Virginia Commission on Energy and Environment

Old Dominion University
October 14, 2008

Food vs. Fuel: The Myth and Reality of an Agricultural Opportunity

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Governmental Relations

Virginia Farm Bureau Federation


APRIL 7, 2008
Joe Klein: How Al Gore Could Save The Democrats
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TIME
The Clean Energy Myth
BY MICHAEL GRUNWALD
Politicians and Big Business are pushing biofuels like corn-based ethanol as alternatives to oil. All they're really doing is driving up food prices and making global warming worse—and you're paying for it
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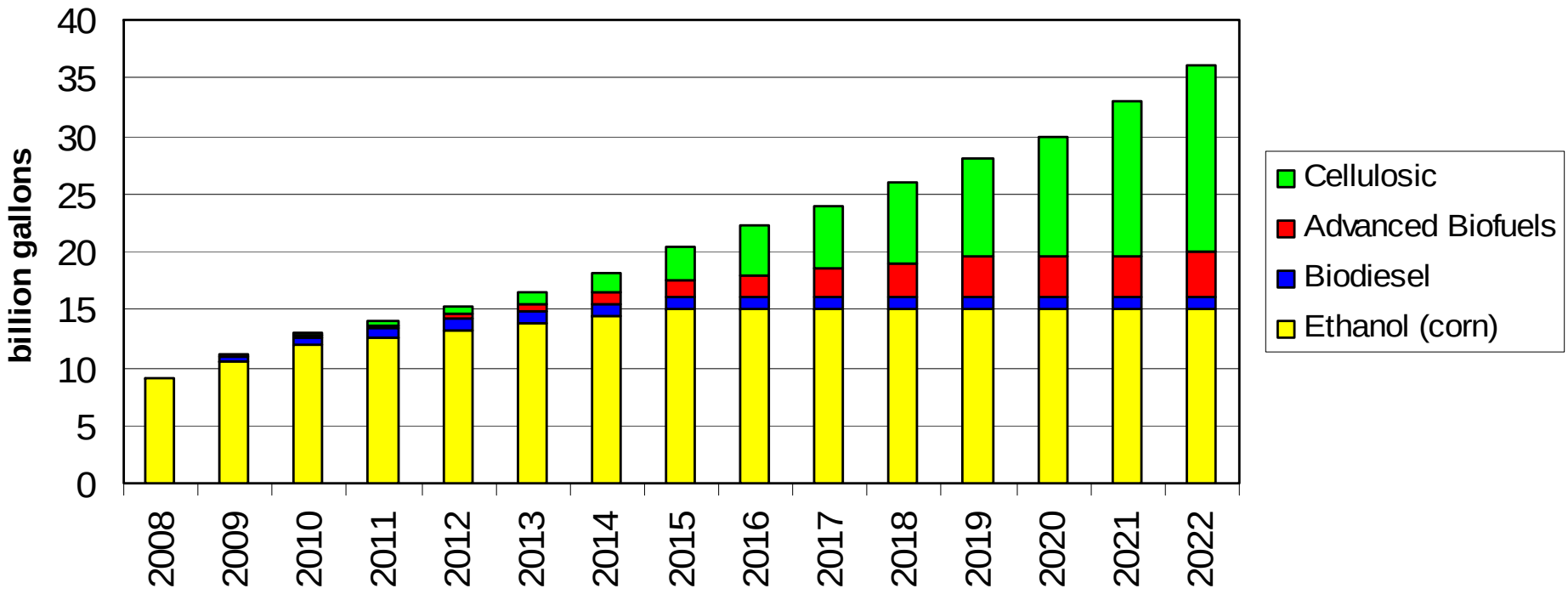
Energy Bill Renewable Fuels Standard

