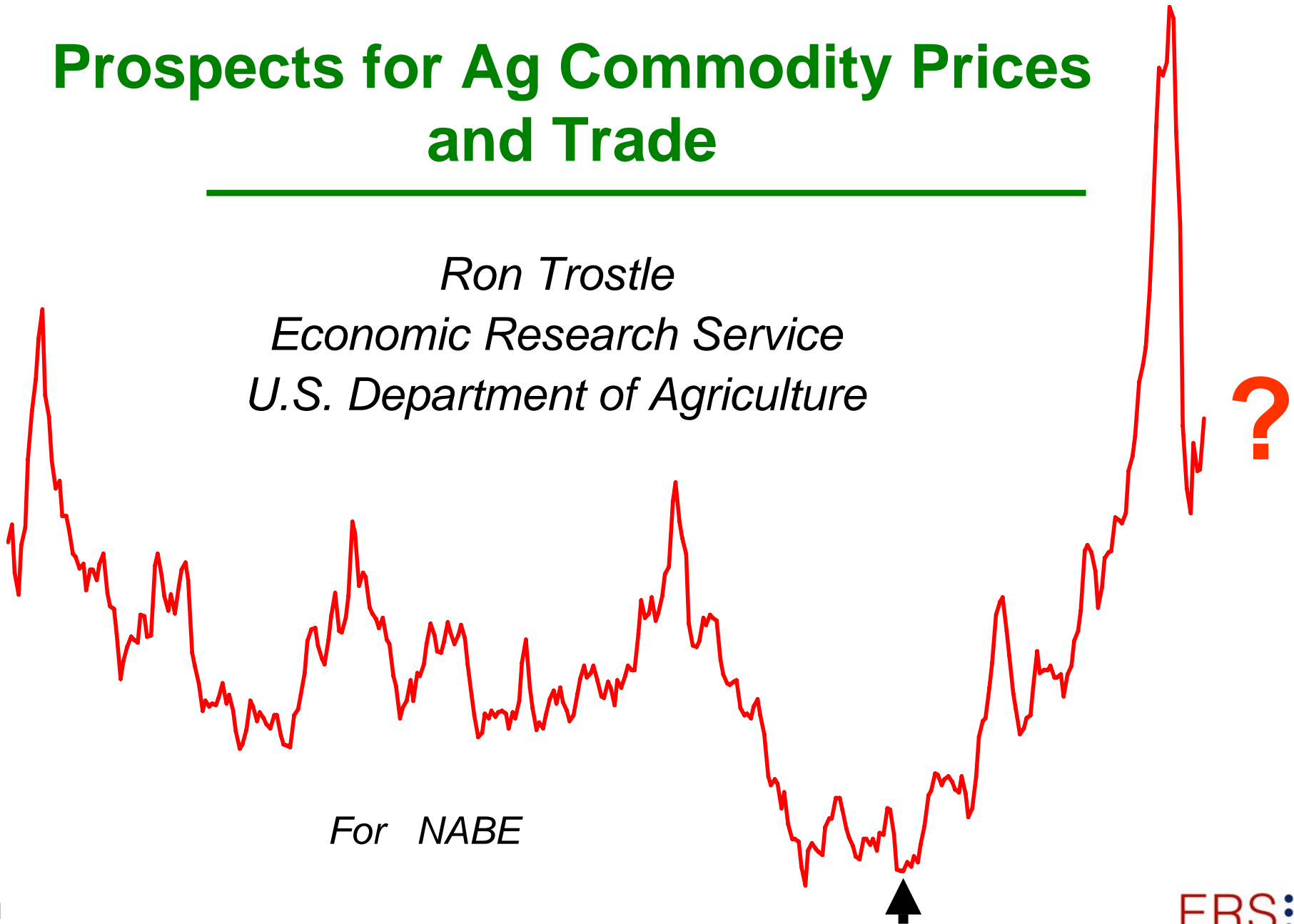


# Prospects for Ag Commodity Prices and Trade

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*Ron Trostle*

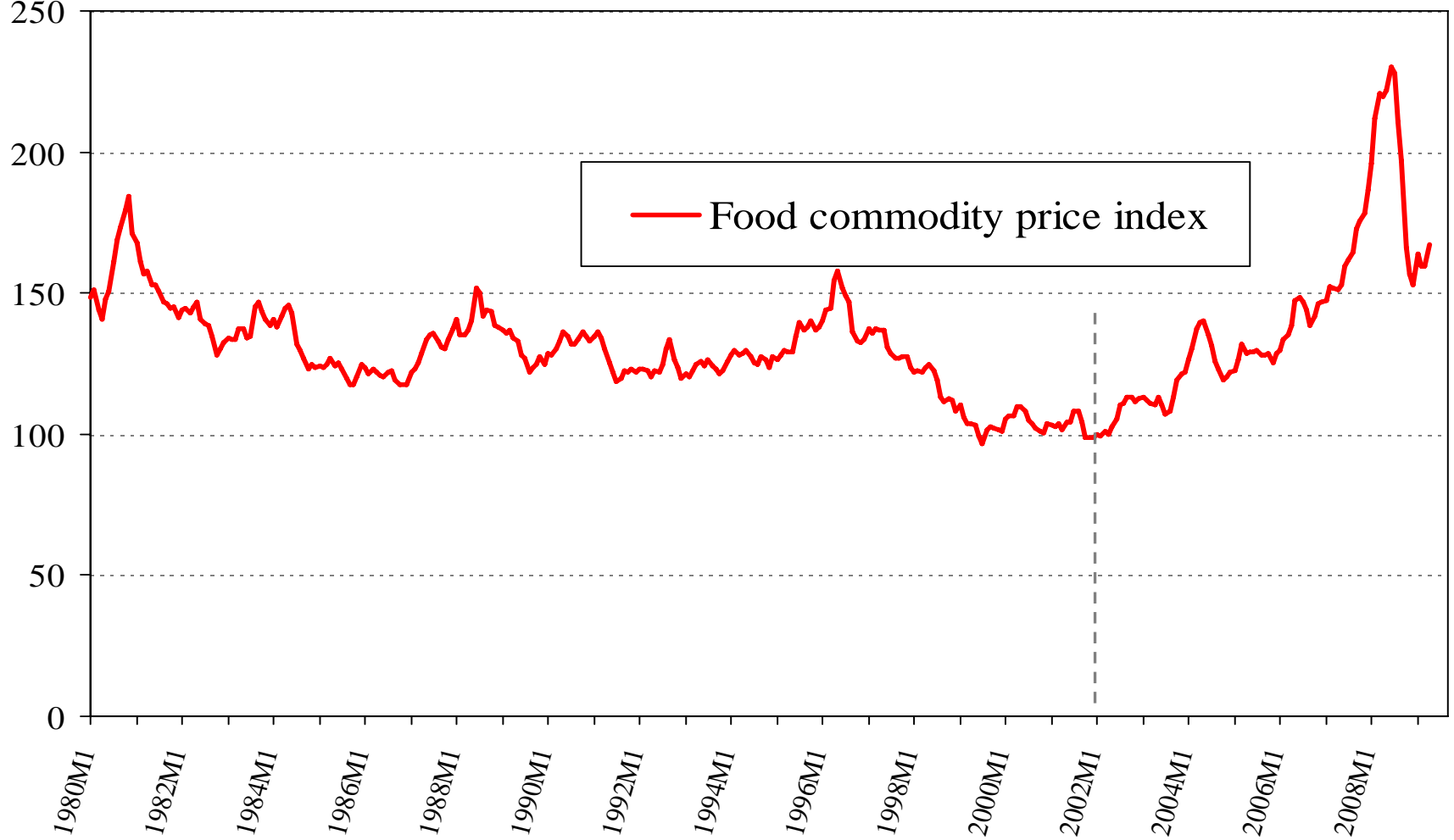
*Economic Research Service  
U.S. Department of Agriculture*



