

Emerging Trends in Agricultural Policy, Alternative Energy Sources and Food Consumption Trends

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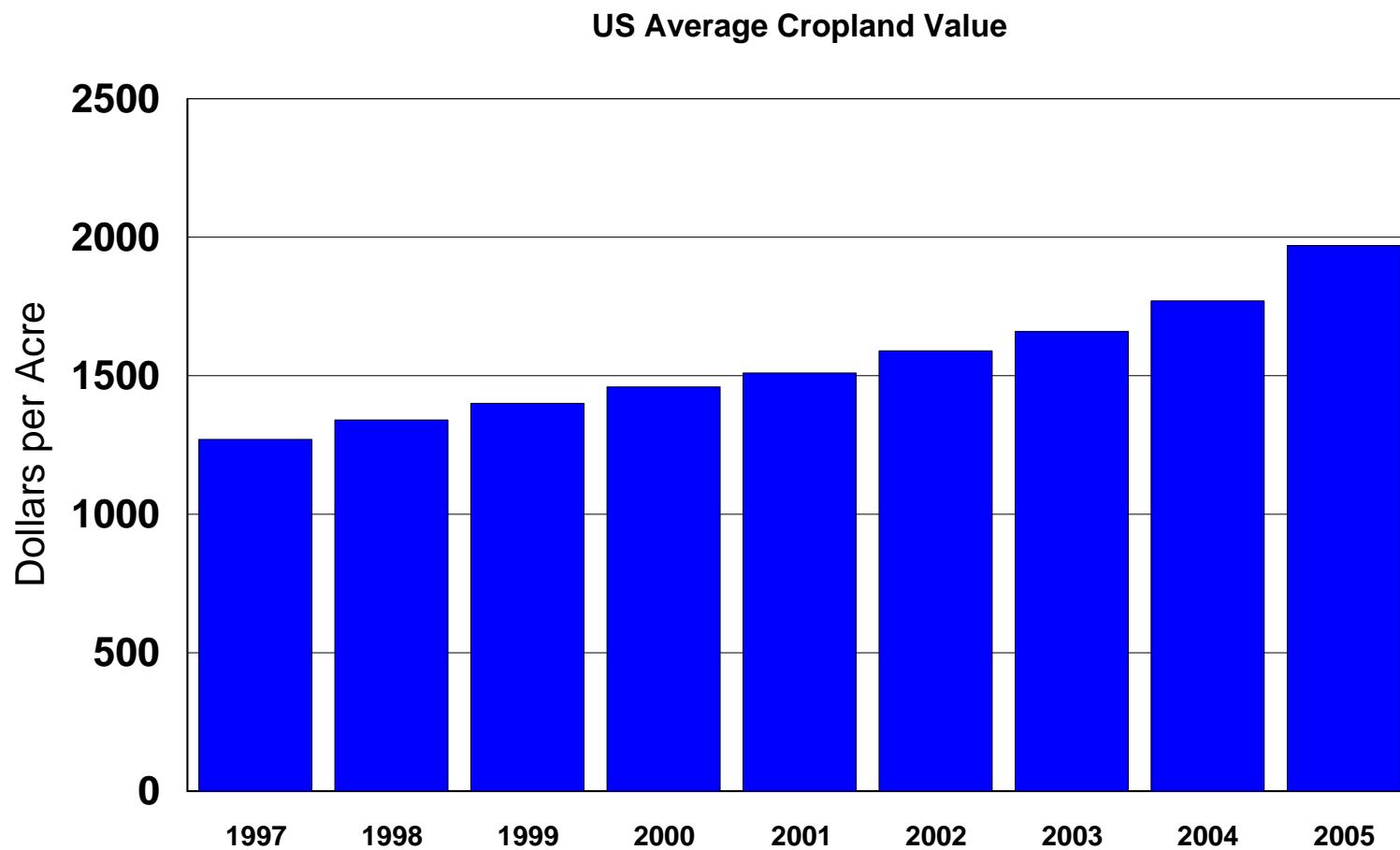
Outline

- Ag Policy Trends
- Current Farm Setting
- Trends in Biotechnology Usage
- Energy Trends
- Food Trends

Ag Policy Trends

- Cooperation across parties – gone
- Perceived strong catalysts for change
 - Deficit
 - WTO negotiations
 - Administration
- Old guard interest groups getting diluted
- Emergence of AgroEnergy Policy bloc

