Reasons for Concern

- Biofuel policy increasing competition for feedstocks and land used by cattle
 - Higher cost of gain bid into feeder cattle
 - Stable genetic targets, but a smaller herd
- Monetary policy impacting value of dollar
 - Current higher rate limiting trade
 - Inflation likely in future
 - Higher interest rates to cure inflation

Thank you!

Any Questions?

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www.econ.iastate.edu/faculty/lawrence/