*For NABE*

# Food commodity prices since January 2002: Up 130 %, then down 1/3

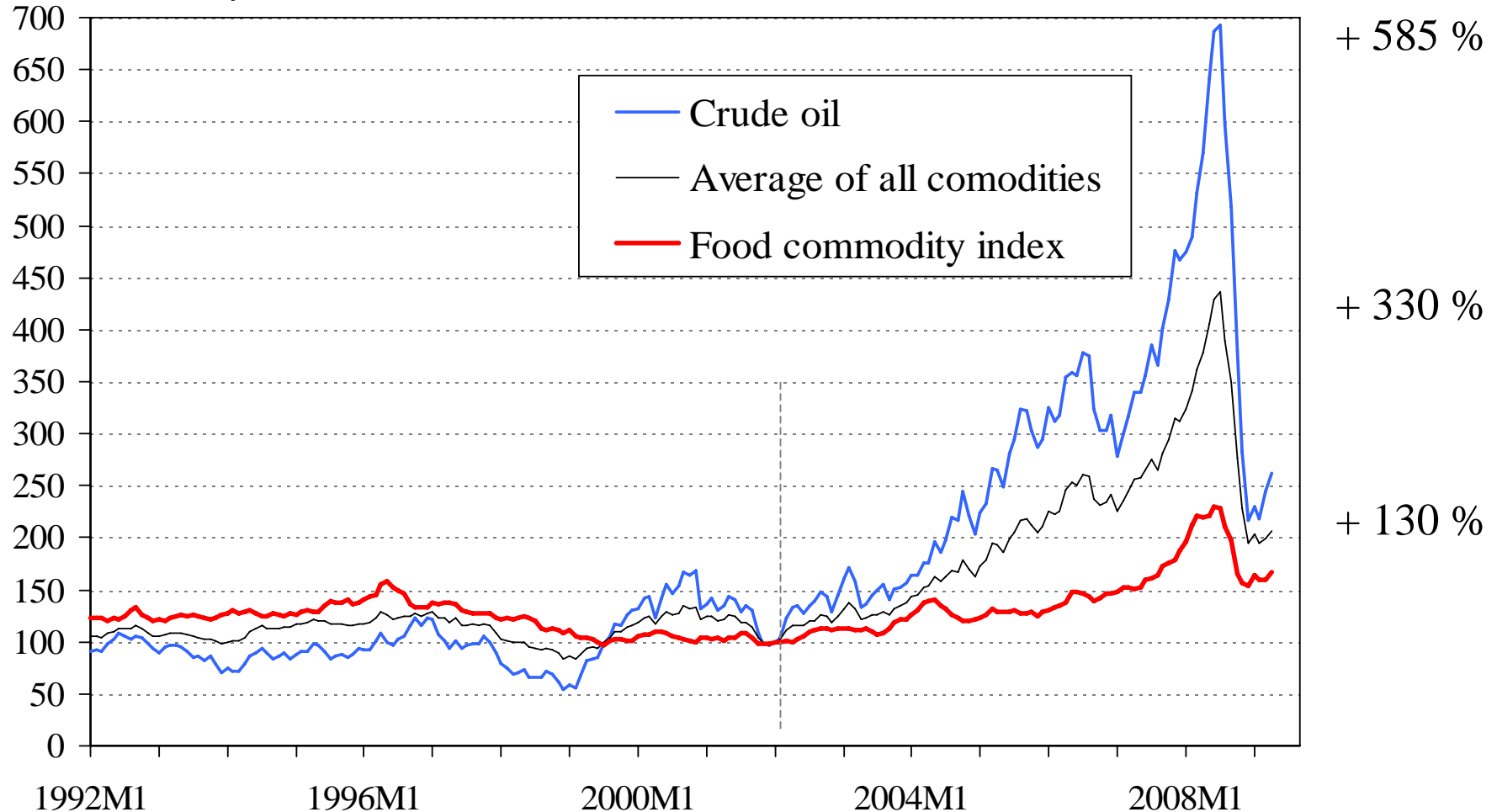
Index: January 2002 = 100