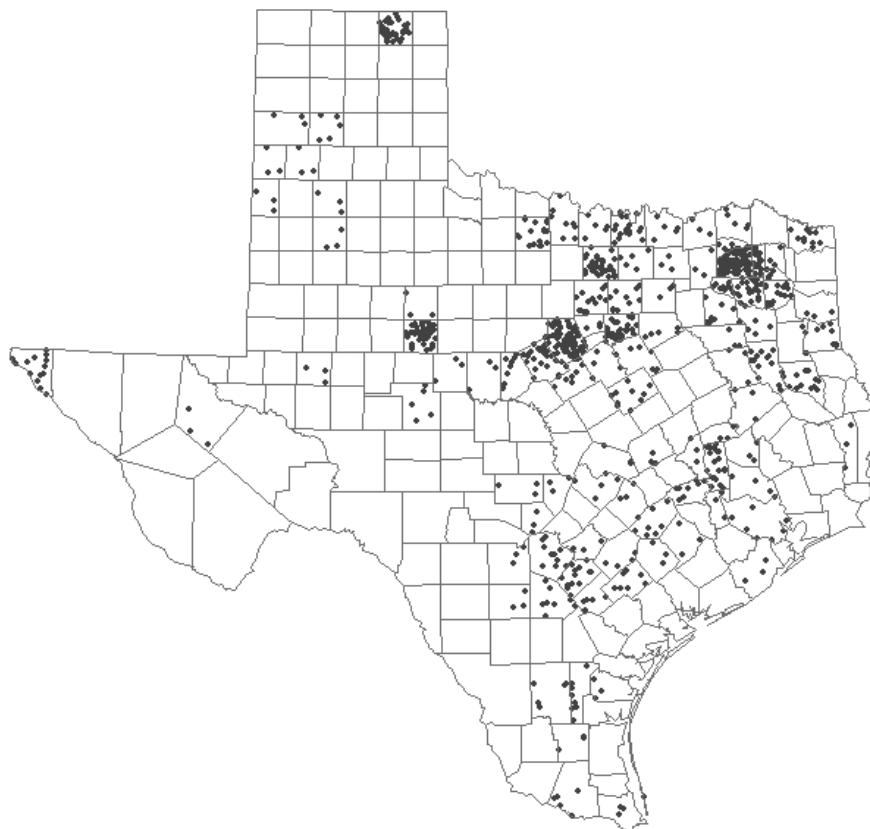
Cropland Value has Steadily Increased



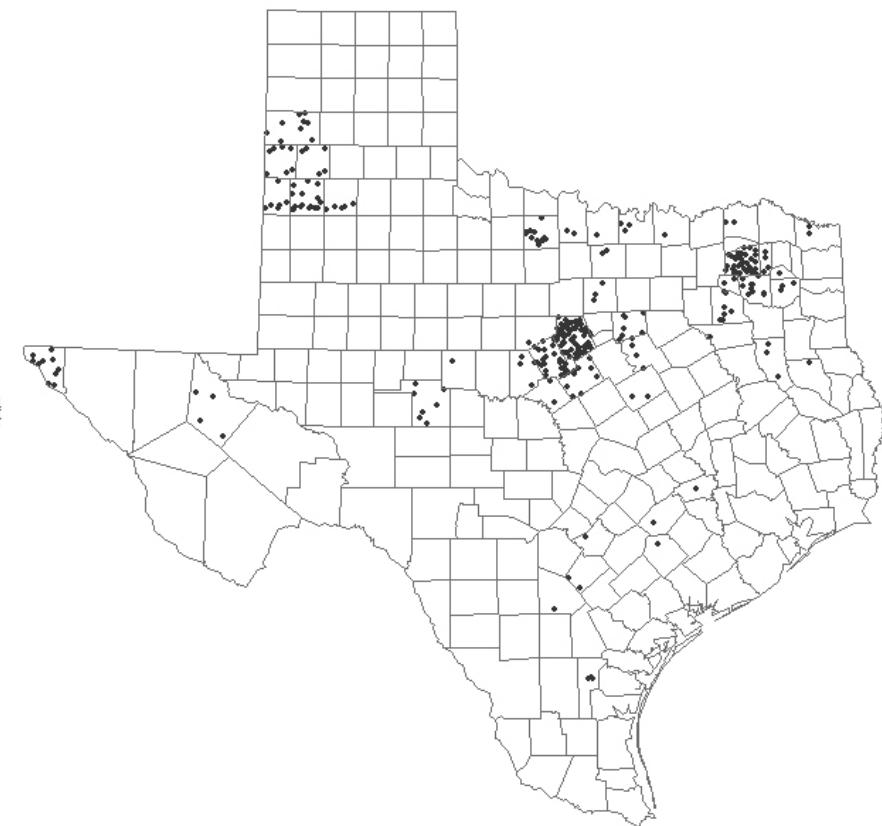
Source: NASS

Economics Still Rule: TX Dairy Industry Example

1980



2004



1 Dot = 1,000 Cows

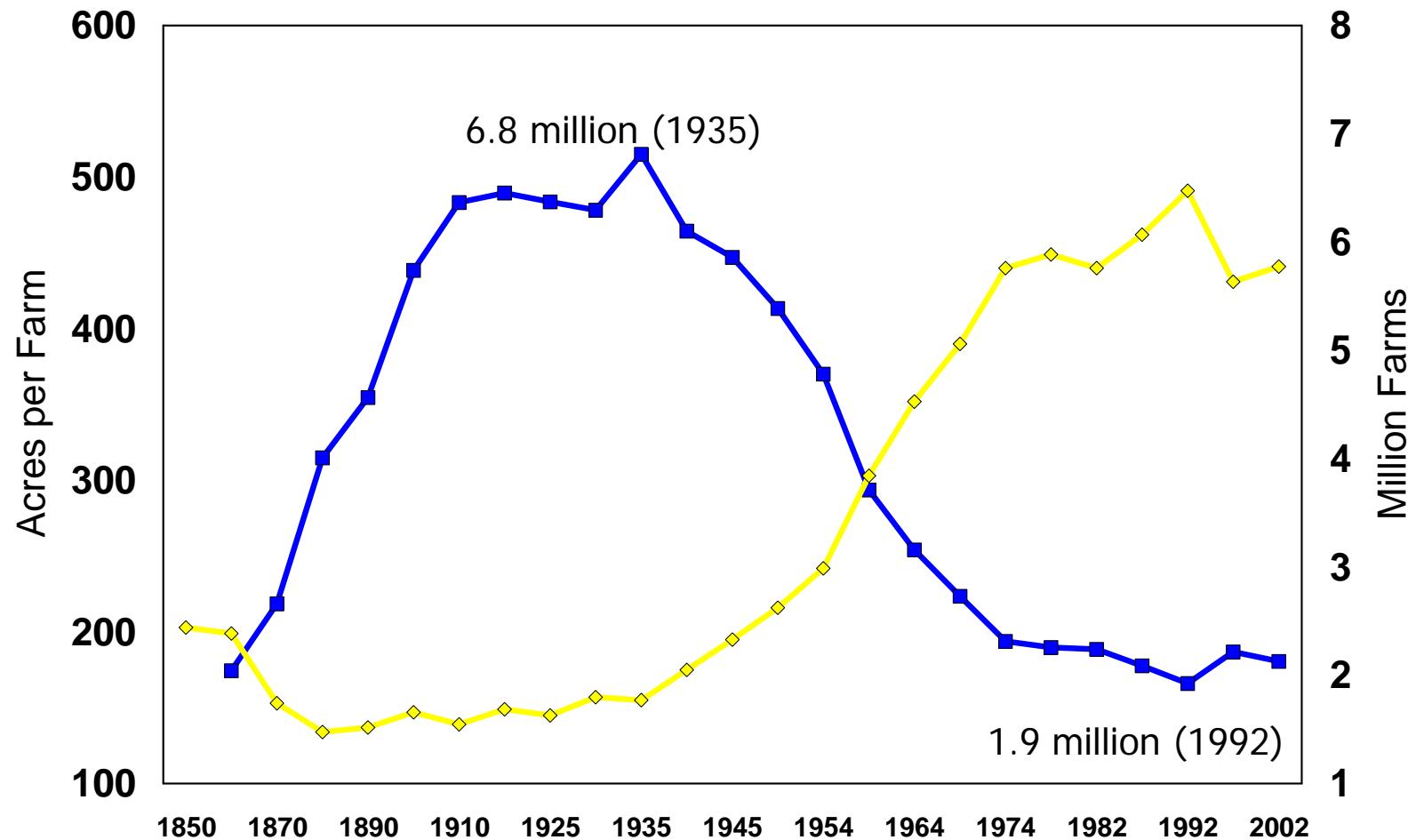
What are the Comparative Advantages of the US Ag Sector Relative to its Major Competitors?

- **Abundant, fertile land**
- **Cutting-edge technology**
 - Plant and animal genetics
 - Pesticides and Fertilizers
 - Farm machinery
 - Management techniques
- **Highly skilled agricultural managers**
- **Marketing Infrastructure**



