Materials to be discussed during the May 9, 2008 ANRE Wisline teleconference an "Open Discussion on Food and Fuel Issues"

USDA
United States Department of Agriculture

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Outlook

A Report from the Economic Research Service

www.ers.usda.gov

Global Agricultural Supply and Demand: Factors Contributing to the Recent Increase in Food Commodity Prices

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Abstract

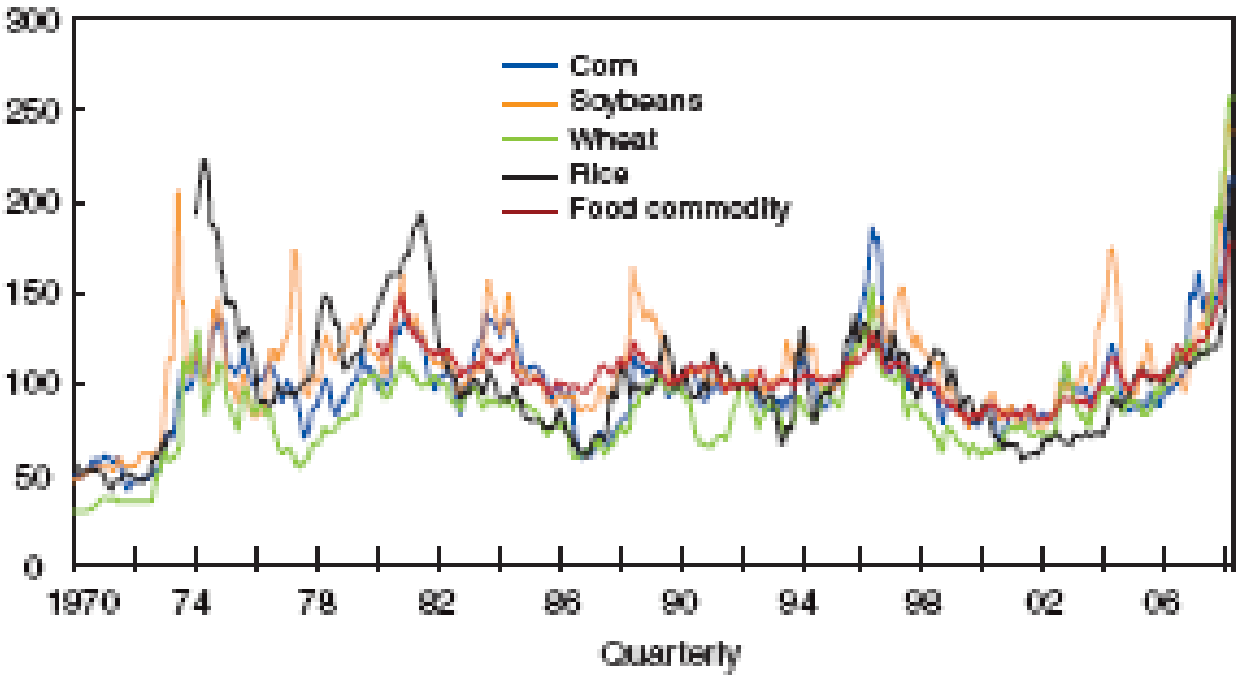
Figure 1

Food commodity prices rose more than 60 percent in the last 2 years

Source: International Monetary Fund: International Financial Statistics.

Figure 2

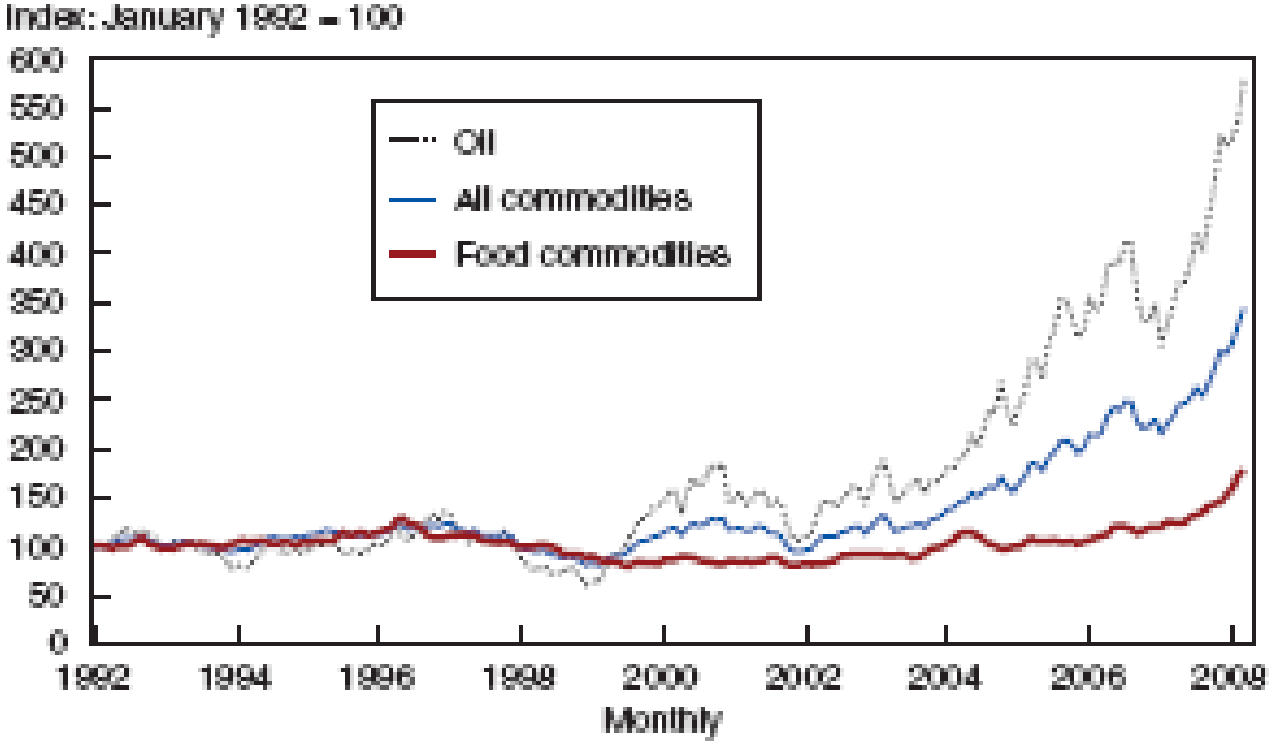
Food commodity price spikes since 1970



Source: International Monetary Fund International Financial Statistics.