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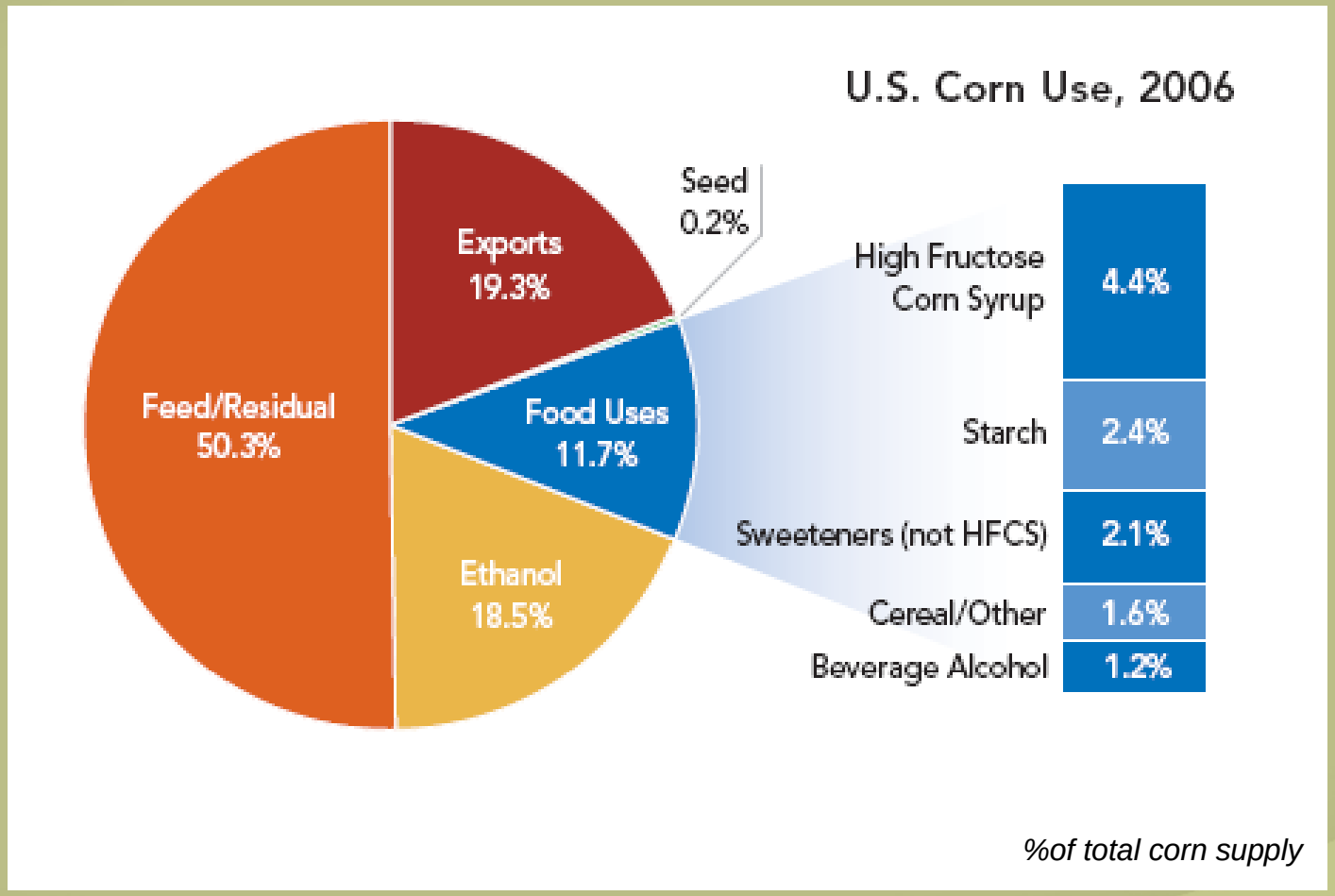
E85 / Gasoline

Corn is currently the primary feedstock for ethanol

But, not the corn you have on your dinner plate

How is the corn crop used?



Myths?

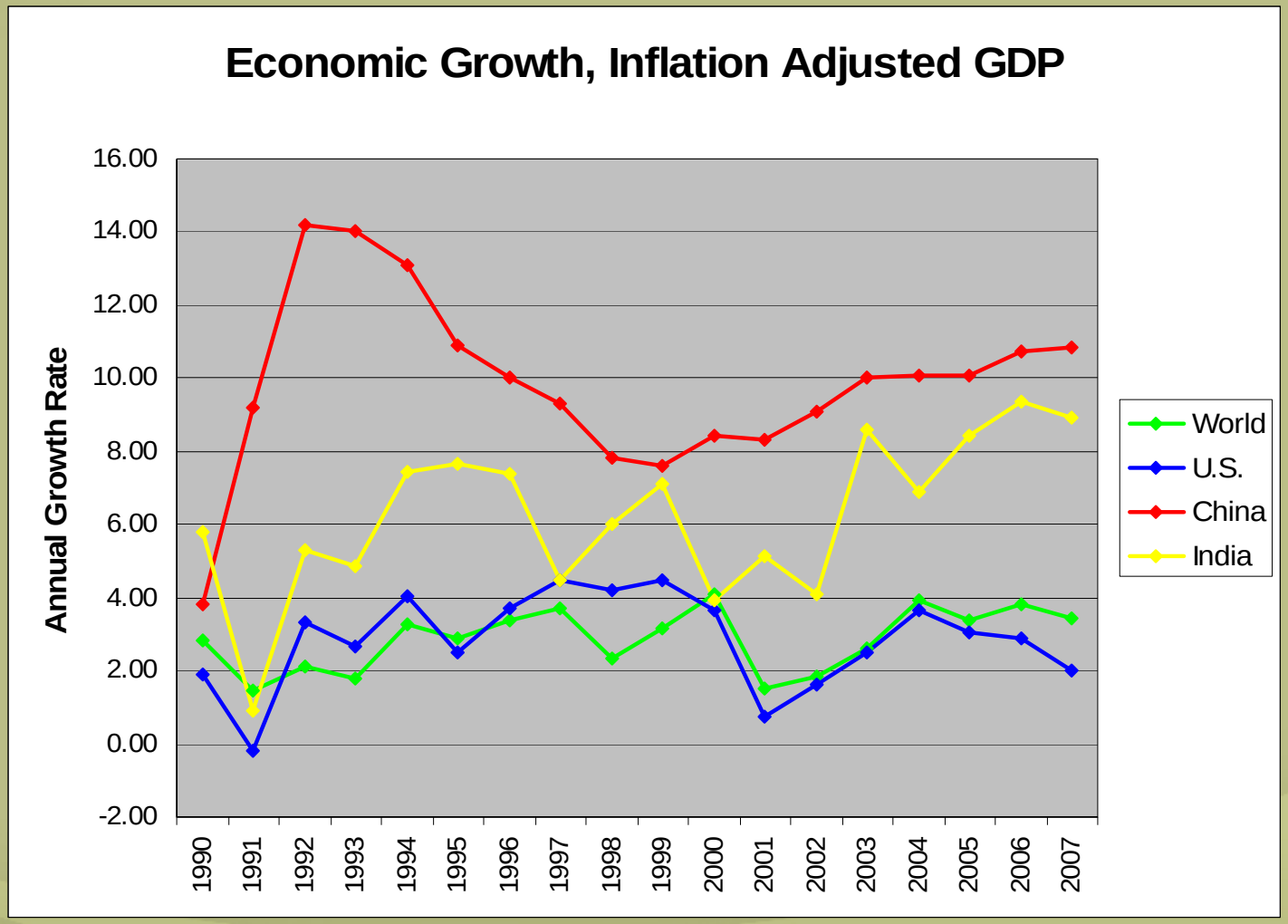
- Ethanol is making food prices increase
  - Crops being used for biofuels are taking away from food sources
- High commodity prices are making farmers rich
- Forestland is being cleared to allow more acres for corn and other crops
- Increasing ethanol grains grown will add greater problems to water quality