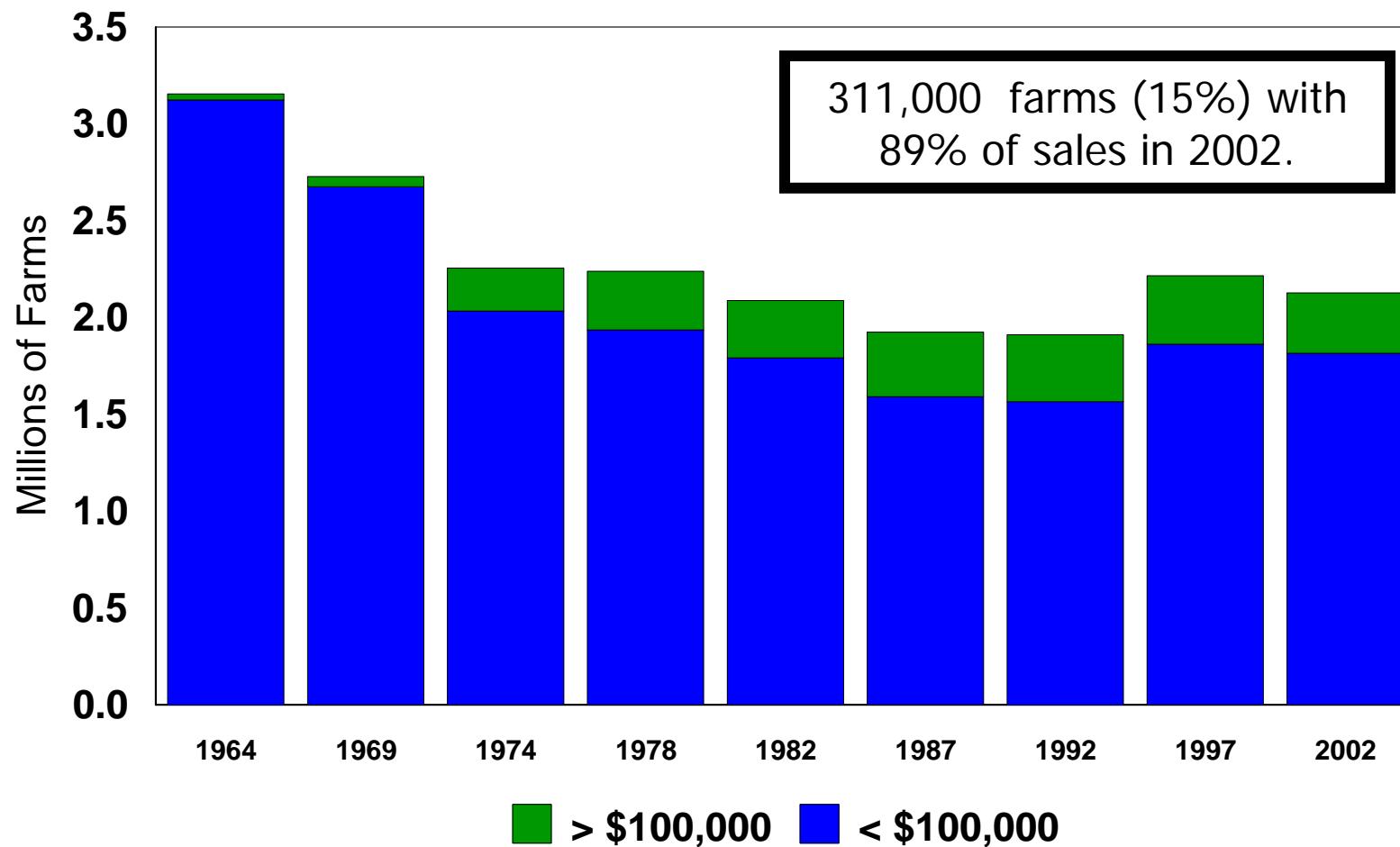
Perhaps the
Most dynamic

Farm numbers are declining, while acreage per farm is rising



Source: USDA

Fewer But Larger Farms Produce the Majority of Output



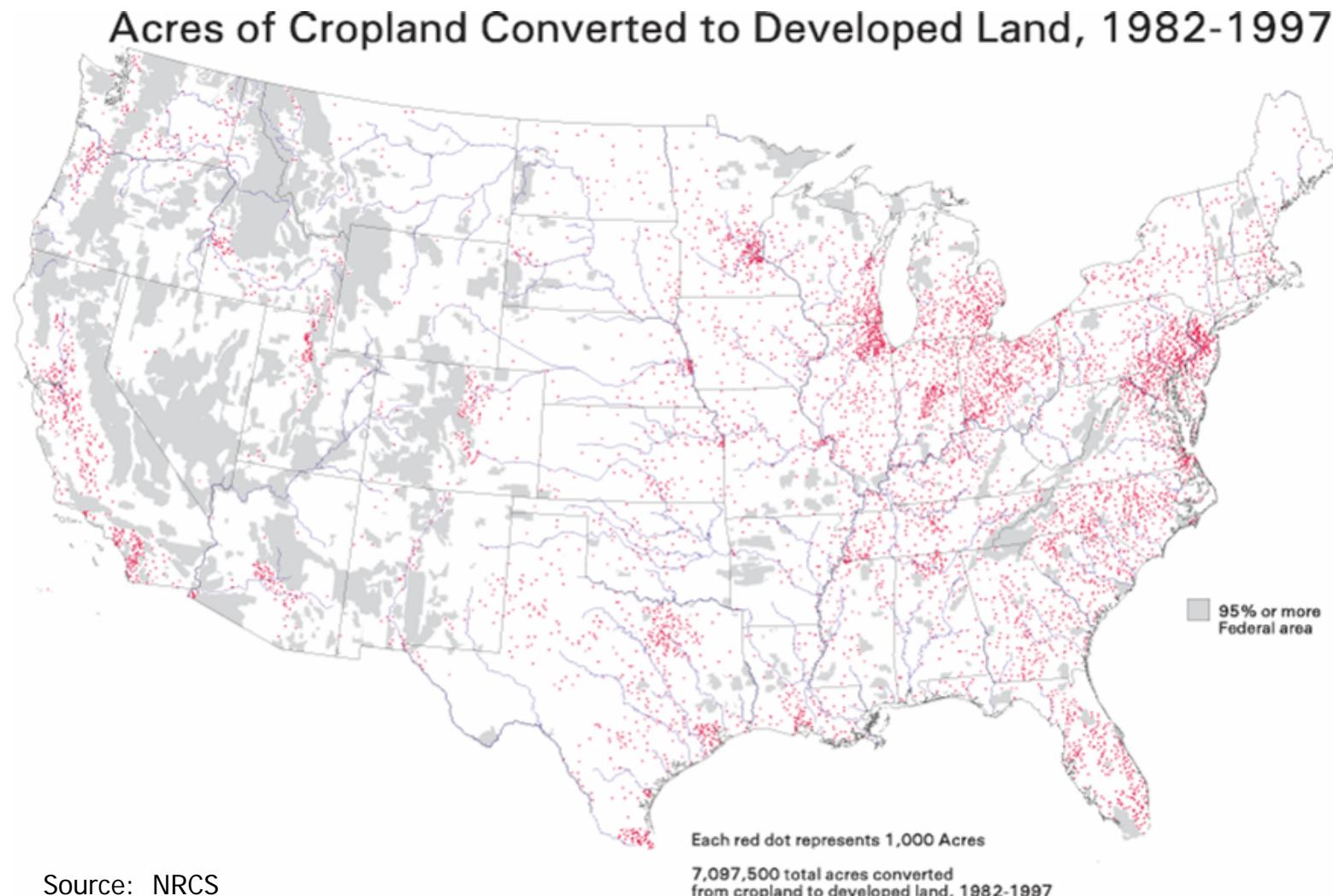
Source: USDA

Off-Farm Income is Important to Most Farm Sizes



Source: USDA

Farmland Lost to Development

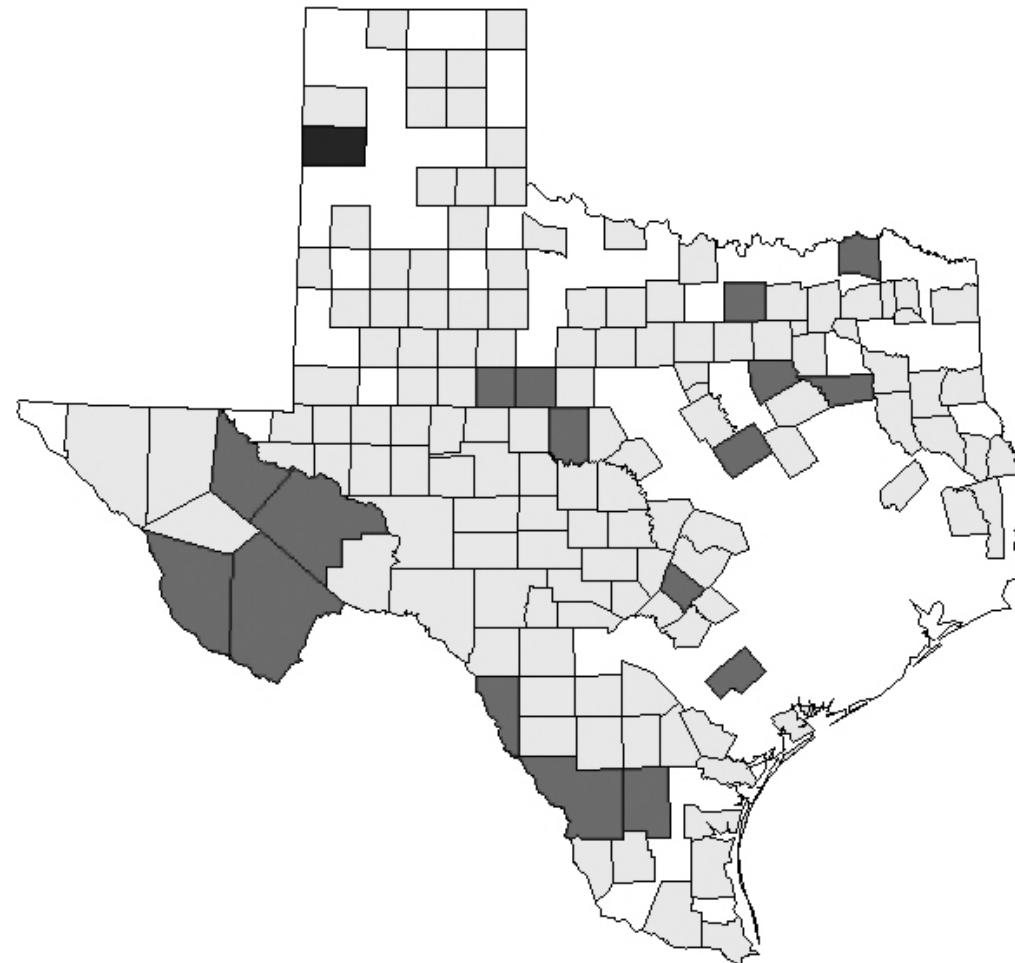


Source: NRCS

Loss of Beef Cattle Numbers From 1980 to 2004 (1,000s) by County

Legend

- 1 - 30
- 31 - 85
- 86 - 255

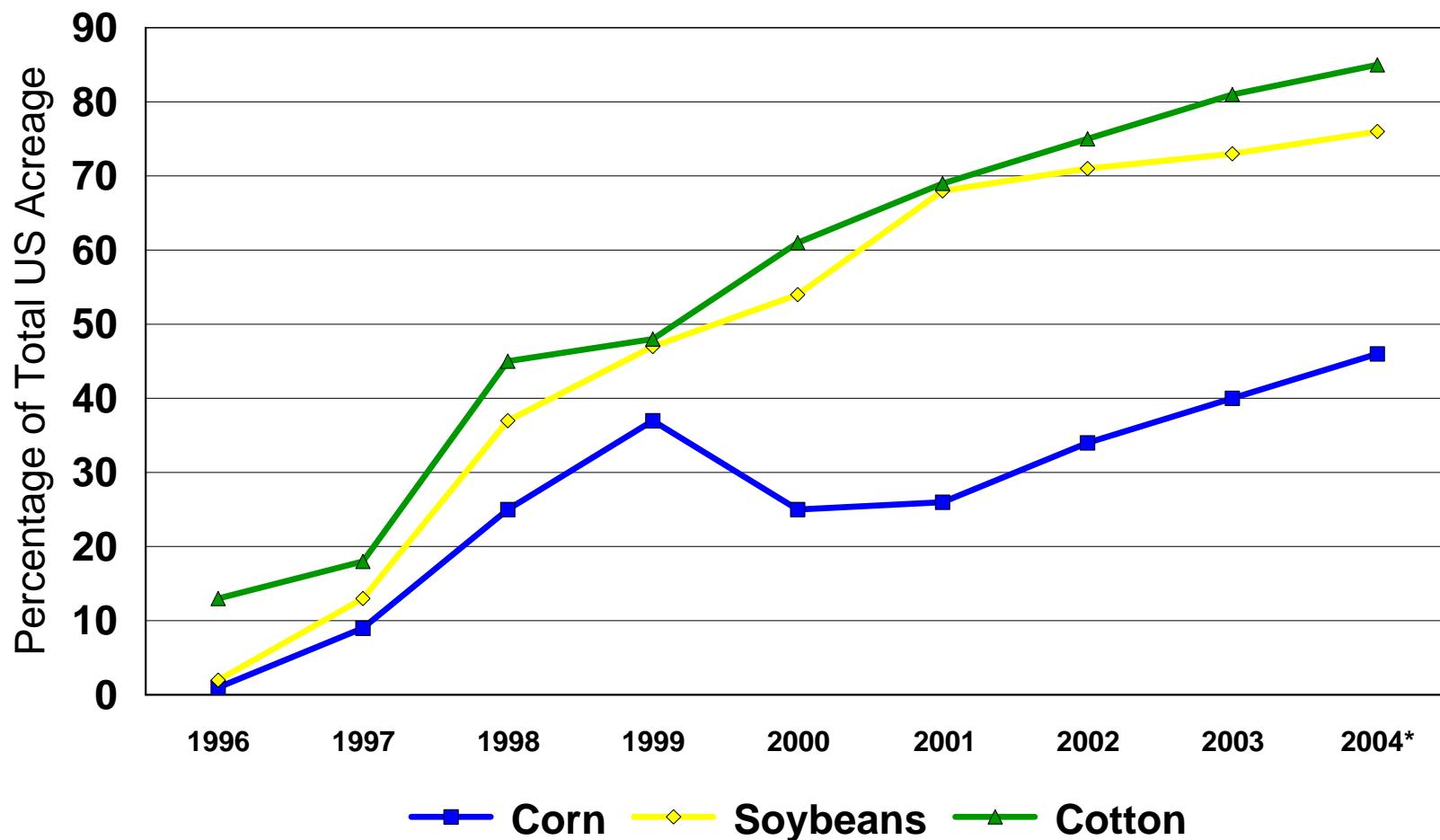


Four Firm Concentration Ratios (CR4): Selected Years