Figure 3

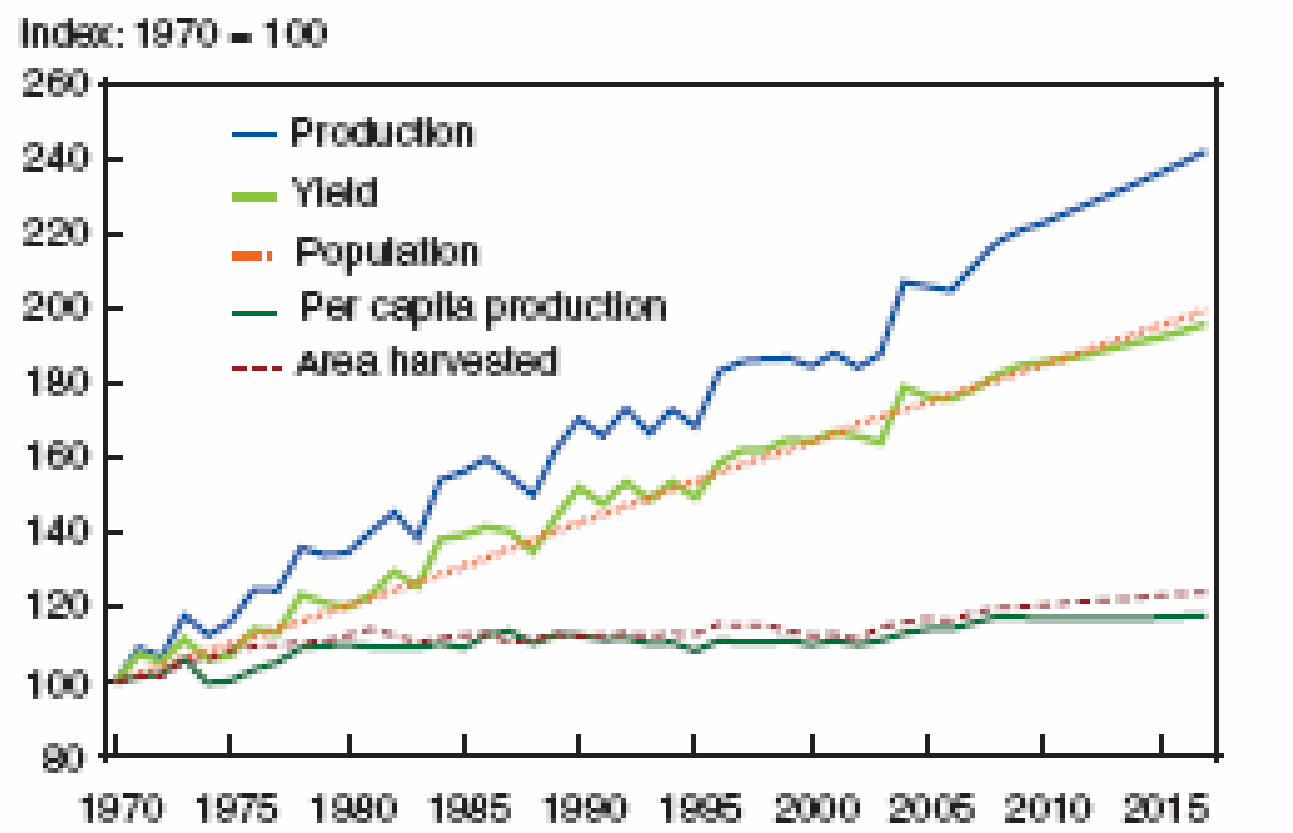
Prices of many commodities rose



Source: International Monetary Fund International Financial Statistics.

Total world grain & oilseeds[1]

Production, yield, area harvested, population & per capita production



[1]Total oilseeds = soybeans + rapeseed + sunflowers.

Source: USDA Agricultural Projections to 2017.

Total world grain & oilseeds[1]

Production, yield, area harvested, population & per capita production

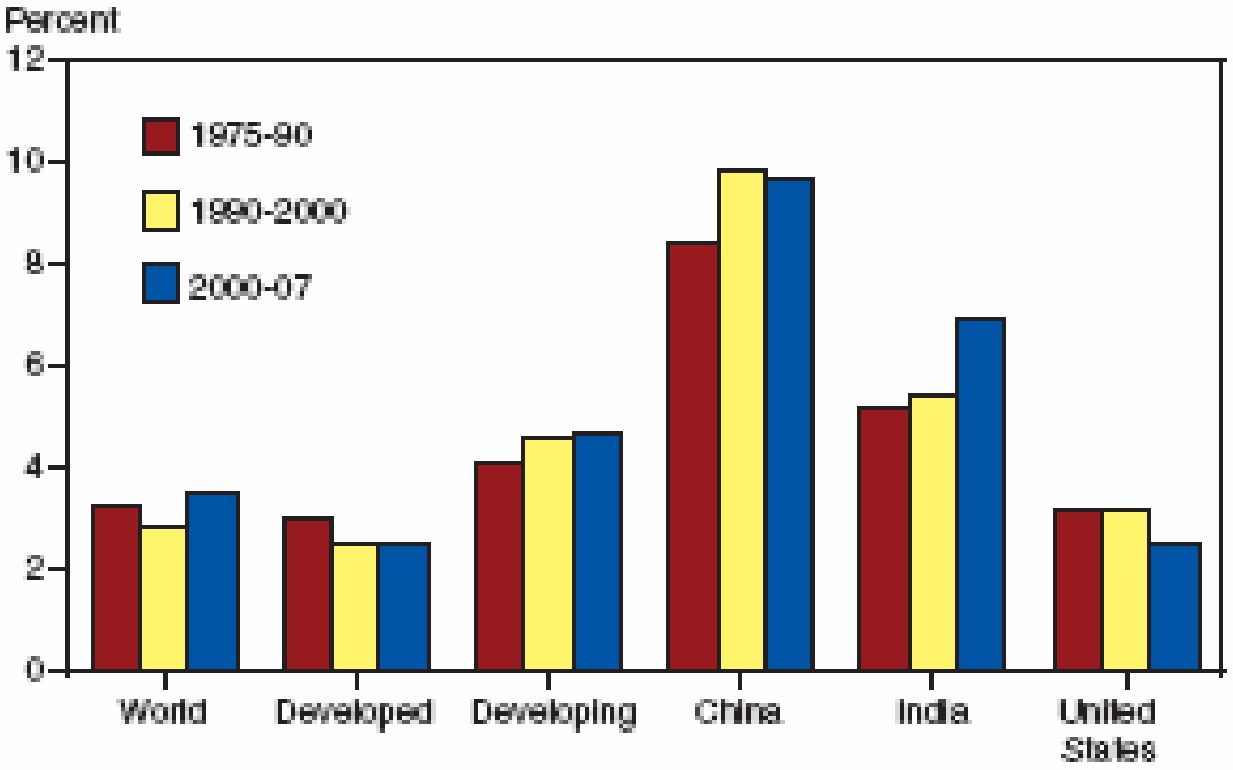
Exponential trend growth rates:

	1970-90	90-07	2009-17
Production	2.2	1.3	1.2
Yields	2.0	1.1	0.8
Area	0.15	0.14	0.39
Population	1.7	1.4	1.1
Per capita production	0.56	0.11	0.02

Figure 5

Strong economic growth

Average real GDP growth rates

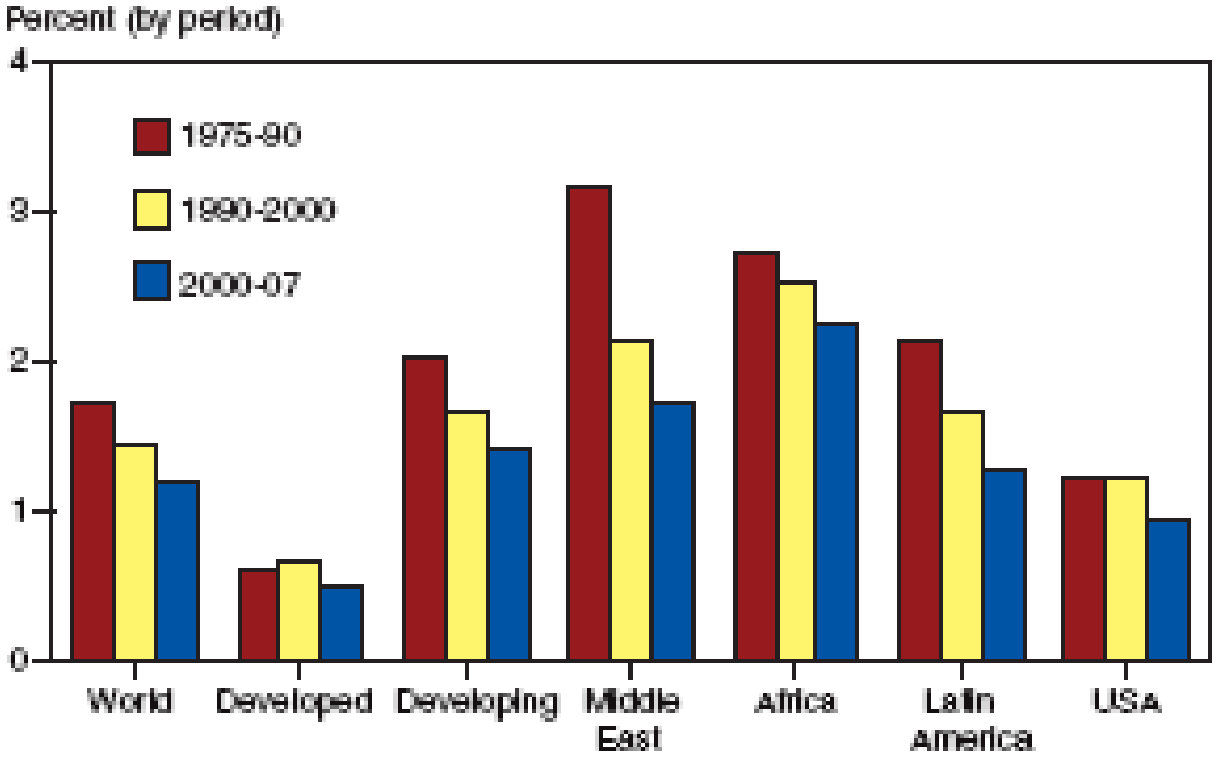


Source: USDA Agricultural Projections to 2017.