Is ethanol making food prices increase?

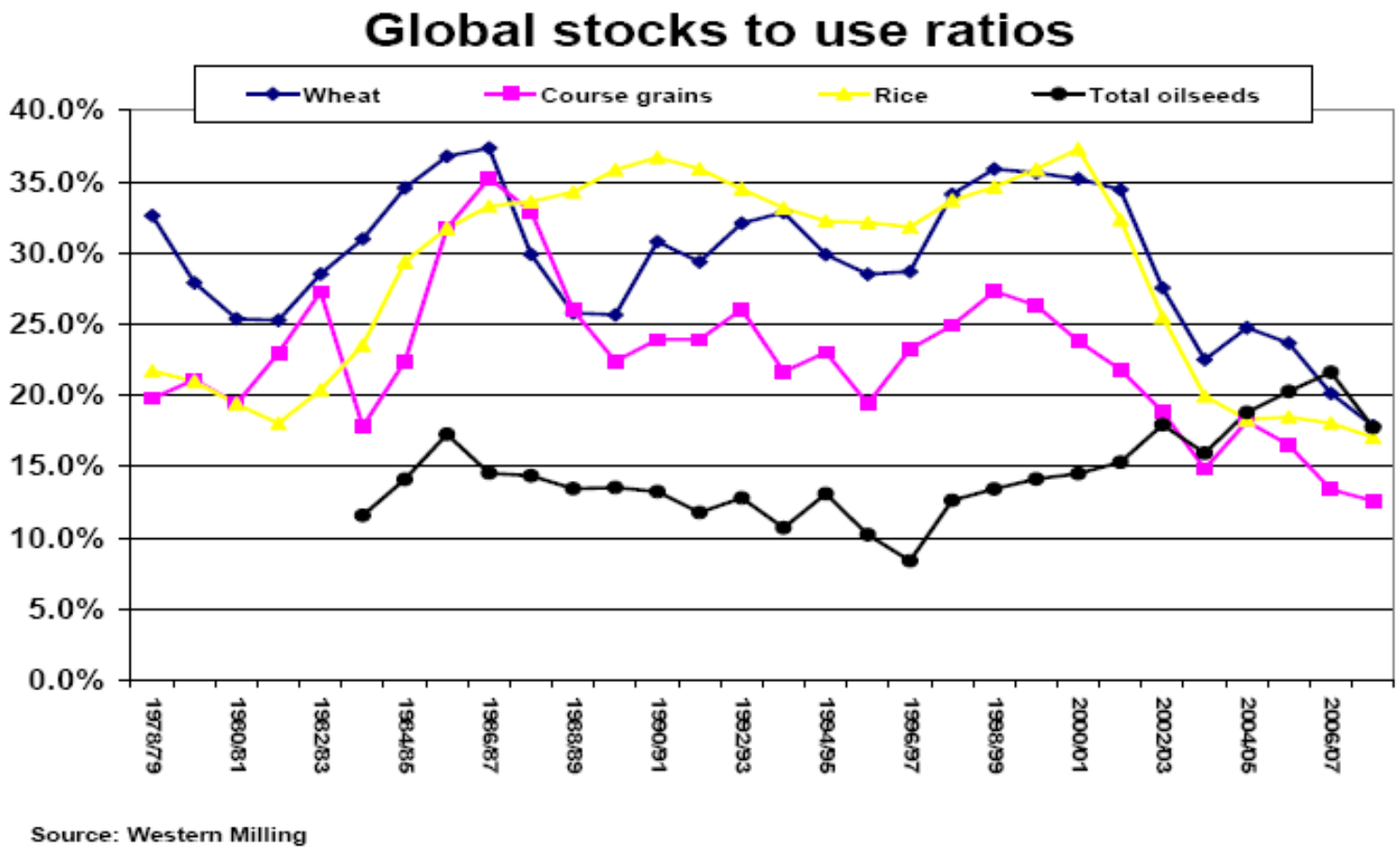
So what's behind higher food prices?