Beef Packers	72% (1990)	76% (1995)	70% (1998)	81% (2000)
Beef Feedlots	37% (1987)	34% (1989)	44% (1992)	59% (2001)
Broilers	35% (1986)	44% (1990)	49% (1998)	50% (2001)
Pork Production				49% (2002)
Food Retailing			24% (1997)	38% (2001)

Source: USDA, trade association publications

US Acreage Using Biotechnology Continues to Increase

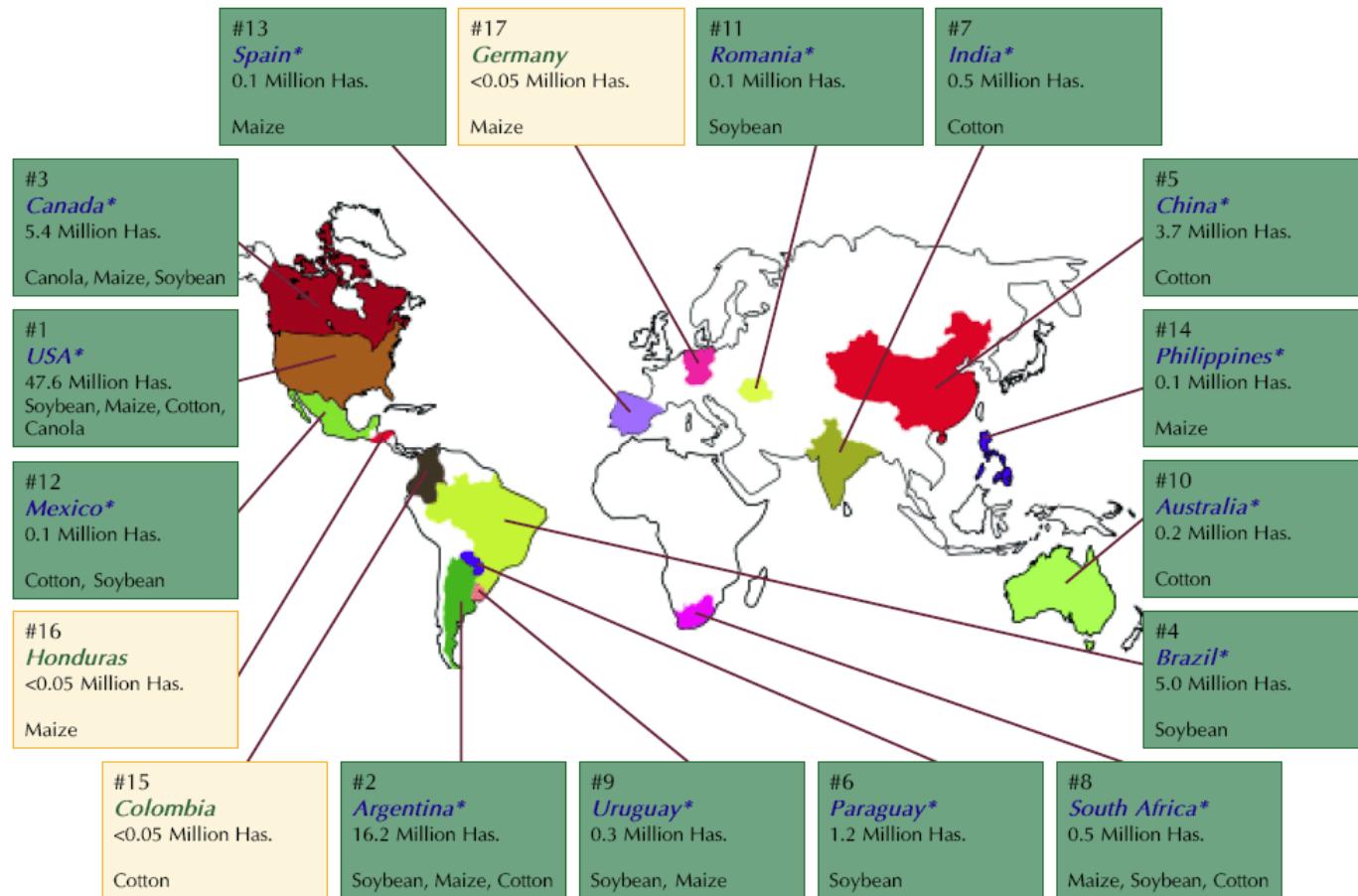


* Estimate

Source: Council for Biotechnology Information

Agricultural Biotechnology has Spread Around the World

Biotech Crop Countries and Mega-Countries*, 2004



■ *14 biotech mega-countries growing 50,000 hectares, or more, of biotech crops.