Figure 6

Population growth rates decline

But still high in developing countries



Source: USDA Agricultural Projections to 2017.

Global meat[1]

Production, per capita consumption, and population

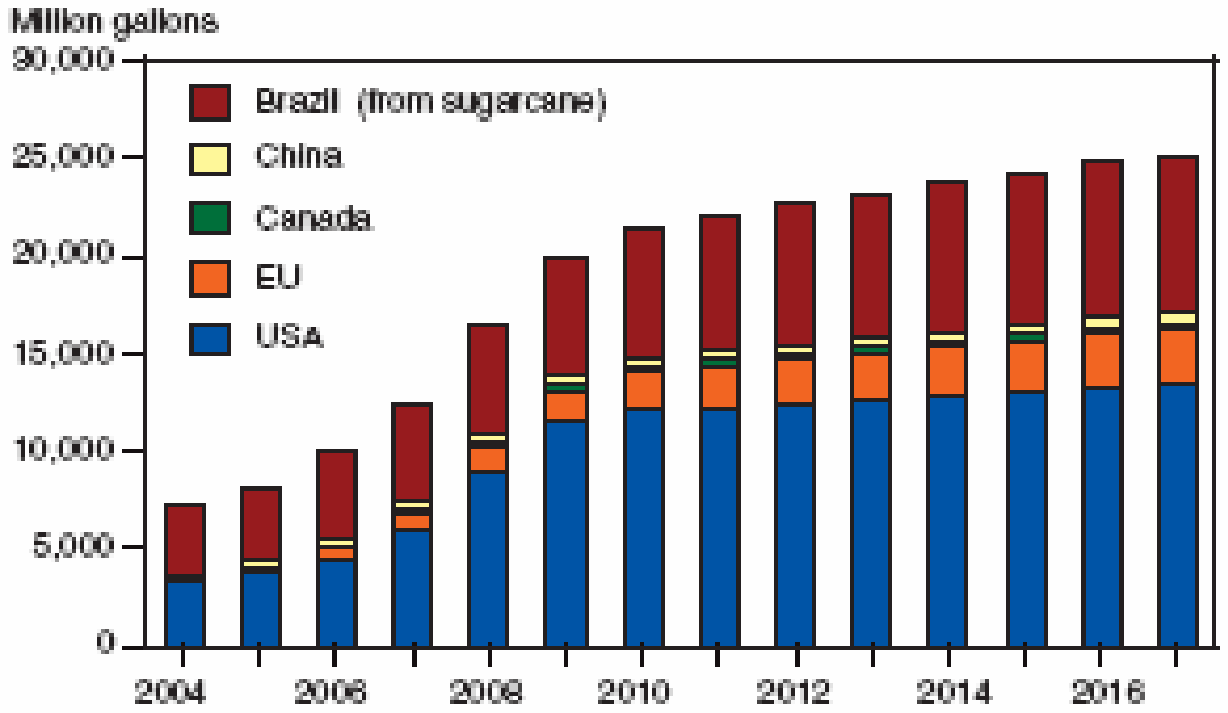
Exponential trend growth rates:

	1975-90	90-07	2008-17
Production	2.2	2.5	2.1
Population	1.7	1.4	1.1
Percapita use	1.4	1.1	1.0

Figure 17

Ethanol production

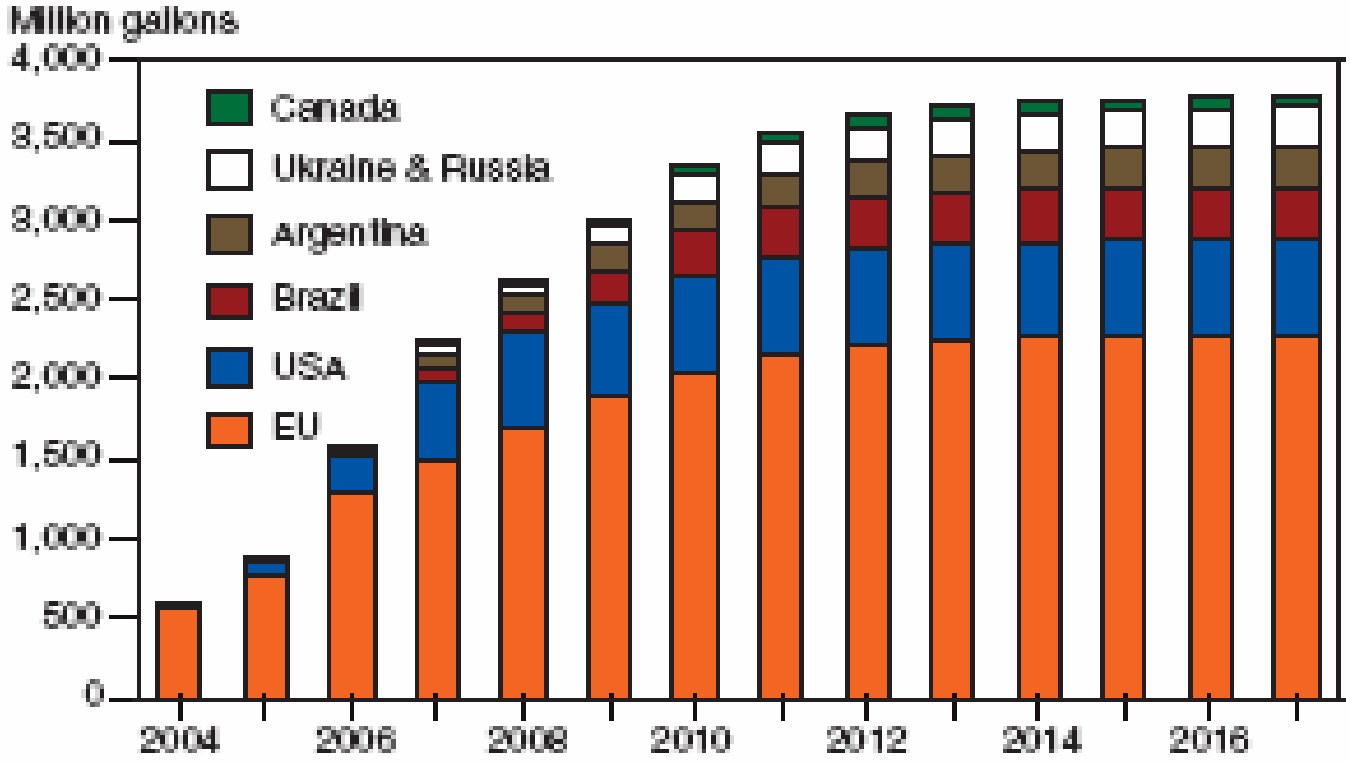
Mostly from grain feedstocks except for Brazil



Source: USDA Agricultural Projections to 2017.