Source: International Monetary Fund: International Financial Statistics

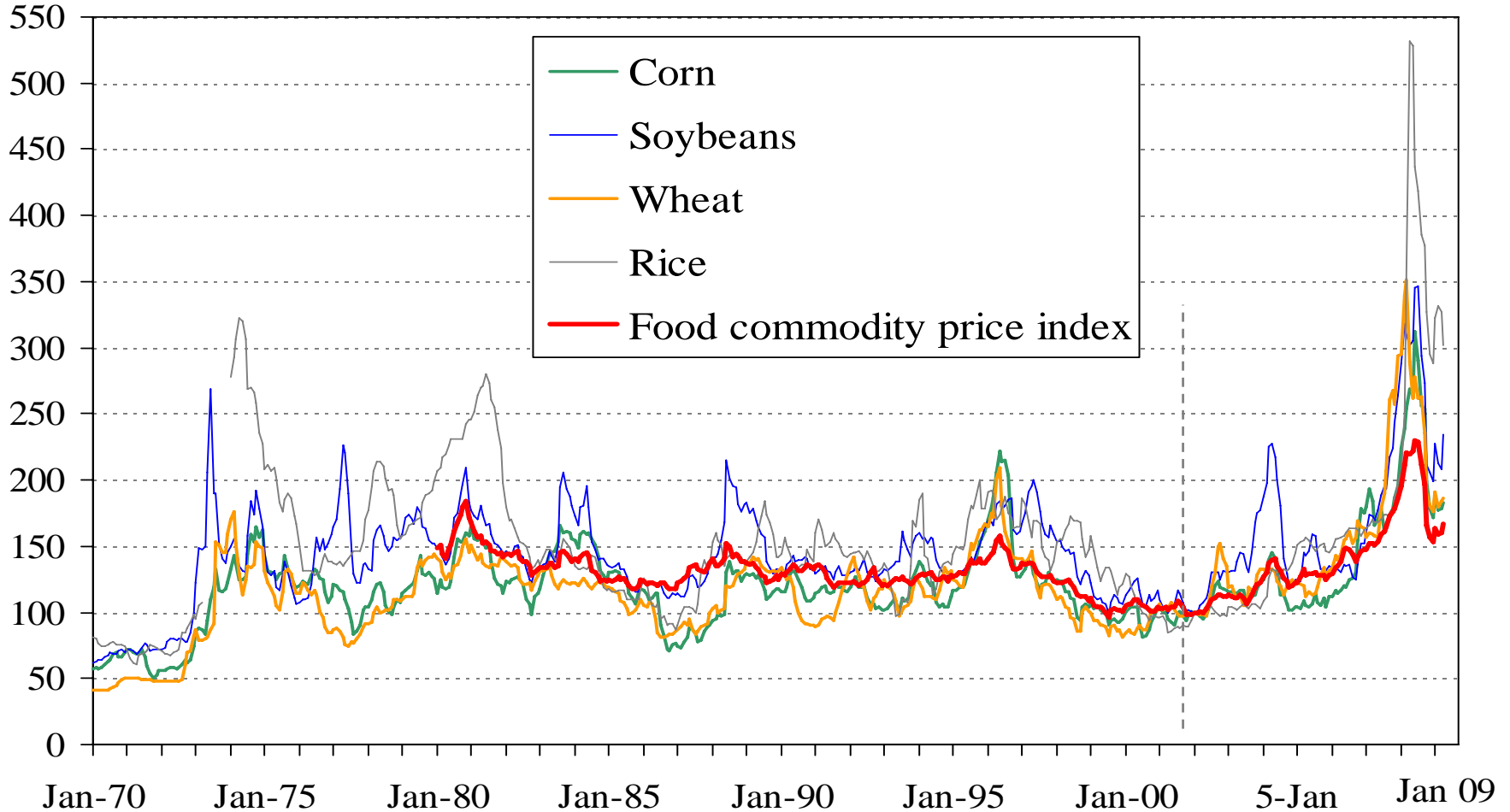
# Prices of many commodities rose even more