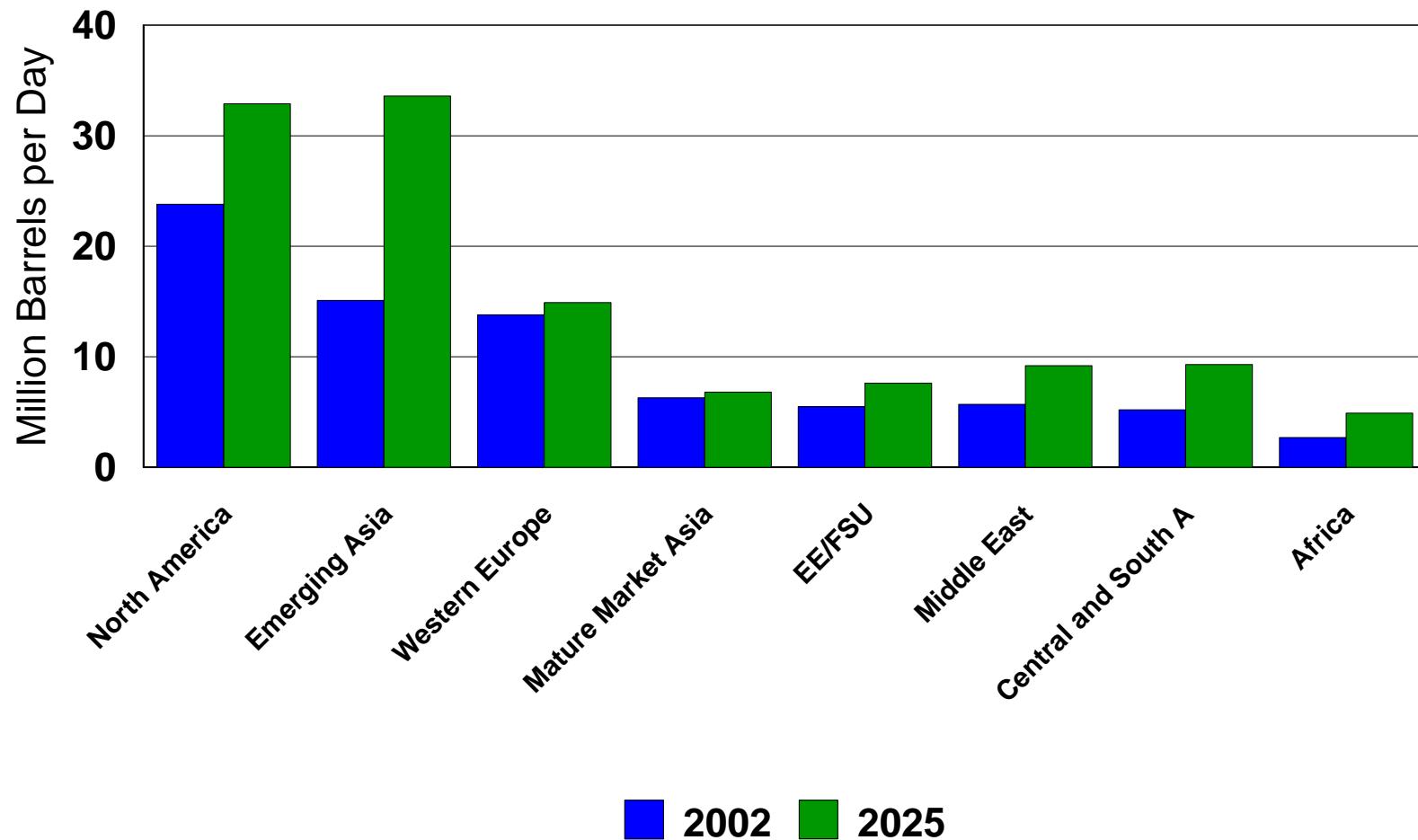
Source: Clive James, 2004

Biotech Acreage Increasing Worldwide

- China
 - 2003 – 6.9 million acres
 - 2004 – 9.1 million acres
 - Most acreage is Bt cotton, but the crop to watch is Bt rice.
- India
 - 2003 – 250,000 acres
 - 2004 – 1.24 million acres
- The World
 - 1996 – 4.3 million acres
 - 2004 – 200 million acres
 - 2010 Estimate – 375 million acres or 10 percent of the cultivable land, in 30 countries.

Source: International Service for the Acquisition of Agri-biotech Applications

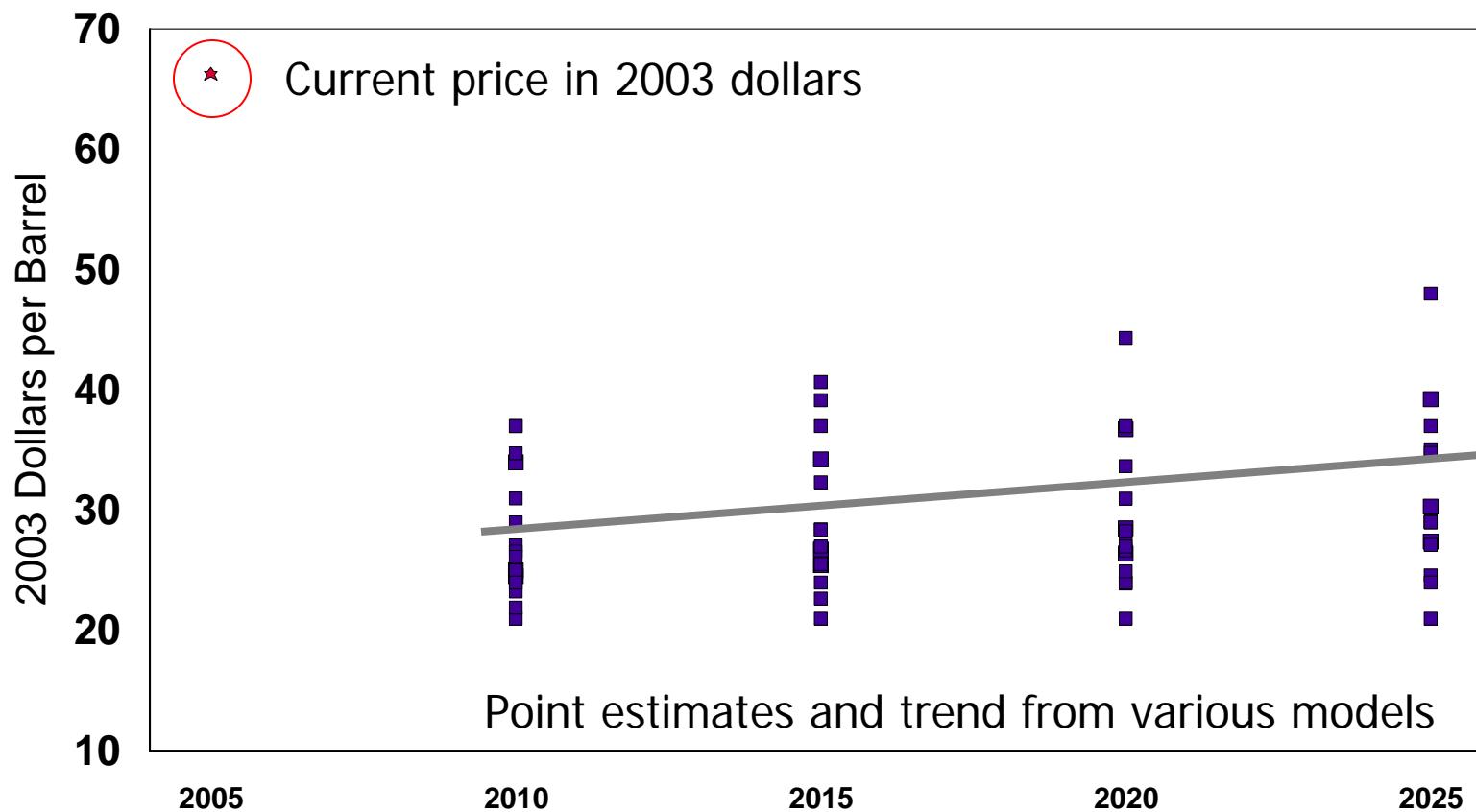
Oil Consumption in Asia is Projected to More Than Double in 20 Years



Source: Energy Information Administration

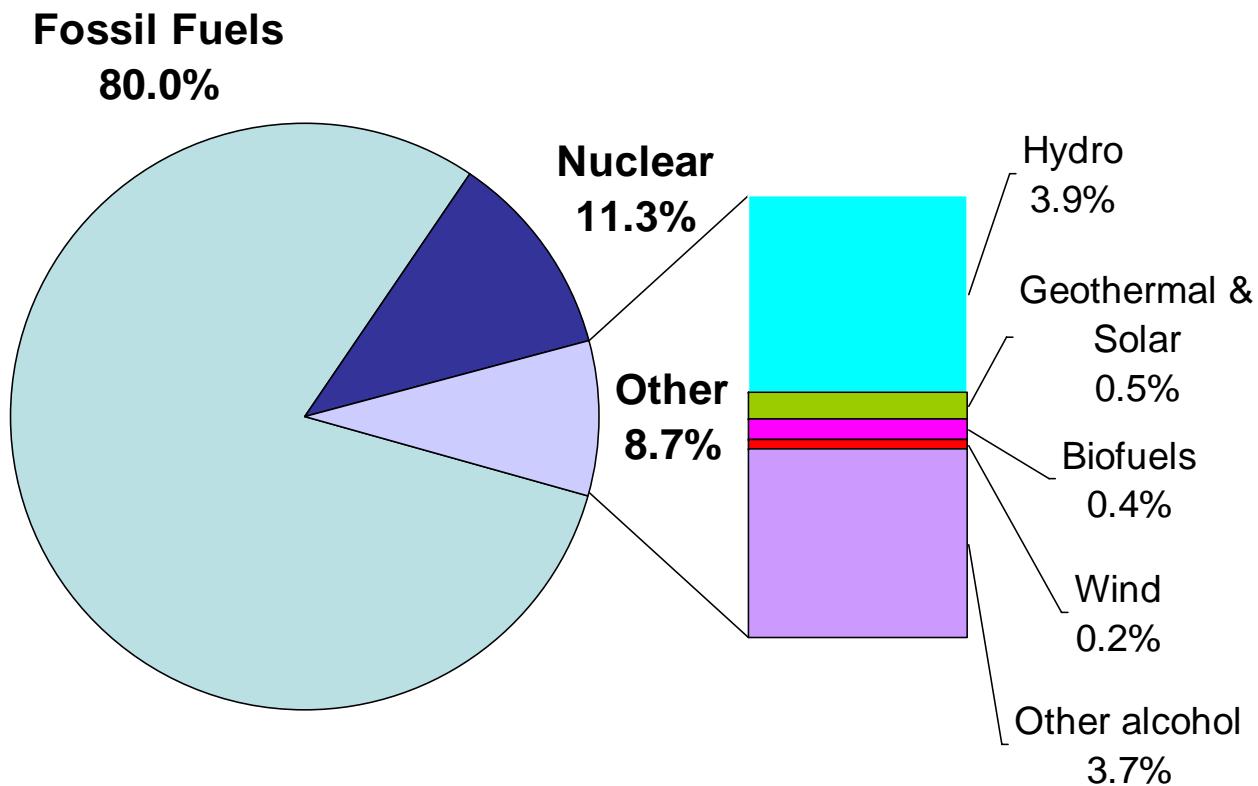
Going to Have to Get Better at Projecting Energy Prices