Figure 18

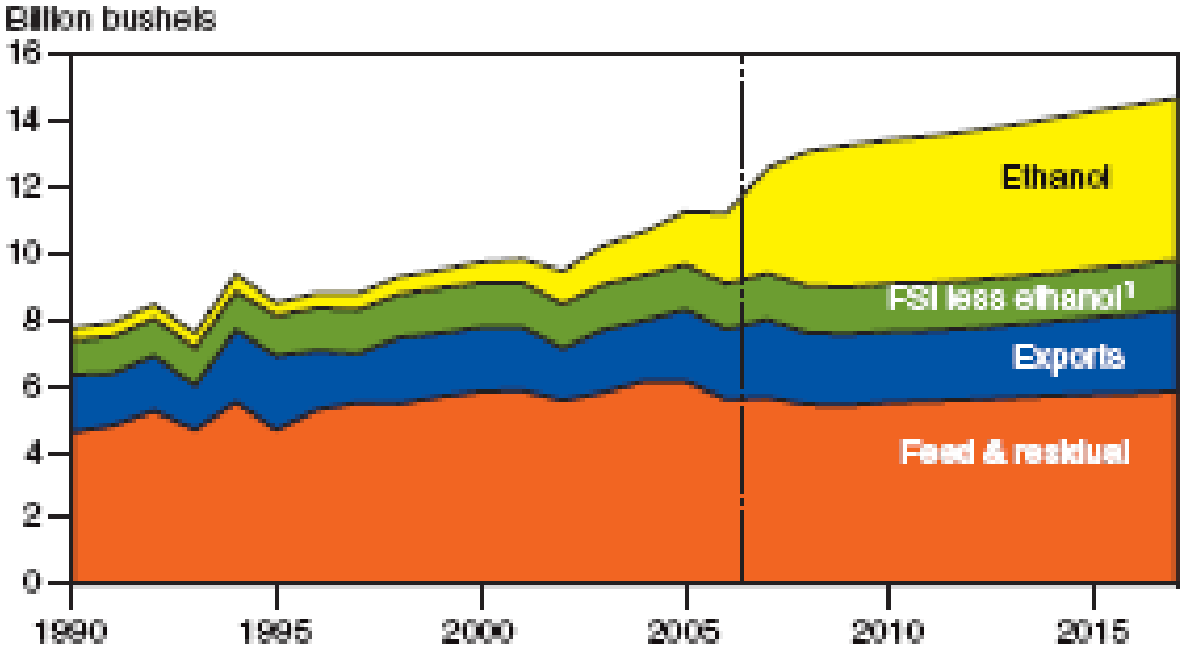
Biodiesel production



Source: USDA Agricultural Projections to 2017.

Figure 19

U.S. corn use

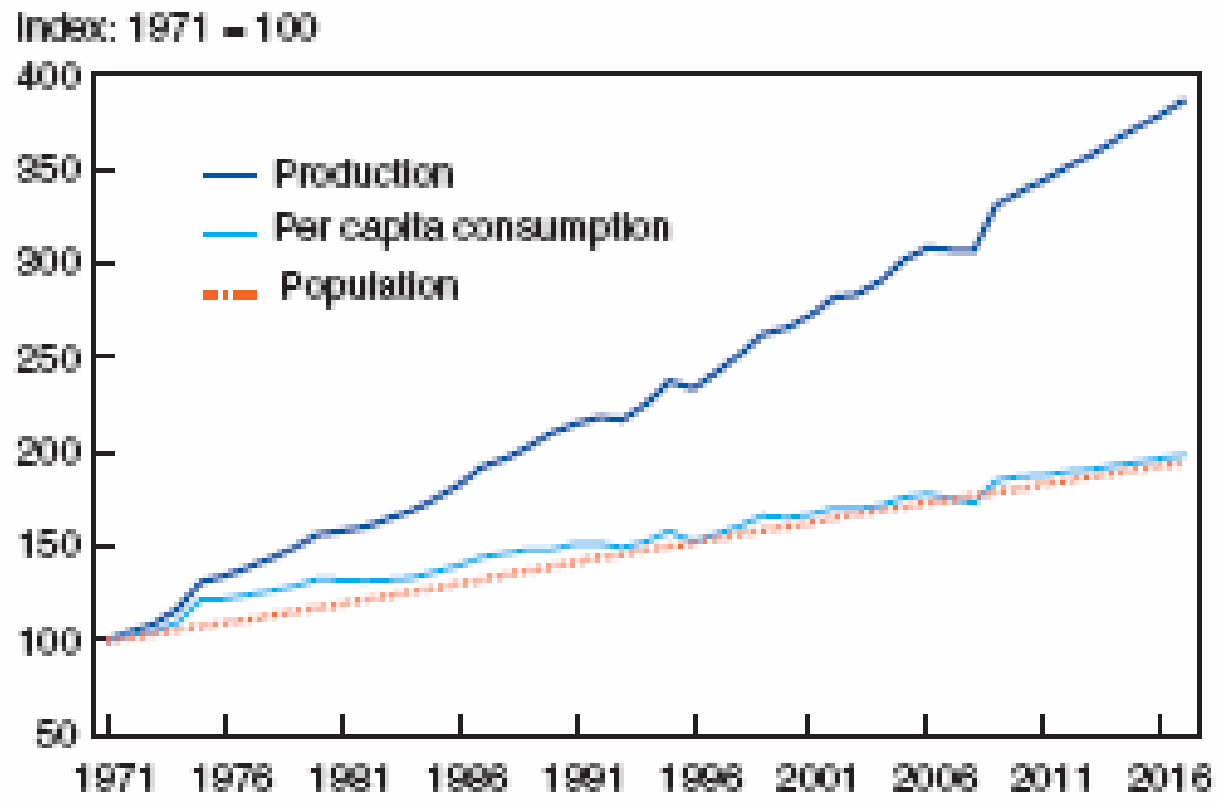


[1]Food, seed, and industrial less ethanol.

Source: USDA Agricultural Projections to 2017.

Global meat[1]

Production, per capita consumption, and population



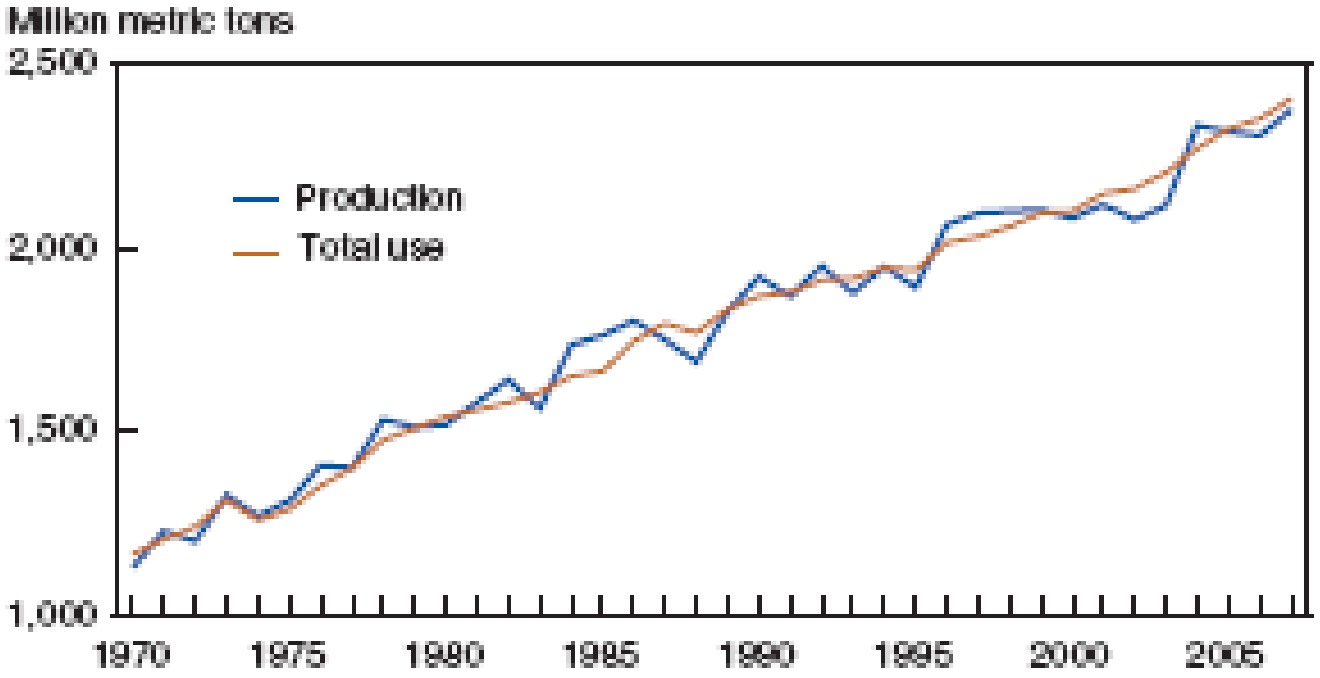
[1]Total meat = beef + pork + chickens & turkeys.

Source: USDA Agricultural Projections to 2017.