Index: January 2002 = 100



# Food commodity prices: Indices for selected crops and total food

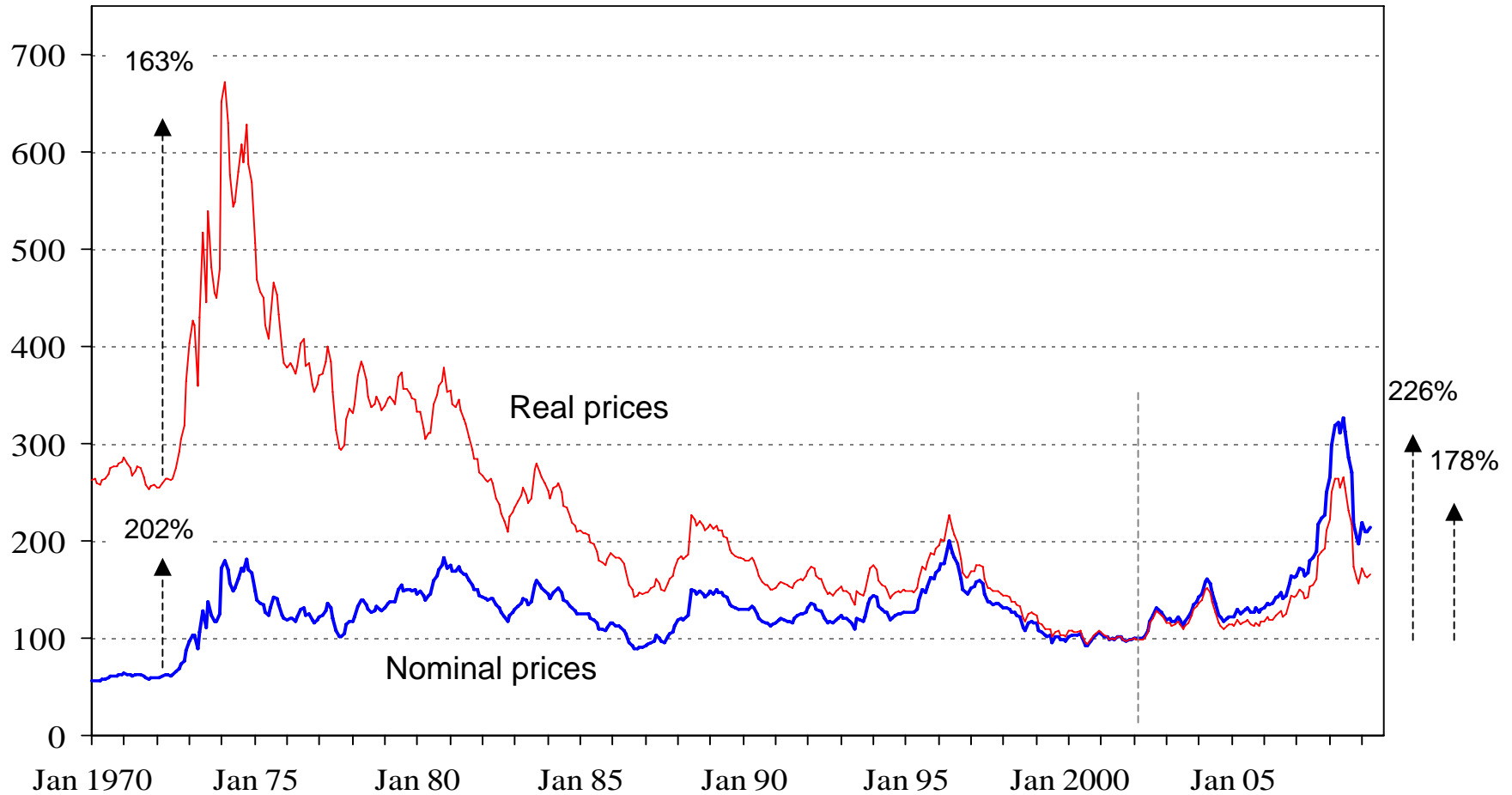
Index: January 2002 = 100



# Crop price increases: real vs. nominal

Weighted average of 4 crops (wheat, soybeans, corn & rice) 1/

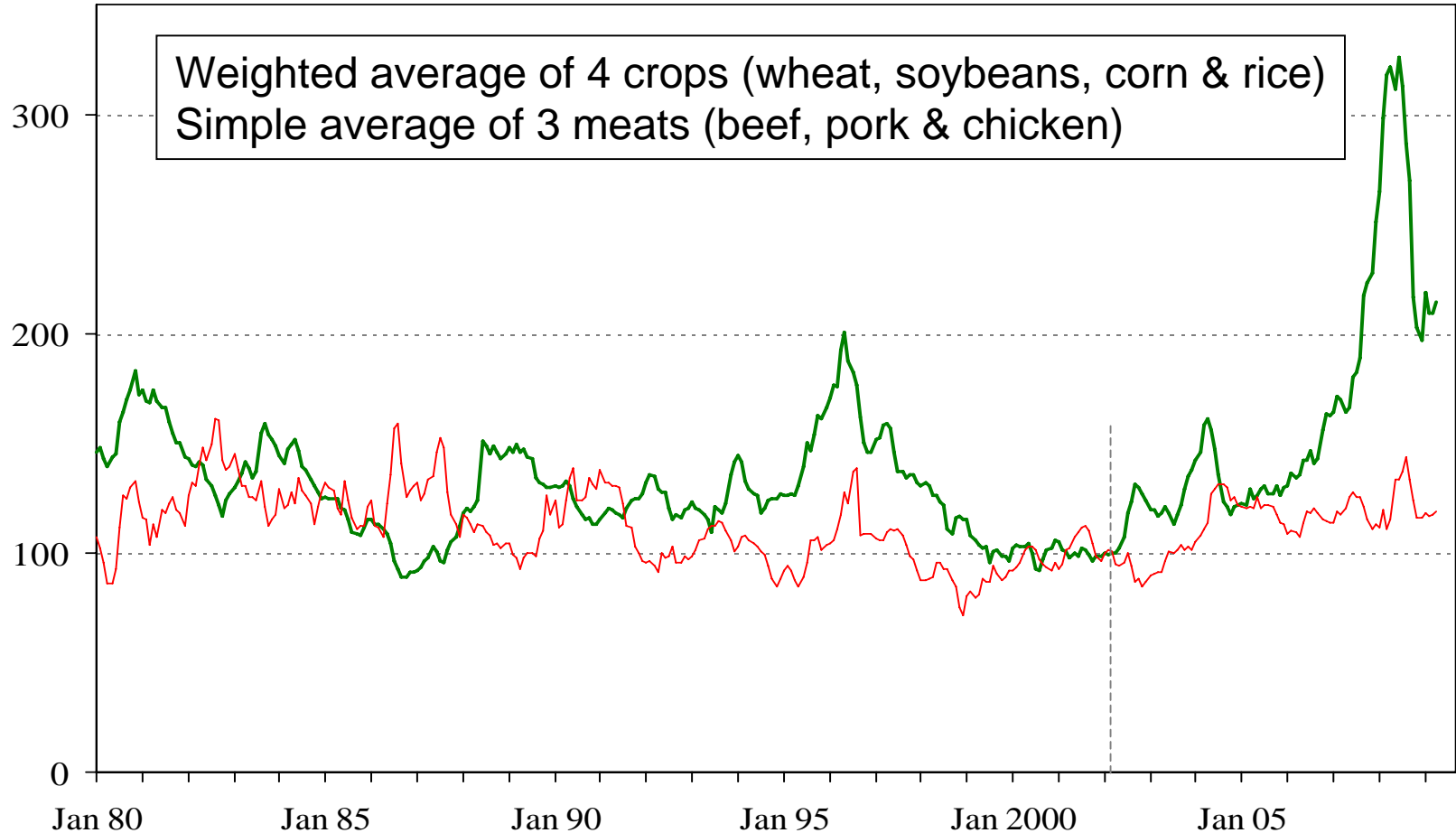