Forecasts of World Oil Prices, 2010-2025



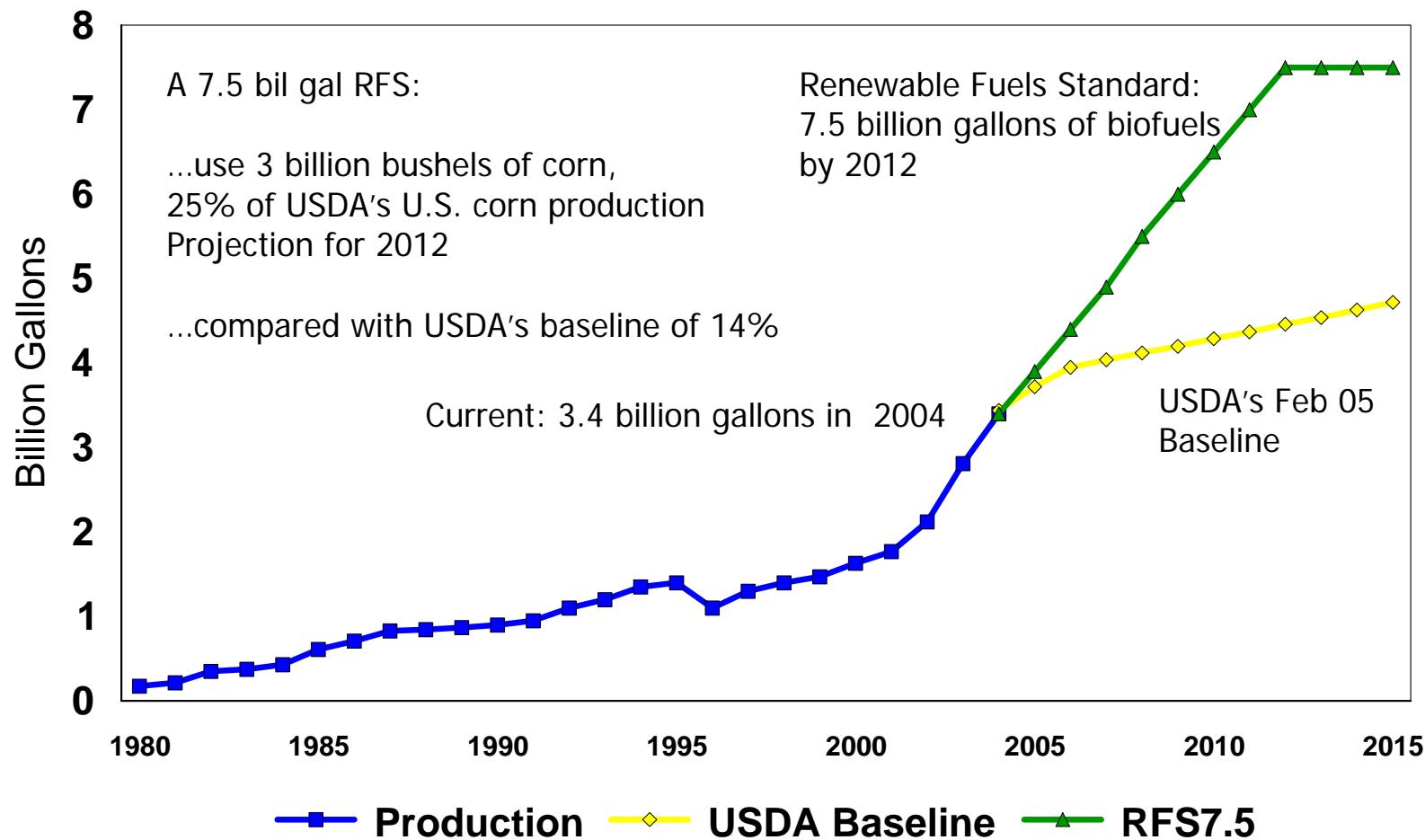
Source: US Energy Information Administration

US Energy Production, 2003



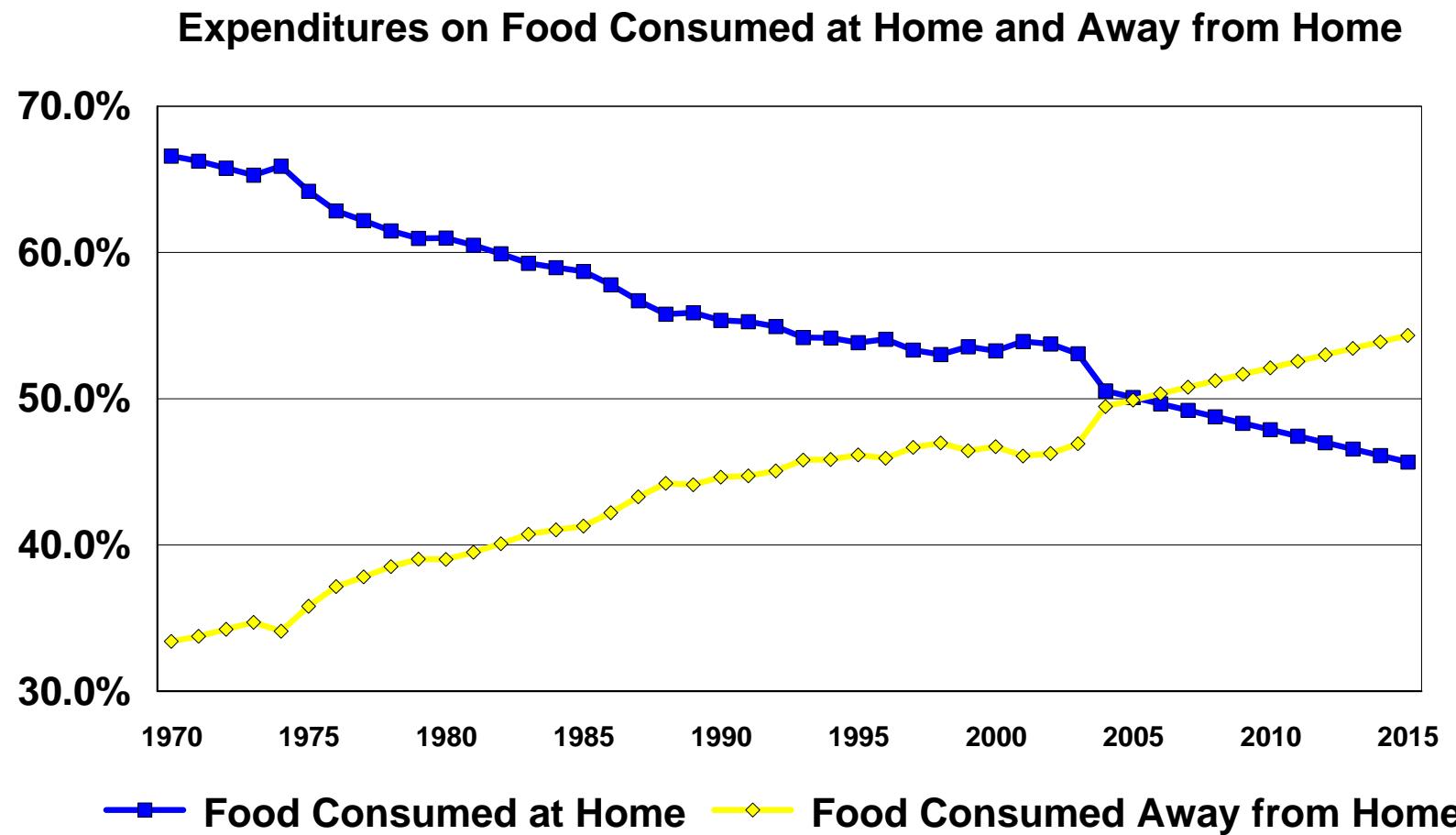
Source: DOE, EIA; American Coalition for Ethanol; National Biodiesel Board.