- Increasing demand around the world for food
- Years of dwindling world stocks
- Falling dollar
- Increased speculation in commodity markets
- Billions of bushels in new U.S. corn demand
- Cost of production
- Weather conditions

Increasing demand around the world

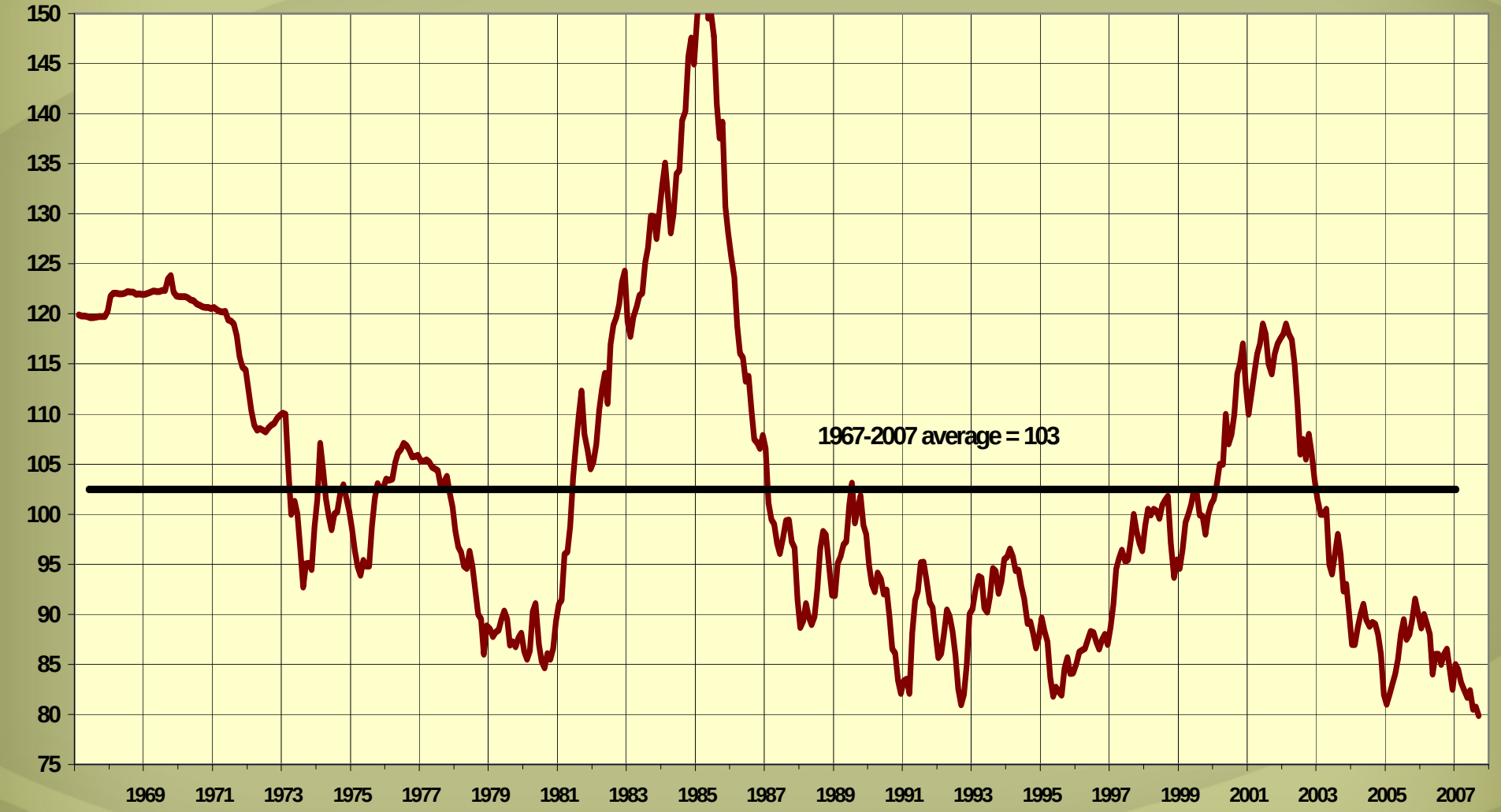


Years of dwindling world stocks

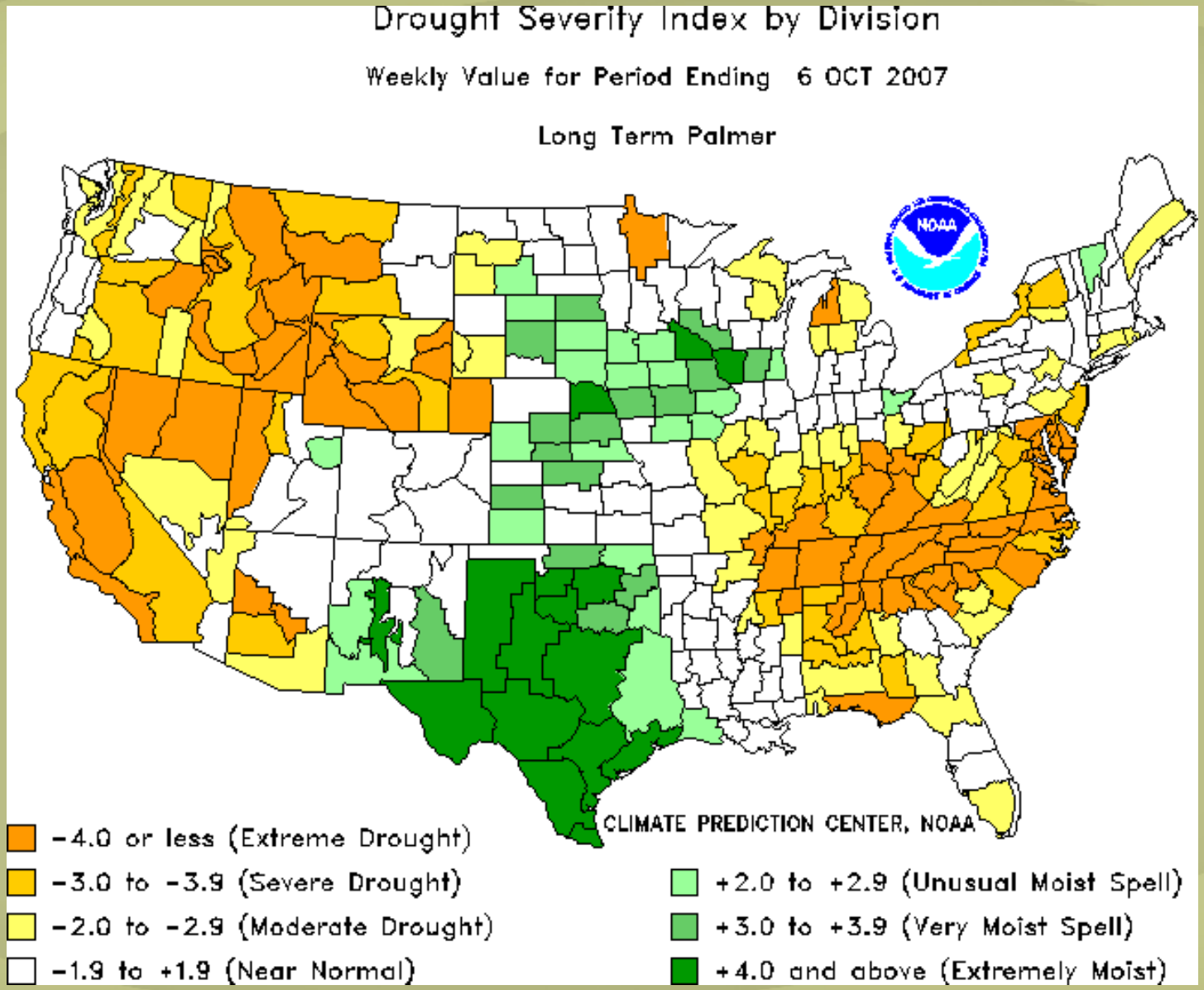