Figure 14

Total world grain & oilseeds

Production and total use

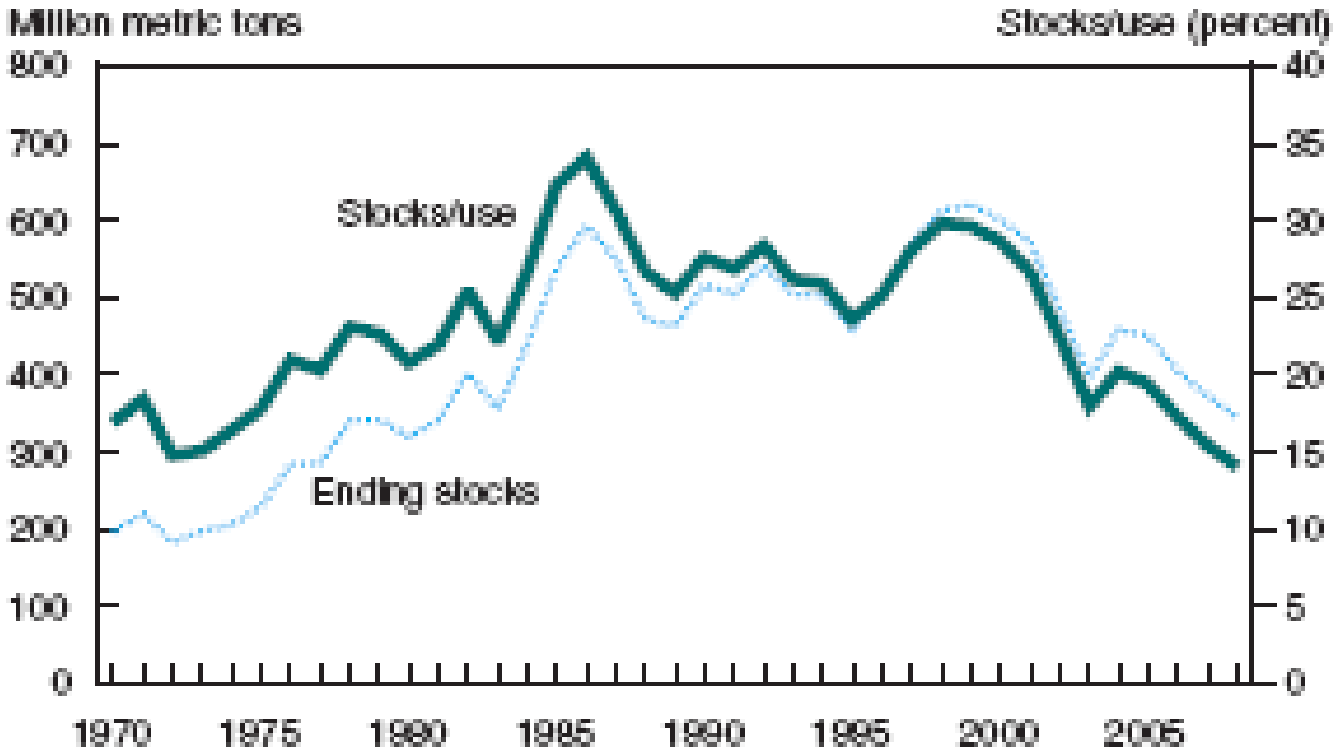


Source: USDA PS&D Database.

Figure 15

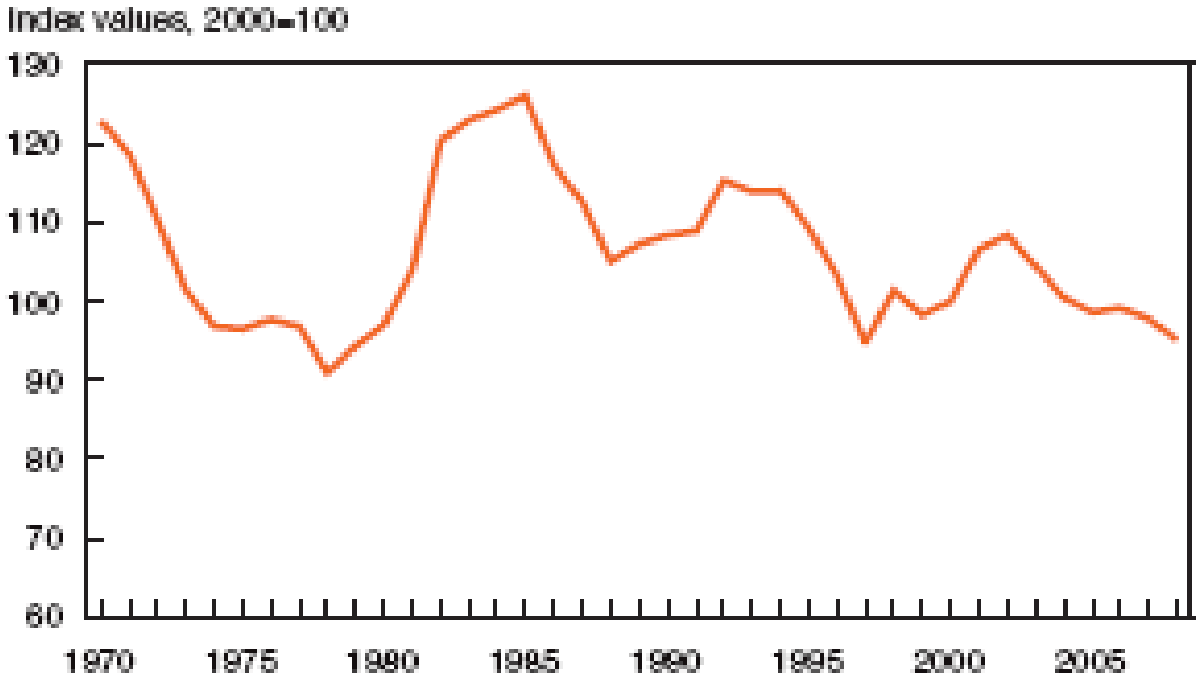
Total world grain & oilseeds

Stocks and stocks-to-use ratio



Source: USDA PS&D Database.

Figure 16
Value of U.S. dollar declines after 2002[1]



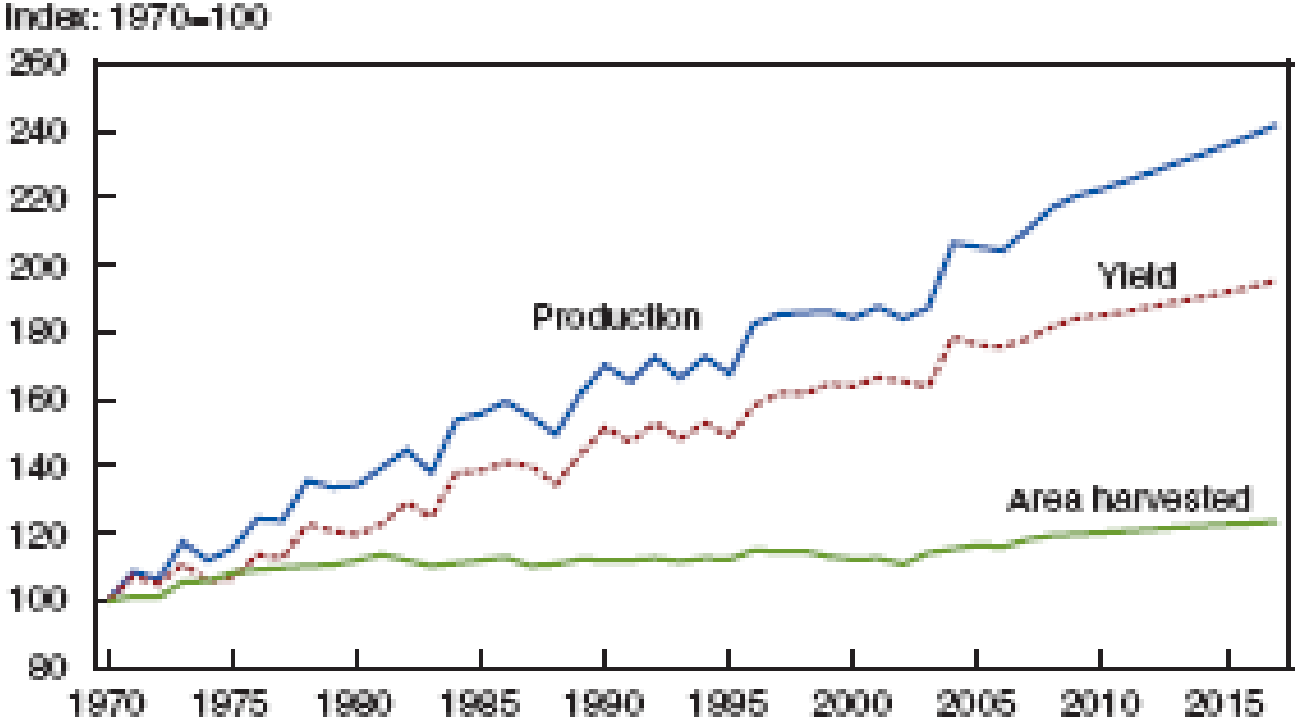
[1]Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights, based on 192 countries.