Future US Ethanol Production



Source: American Coalition for Ethanol

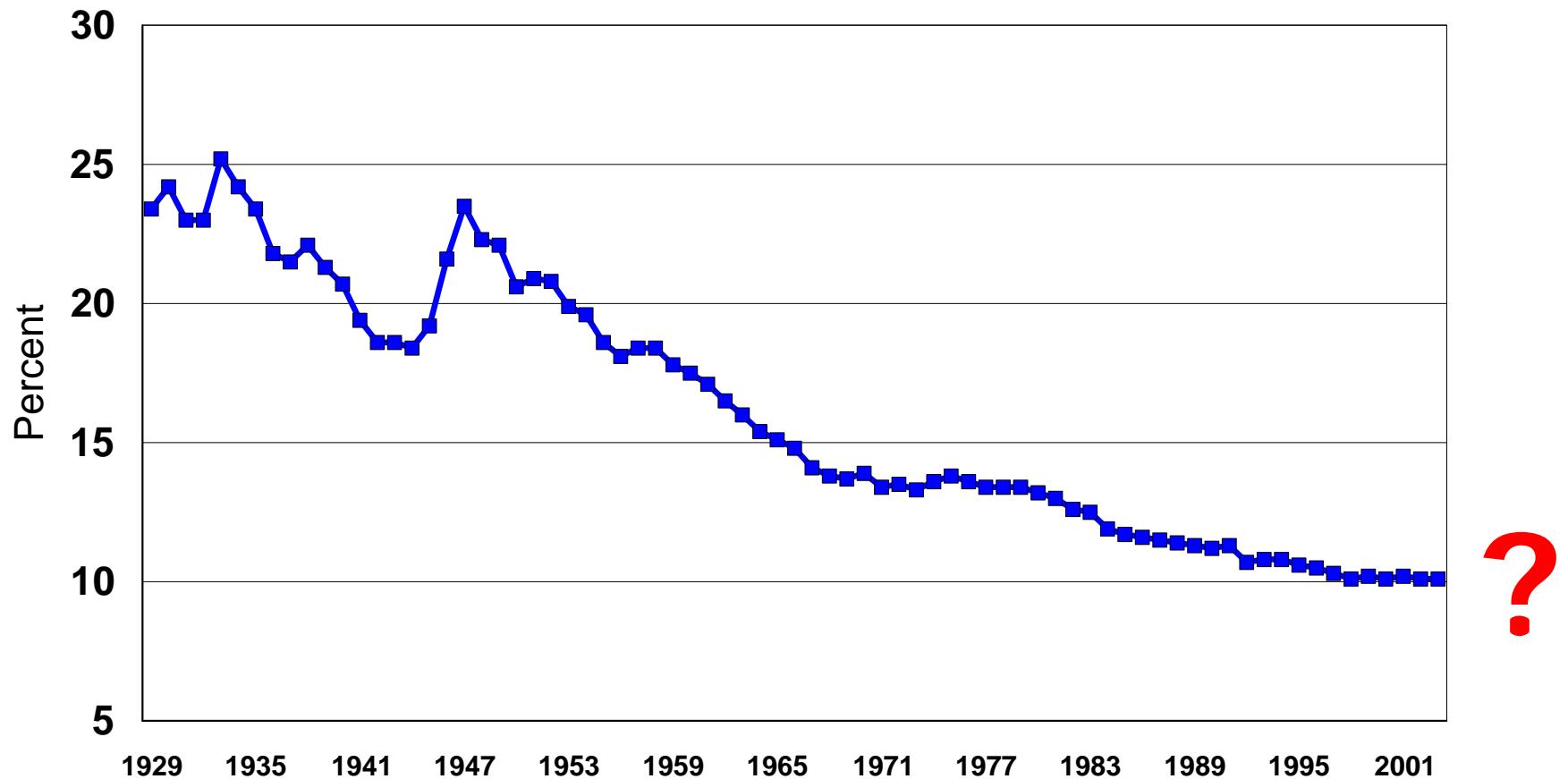
Food Expenditure Trends



Source: ERS

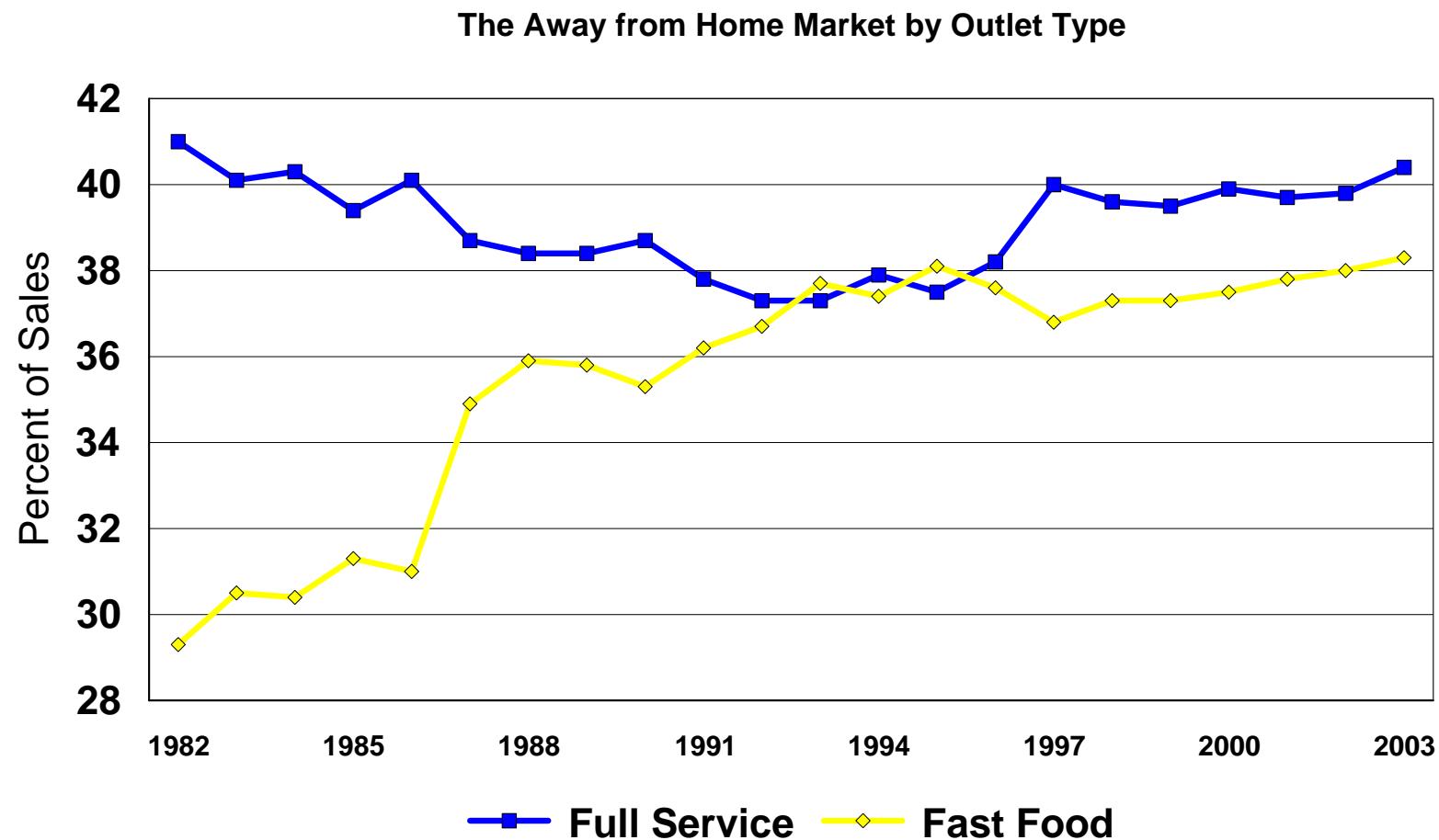
Food's Share of Disposable Income Relatively Flat

Food expenditures by families and individuals as a share of disposable personal income