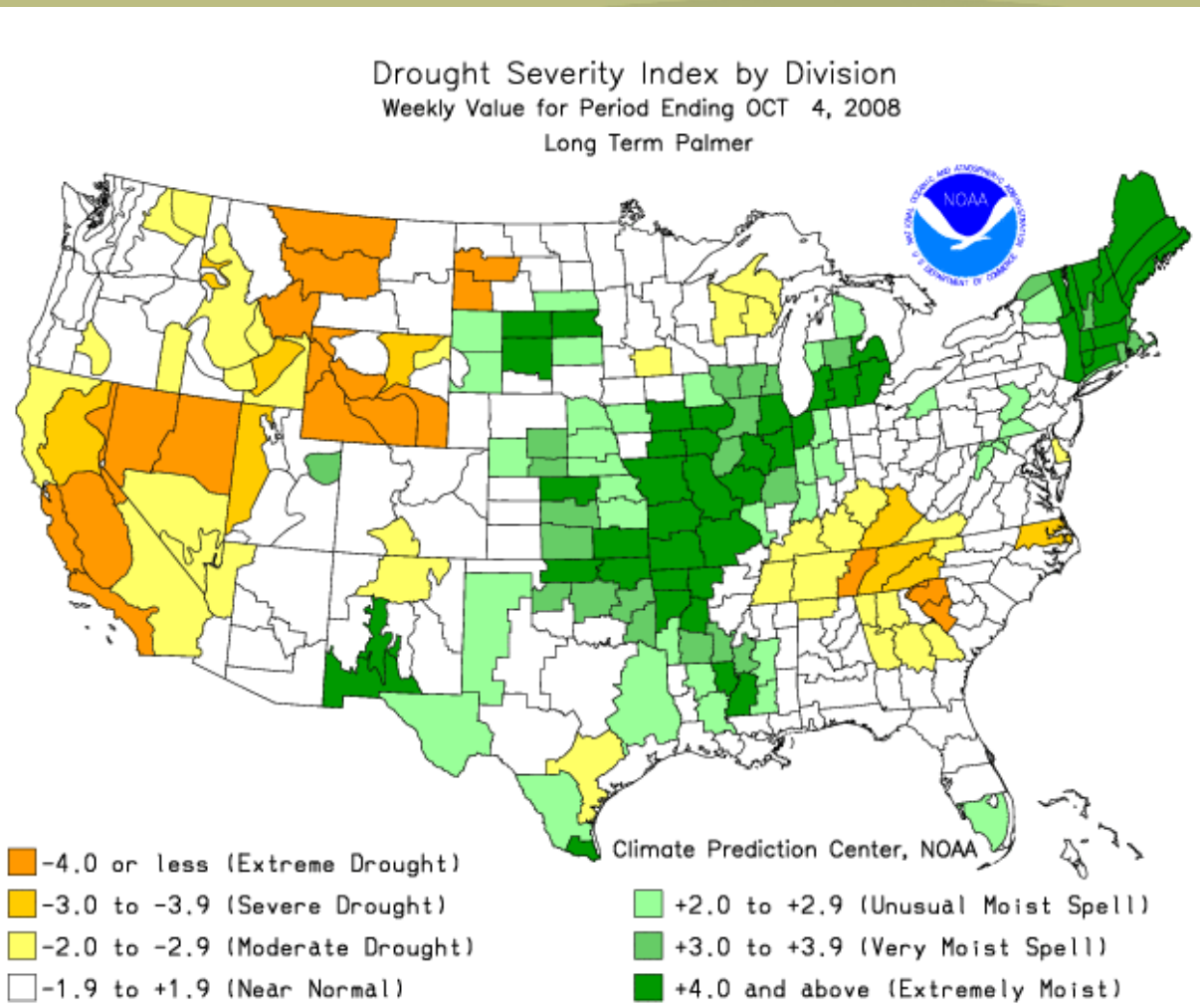
Diets vary by county

Trade-Weighted Value of US Dollar in G10 Countries



Source: Robert Genetski, ClassicalPrinciples.com


Drought Severity Index by Division
Weekly Value for Period Ending 6 OCT 2007
Long Term Palmer
NOAA
CLIMATE PREDICTION CENTER, NOAA
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