Index: January 2002 = 100



1/ IMF monthly prices weighted by world exports.

# Crop and meat prices nominal <sup>1/</sup>

Index: January 2002 = 100



1/ IMF monthly prices weighted by world exports.

# Nominal price increases since January 2002 and declines since the peak

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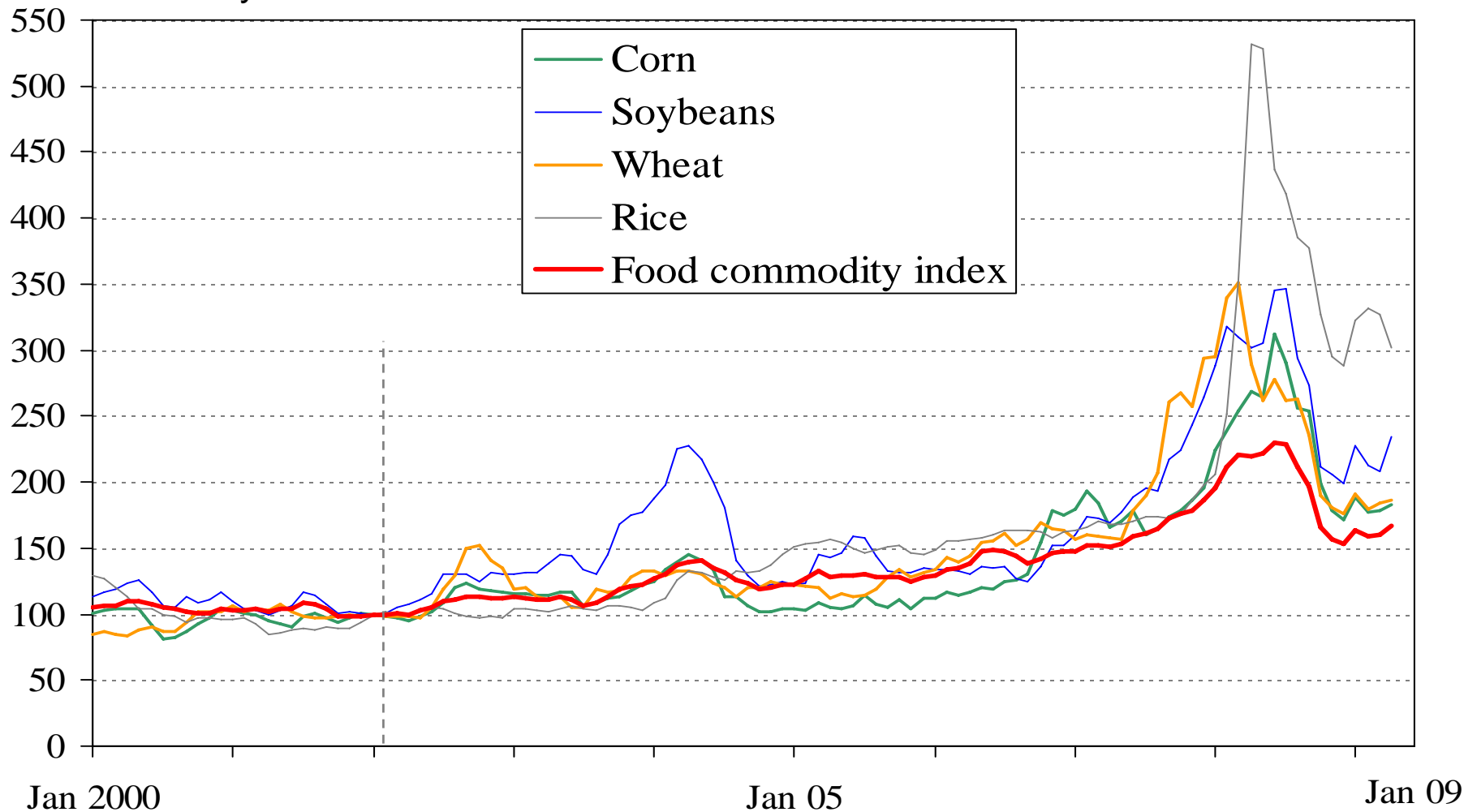
<u>Commodity</u>	<u>Up</u>	<u>Down</u> <sup>1</sup>	<u>Since peak in</u>
Wheat	337 %	62 %	Mid March, 2008
Corn	268 %	62 %	End of June, 2008
Soybeans	295 %	53 %	Early July, 2008
Rice	> 400 %	36 %	Late Sept, 2008
Index of food commodities	130 %	34 %	June, 2008