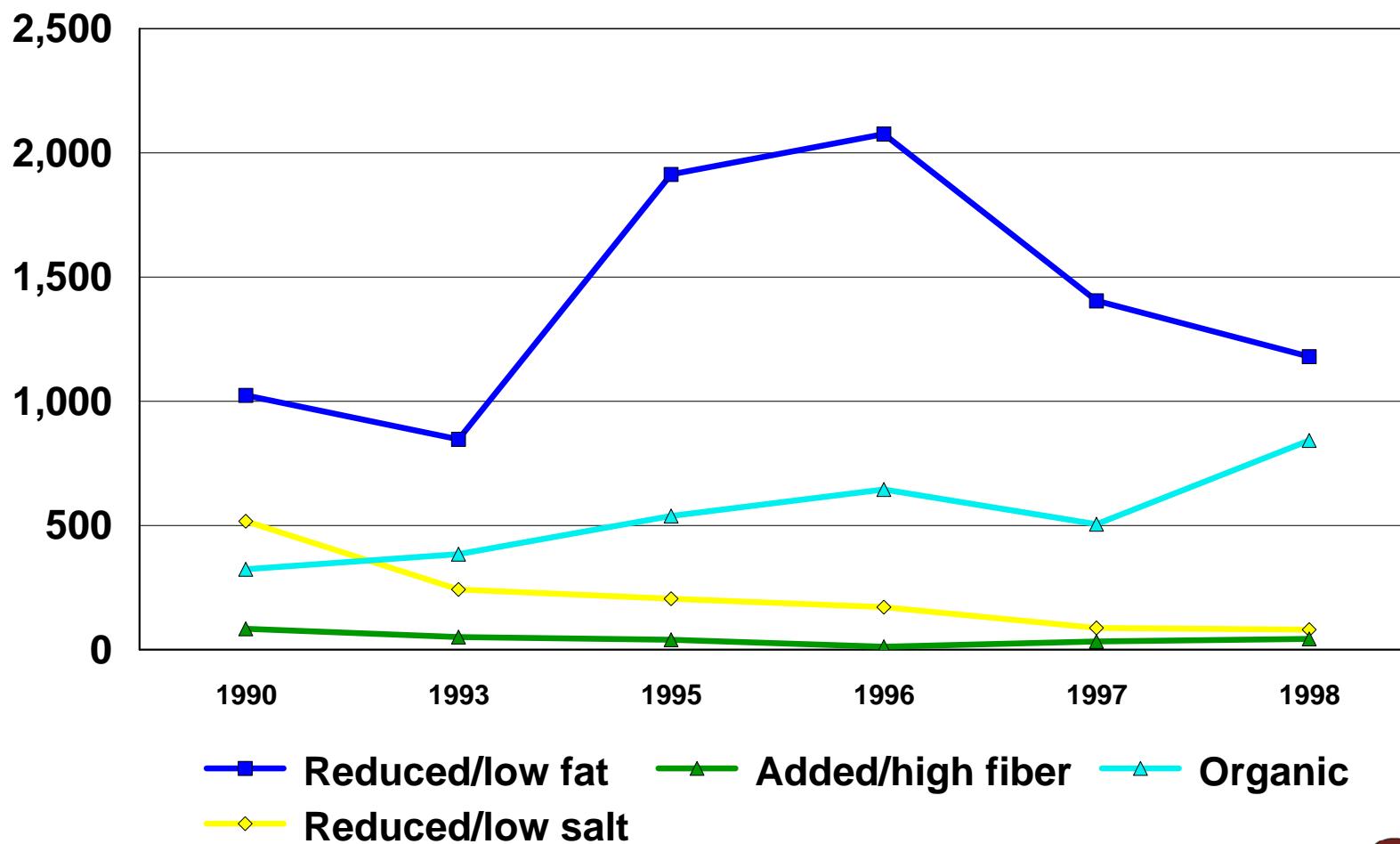
Source: ERS

Eating out trends



Source: ERS

Food Product Introductions by Claim



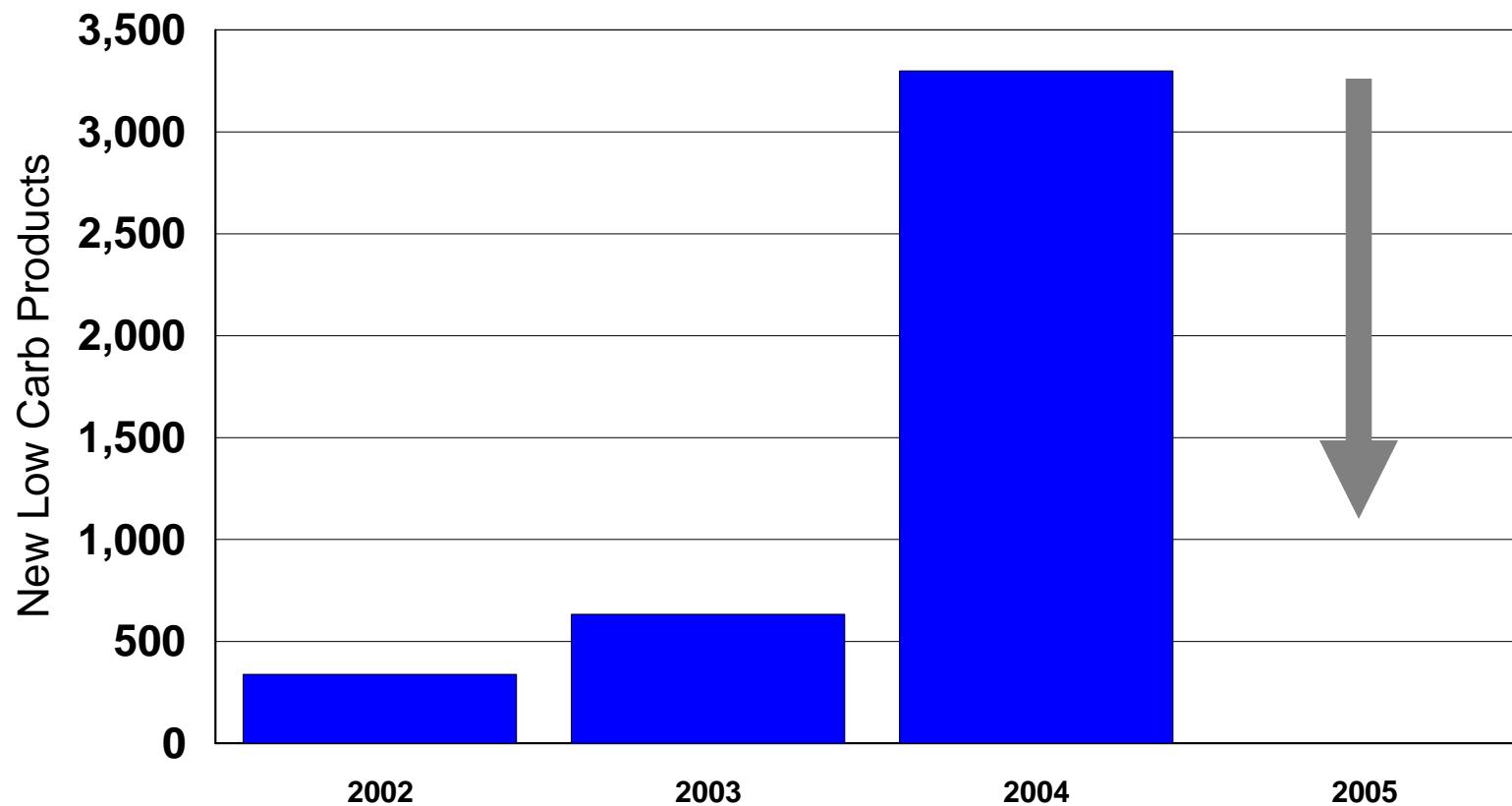
Source: New Product News

Lifecycle Analysis: Low Carb Craze

- **November 1999** – “Low Carb Diets” on cover of *TIME Magazine*
- **February 2004** – low carb diet peak, 9.1% of Americans on the diet
- **May 2004** – Krispy Kreme Doughnuts blames low carb diets for profits coming in below Wall Street estimates
- **June 2004** – New World Pasta Company, nations largest pasta maker, declares bankruptcy
- **September 2004** – Interstate bakeries, maker of Wonder Bread and Twinkies, files for bankruptcy
- **July 2005** – 2.2% of Americans on a low carb diet
- **August 2005** – Atkins Nutritionals declares bankruptcy
- **October 2005** – Jack in the Box® launches “Bread is Back!” campaign

Low Carb Craze Fading Fast

New Low Carb Product Introductions



Source: Productscan Online

Conclusions

- Think about the last 10 years...
 - 1995 record crop prices
 - 1998-2001 market loss assistance payments
 - 2002 farm bill increase government support and low prices
- The Next 10 years likely to be at least as interesting
- Land values will depend on policy choices