-1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)


Drought Severity Index by Division
Weekly Value for Period Ending OCT 4, 2008
Long Term Palmer
NOAA
Climate Prediction Center, NOAA
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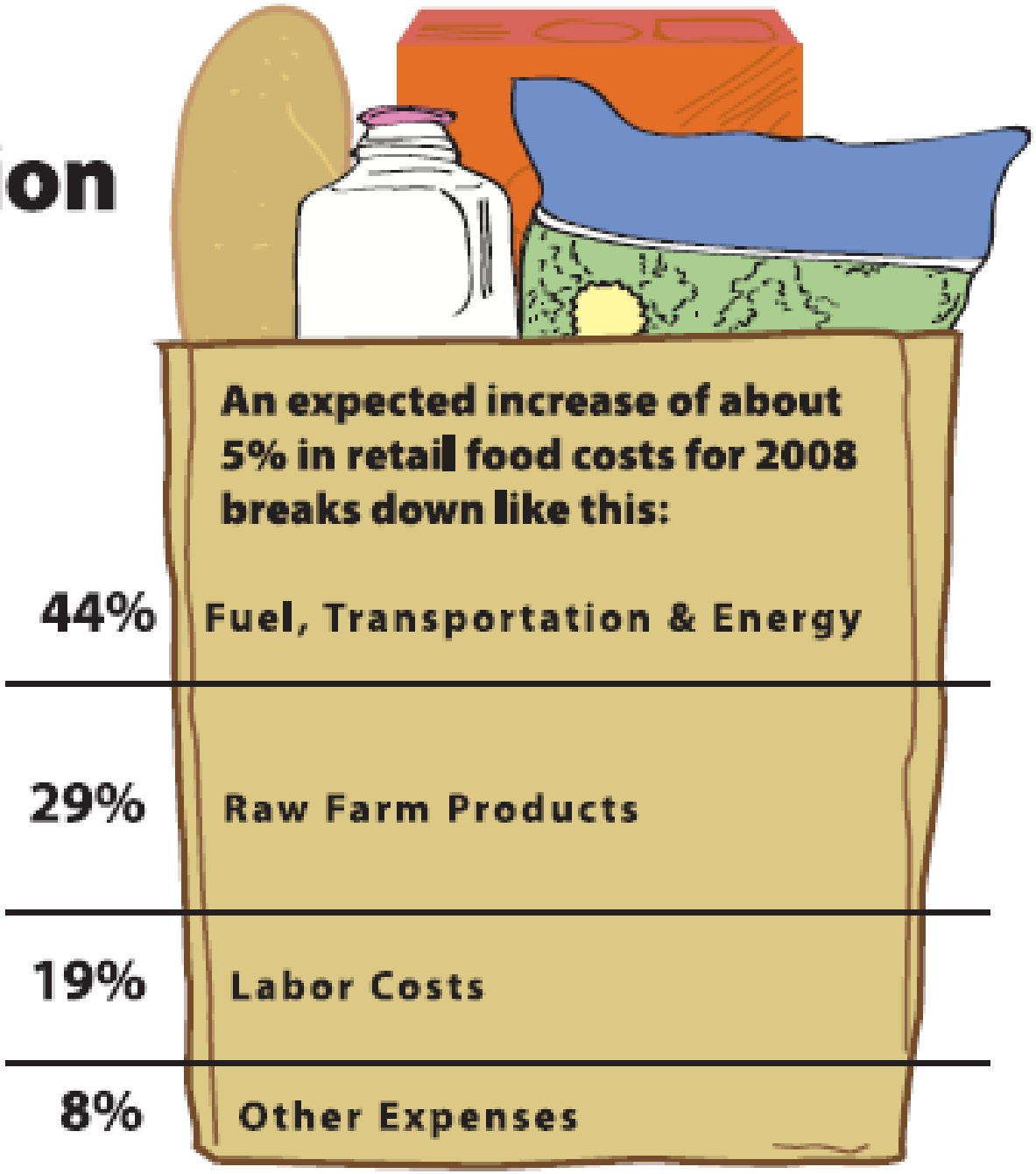
Estimated increase each of these could add to price of a bushel of corn?