Source: ERS International Macroeconomics Dataset.

Figure 23

Total world grain and oilseeds[1]

Production, yield, and area harvested



[1]Total oilseeds = soybeans + rapeseed + sunflowers.

Source: USDA Agricultural Projections to 2017.

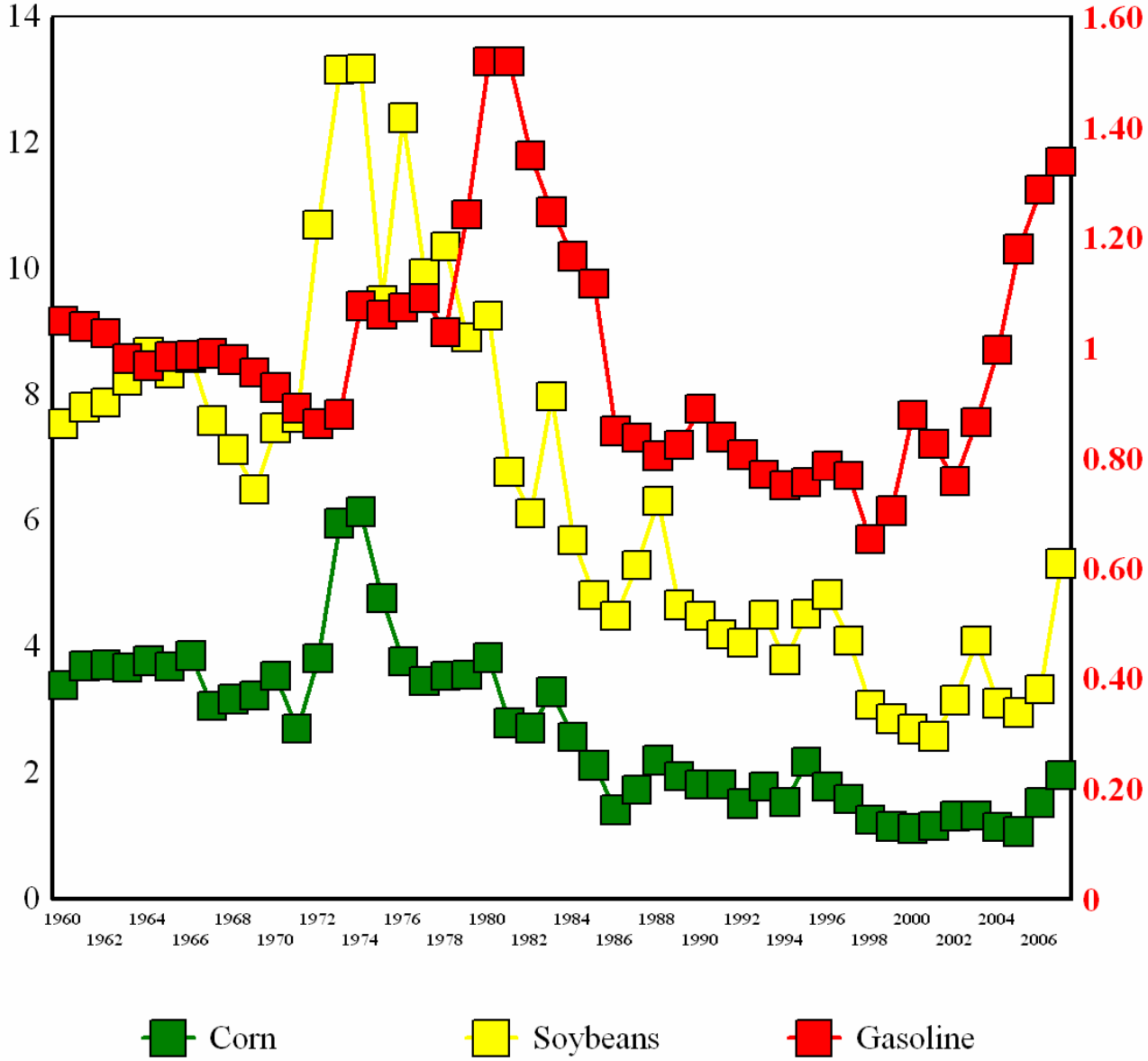
Developments in 2007

In 2007, a number of adverse weather events affected yields across the globe, including:

- Northern Europe had a dry spring and harvest-time floods.
- Southeast Europe experienced a drought.
- Ukraine and Russia experienced a second year of drought.
- A large area of the U.S. hard red winter wheat area had a late, hard, multi-day freeze that killed some of the crop and reduced yields over large areas.
- Canada's summer growing season was hot and dry, resulting in lower yields for wheat, barley, and rapeseed.
- Northwest Africa experienced a drought in some of its major wheat- and barley-growing areas.
- Turkey had a drought that reduced yields in its nonirrigated production areas.
- Australia was in the third year of the worst multiyear drought in a century. Grain yields were very low and exports plummeted.
- Argentina had a late freeze followed by drought that reduced corn and barley yields.

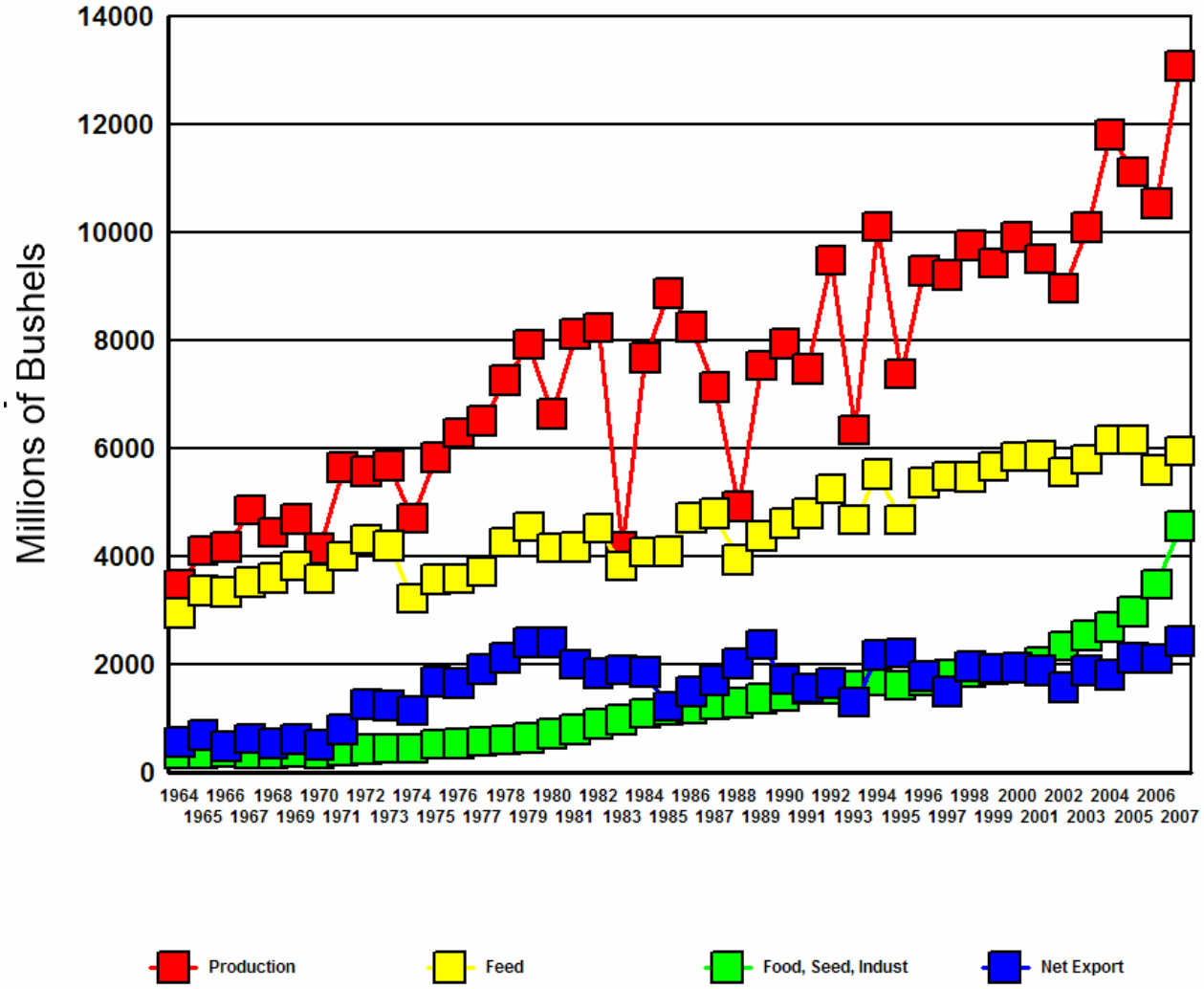
Supplemental Materials Pulled Together by B. L. Jones, UW-Madison Ag Econ and UWEX-CES