<sup>1</sup>Lowest price since peak, as of May 13, 2009.

Kansas City for wheat; Central Illinois for corn and soybeans.  
CBOT for rice

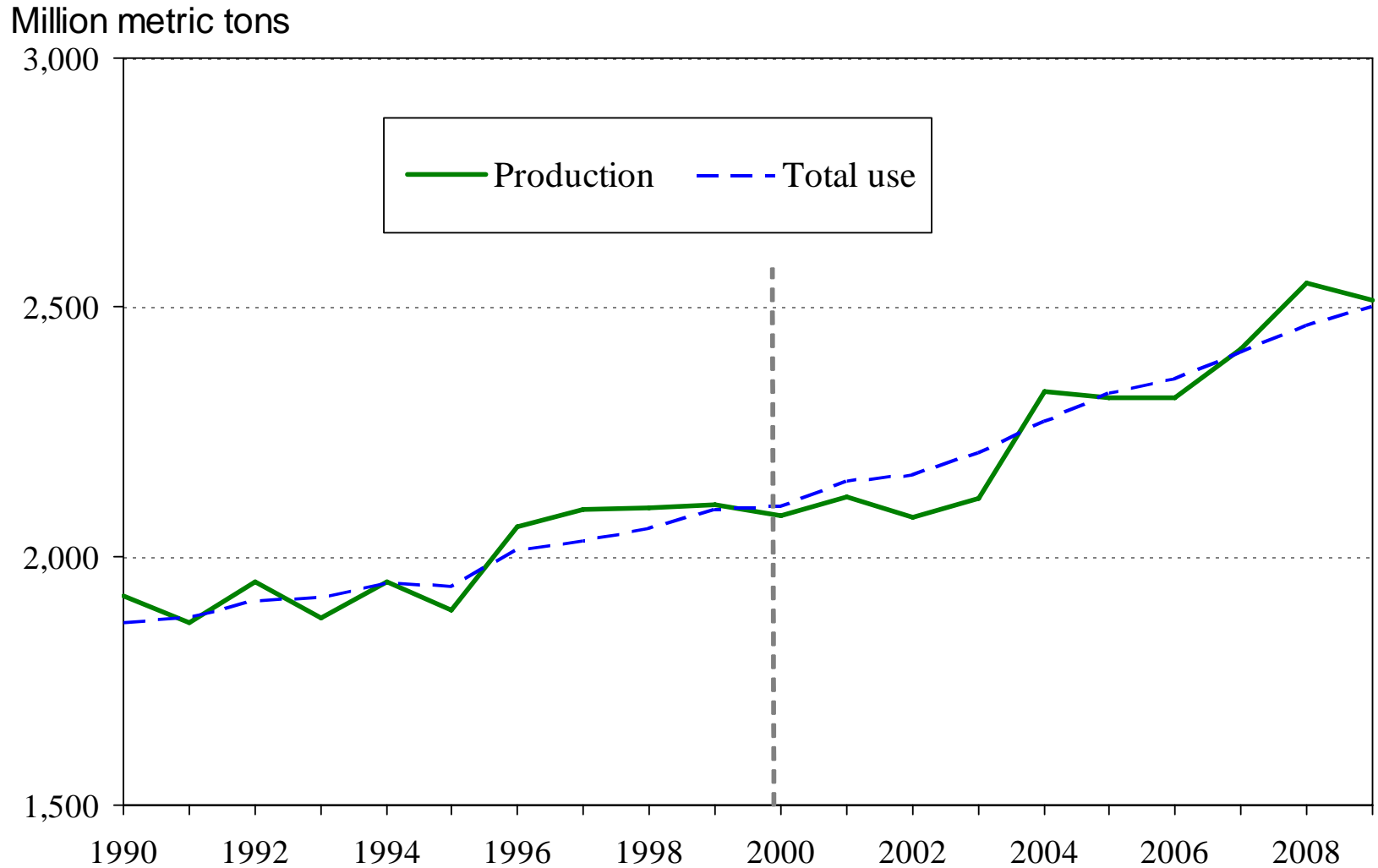
# Food commodity prices: Indices for selected crops and total food