Prices affecting issue	Potential Range of impact (dollars per bushel of corn)
Weather reduce U.S. Yields	**$1.00-2.00**
Higher world demand	**0.50-1.00**
Declining world stocks ratio	**0.50-1.00**
Depreciating U.S. dollar	**0.25-0.75**
Commodity funds	**0.25-0.75**
Ethanol production	**0.50-1.00**
Total	**$3.00-6.50**

Range from five impact studies

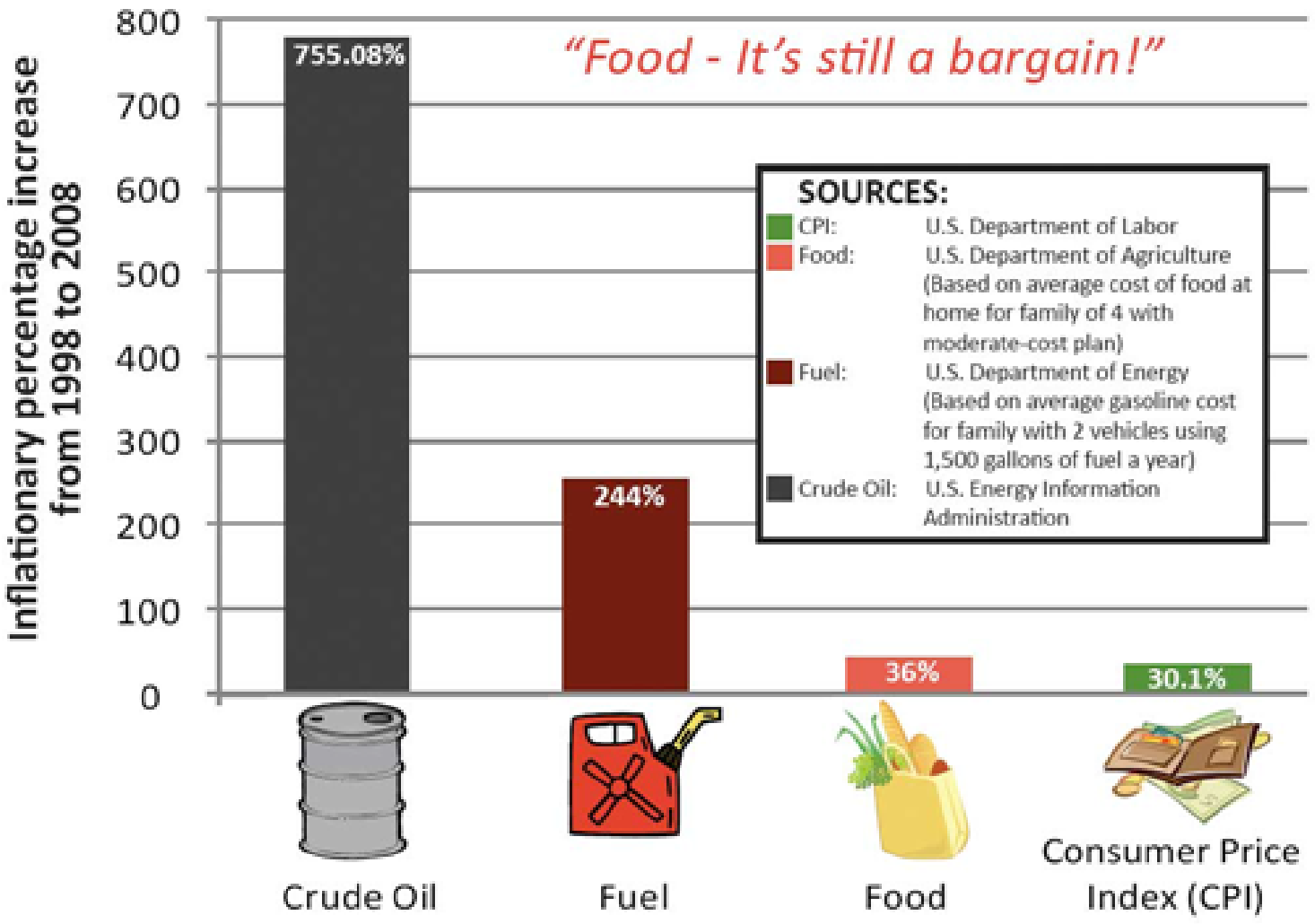
How does the food dollar break down?