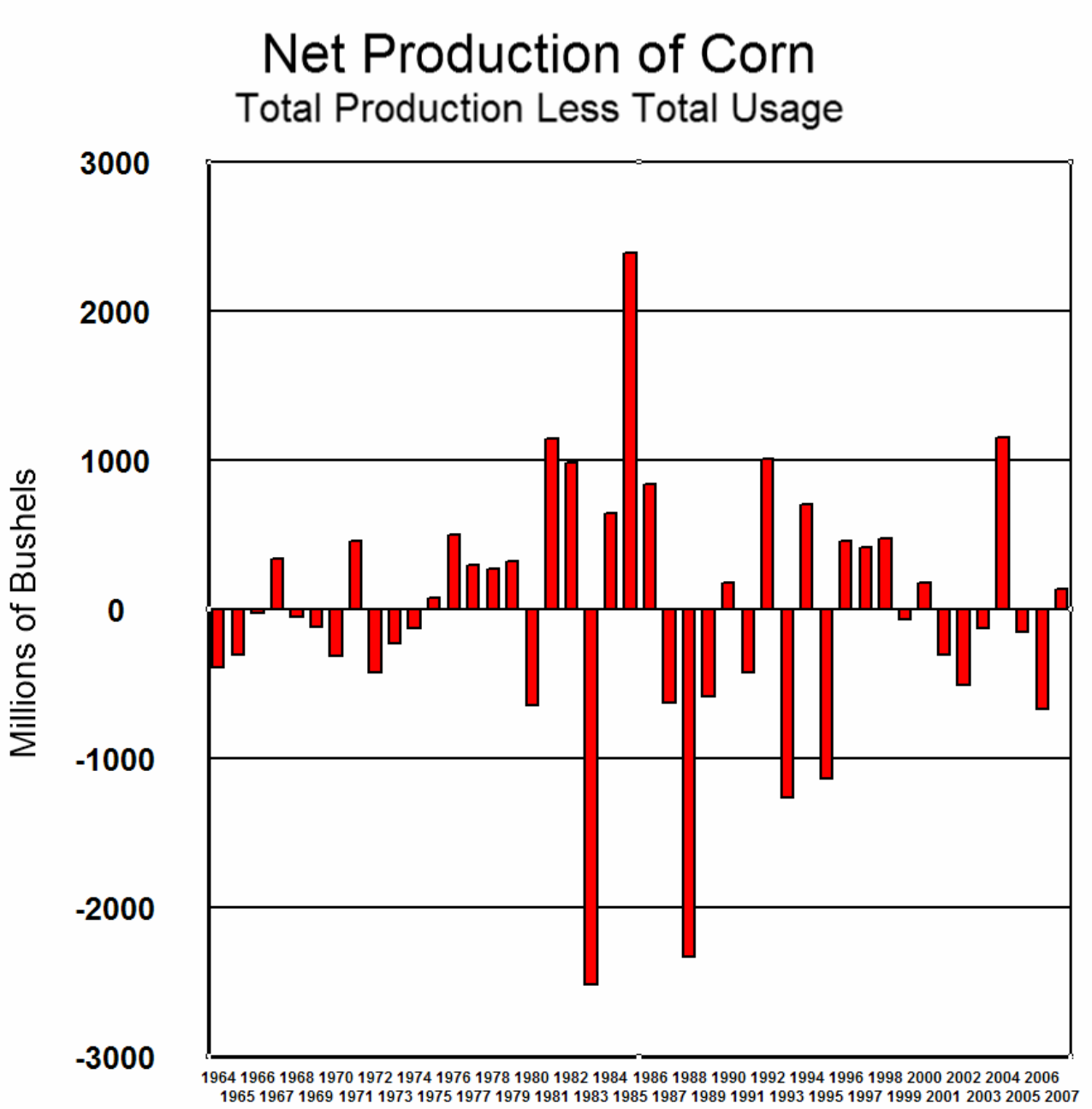
Real Prices-- 1982-84 CPI

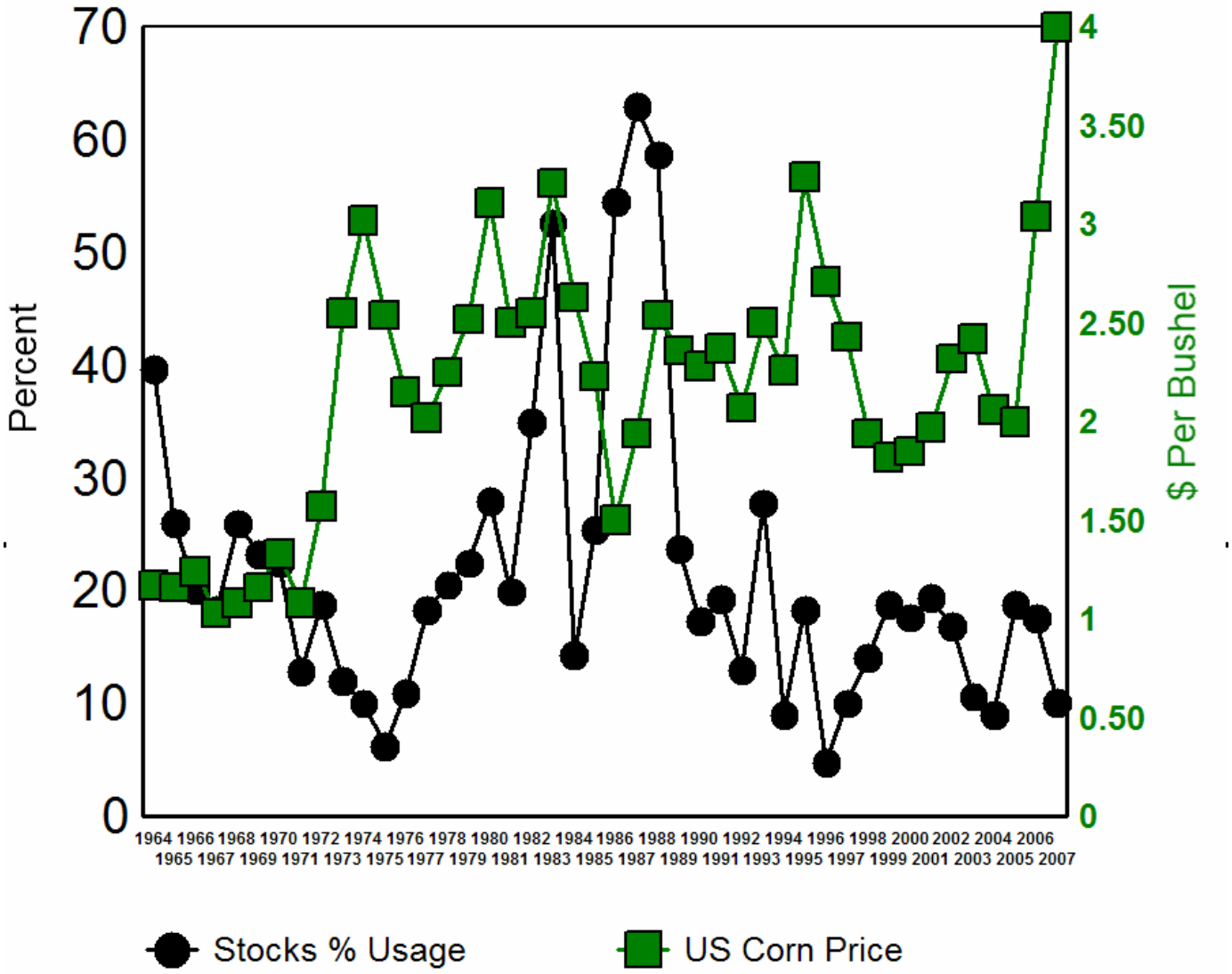


US Corn Production and Usage

Agricultural Statistics, NASS-USDA

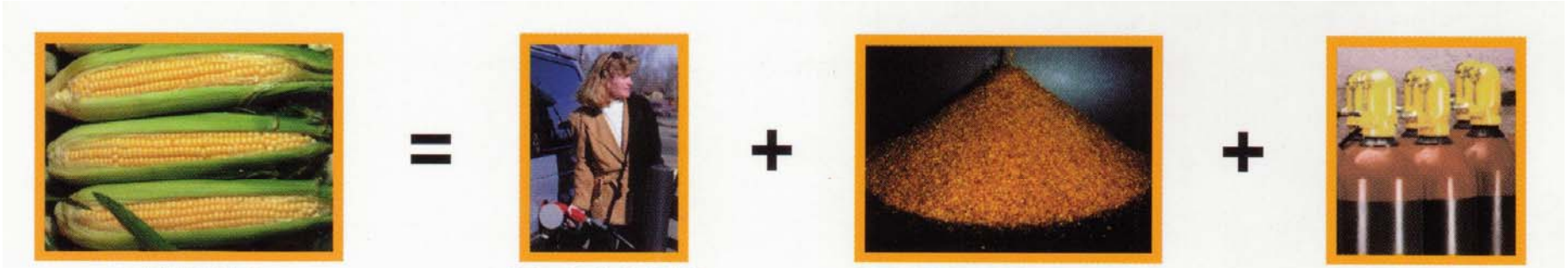



Net Production of Corn
Total Production Less Total Usage
Millions of Bushels
3000
2000
1000
0
-1000
-2000
-3000
1964 1966 1968 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006
1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007


70
60
50
40
30
20
10
0
Percent
4
3.50
3
2.50
2
1.50
1
0.50
0
$ Per Bushel
1964 1966 1968 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006
1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007
Stocks % Usage
US Corn Price

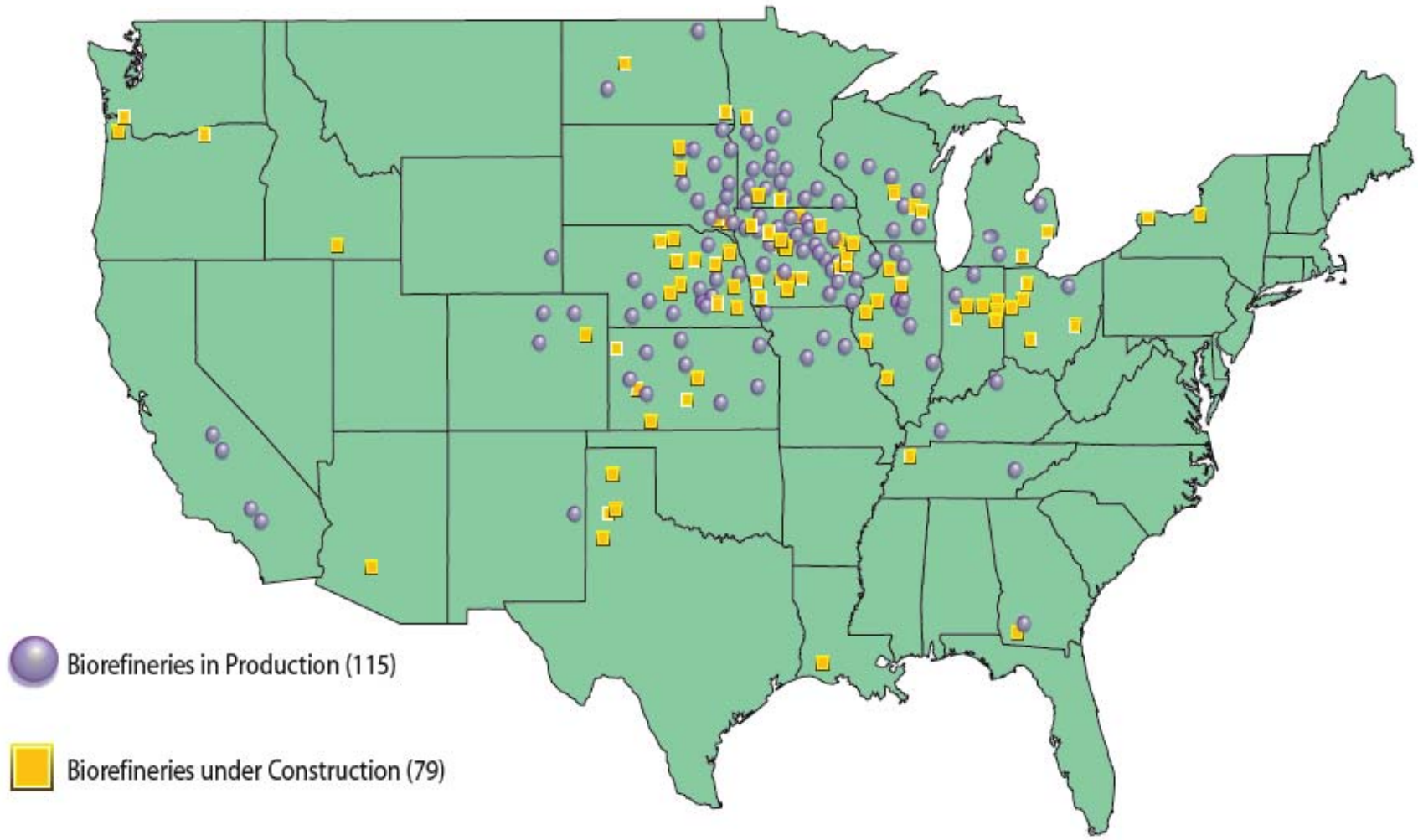
Corn Dry Milling Process Overview

What's in a bushel of corn?



1 Bushel of Corn	2.85 Gallons of Ethanol	18 Pounds of DDGS	18 Pounds of CO_2

U.S. Ethanol Biorefinery Locations



Source: Renewable Fuels Association
4.3.07

US Gasoline Consumption

380 Million Gallons / Day --- 139 Billion Gallons / Year

Potential Ethanol Production From Corn (2006) :	Gal / Yr (Billion)	% Annual US Gasoline Consumption
Exports	6.39	4.6
Feed, Seed, Etc.	17.03	12.3
Food, Alcohol, Industrial	9.98	7.2
Total	33.4	24.1

Ethanol Related Demands For Corn

Annual US Gasoline Consumption

@ 140 Billion Gallons (Source: Energy Information Administration)

Potential Use of Ethanol with 10% Blending

@ 14 Billion Gallons

Potential Demand For Corn

@ 4.9 Billion Bushels (Assuming 2.85 Gal. Ethanol per Bu. Corn)

Current Usage of Corn For Ethanol

@ 3.2 Billion Bushels (Source: USDA estimate)

Ethanol Related Demands For Corn

-Continued-

Potential Use of Ethanol with 10% Blending

@ 14 Billion Gallons/Yr

Current Refining Capacity On Line

@ 7.6 Billion Gallons/Yr (Source: Renewable Fuels Assoc.)

Refining Capacity Currently Under Construction

@ 5.7 Billion Gallons/Yr (Source: Renewable Fuels Assoc.)

Ethanol Related Demands For Corn

-Continued-

Demands For Corn For The Production of Ethanol May Be Slowing As We Approach Upper Limits For Ethanol Production And Consumption

Blending Rates For Fuel Will Probably Need To Increase (E-85) If Demands For Corn Used In Ethanol Production Are To Rise Above Current Levels