Fuel, Transportation and Energy Drive Retail Food Prices



Source: American Farm Bureau Federation® Graphic; Consumer Price Index (CPI)

10-Year Inflationary Comparison (1998-2008)



Michigan Farm Bureau Graphic

Input cost for corn

- Input cost have increase considerably in 2008 input cost average $275-300/acre
- Increase was primarily due to energy cost and related products diesel, fertilizer, etc
- Fertilizer prices alone has increased over 200% since 2006
- Diesel fuel cost have more than doubled
- Seed and other input cost have increased comparably

Cereals

- A 14 ounce box of corn flakes costs about $2.97 to $3.50. When corn is $2 per bushel, a box of corn flakes includes about 2.2¢ worth of corn. At $4 per bushel, the amount of corn in that cereal costs 4.4¢.

Illinois Corn Marketing Board

Poultry

- Between March 2006 and March 2007, fresh chicken prices were up 1.6 percent per pound.

- The average price of one dozen eggs was one penny more in March 2007 than in March 2004.

U.S. Bureau of Labor Statistics

Livestock

"A doubling of feed grain and oilseed prices would increase average food prices by less than four percent."

Bruce Babcock, Iowa State University

Food vs Fuel increase

- Increases in energy prices exert a greater impact on food prices than does the price of corn.
- A 33 percent increase in crude oil prices—which translates into a $1.00 per gallon increase in the price of conventional regular gasoline— results in a 0.6 percent to 0.9 percent increase in the CPI for food
- an equivalent increase in corn prices ($1.00 per bushel) would cause the CPI for food to increase only 0.3 percent.

John Urbanchuk, LECG, LLC, June 2007

Since January 1, 2008

Commodity	High	Low	Last	Change
Corn	$7.96	$4.31	$4.31	(10%)
Soybeans	$16.35	$9.27	$9.27	(19%)
Wheat	$12.78	$6.09	$6.09	(23%)
Cotton	$98.45	$55.11	$56.25	(27%)
Feeders	$118.70	$100.55	$100.80	(9%)
Hogs	$78.75	$65.00	$66.40	(8%)
Milk	$21.20	$15.25	$15.42	(6%)
Gasoline	$3.51	$2.22	$2.36	(6%)
Ethanol	$2.93	$1.96	$1.99	(5%)
US Dollar	81.49	71.76	81.38	7%

Challenges with in the agricultural industry

Biofuel production offers co-products that can be used by the industry in Dried Distillers Grain (DDG)

Typical nutritional composition of distillers grains	
Component	%
Moisture	12.50
Crude protein	25.50
Crude fat	9.60
Crude fiber	7.30
Phosphorus	0.79
Potassium	0.90
Soduim	0.15
Available lysine	0.56

The table shows a typical nutrient composition for distillers grains. These figures can be adjusted based on the specific product sourced. Source: Tyson Foods Inc.

Soybeans

Canola for biodiesel

INSIDE: RAILROADS, ETHANOL PRODUCERS FOCUS ON SAFETY

Ethanol PRODUCER MAGAZINE

OCTOBER 2008

Beefing Up Barley

Research Results Have Prompted Ethanol Producers to Take Another Look at This Crop

WWW.ETHANOLPRODUCER.COM

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Crops on the horizon

Switchgrass

Is forestland being cleared to allow more acres for corn and other crops?

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- Currently not economically beneficial
- Not comparable to Brazil

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Will increasing grain production for ethanol add greater problems to water quality?

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- In 2007 Virginia corn acreage increased by 50,000 acres while soybeans decreased by 20,000 acres.
- In 2008 corn acreage in Virginia returned to 2006 levels
- 2007 was an extreme drought year
- BMPs should be used where necessary and appropriate to protect water quality, such as a winter cover crop following corn

Best Management Practices

Being in the conversation

What is the best opportunity presented by the biofuel industry for agriculture?

- Keeping land open for production agriculture
- Provides much needed markets

Farmland is being lost to other uses such as development at a rate of 34,775 acres per year since 1978

National Agricultural Statistics Service Survey for Virginia 1978-2002

Thank you!

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