Index: January 2002 = 100



# World grain & oilseeds

## Total production and use



Source: USDA PS&D Database

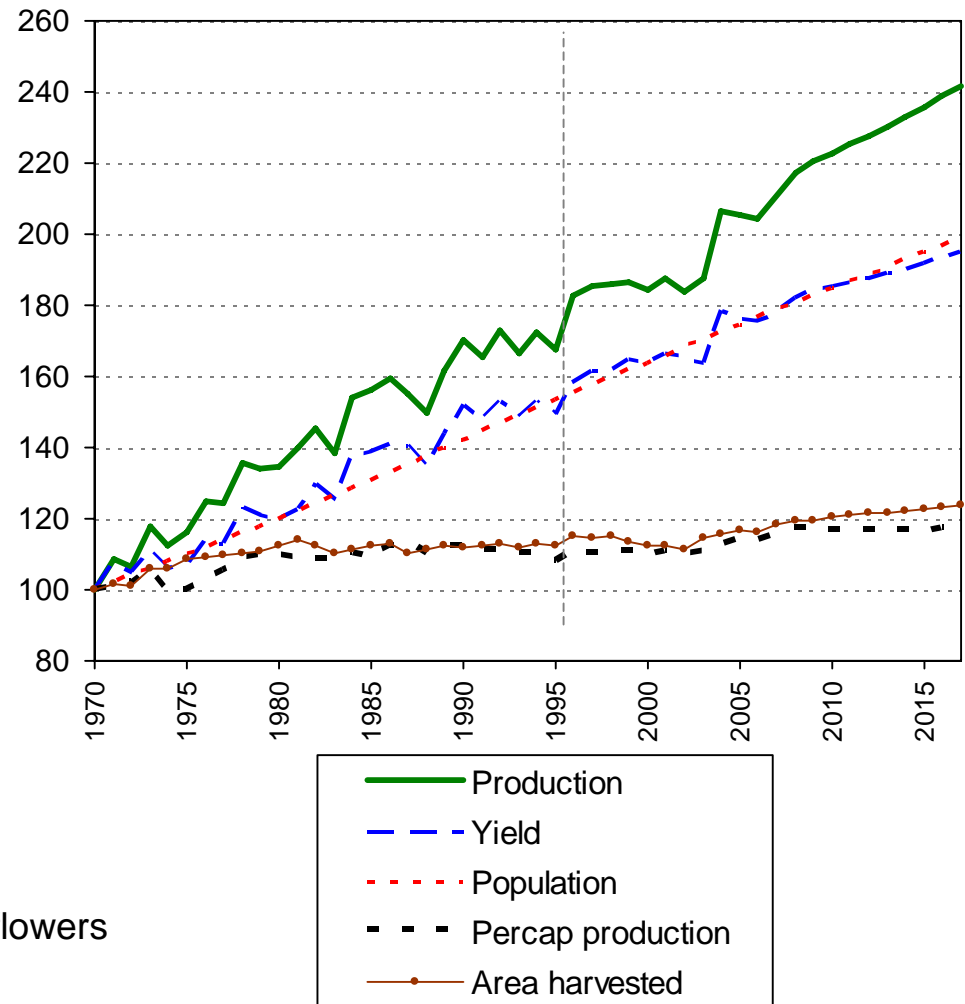
# Total world grain & oilseeds<sup>1</sup>

Production, yield, area harvested, population & percap production

## Exponential trend growth rates:

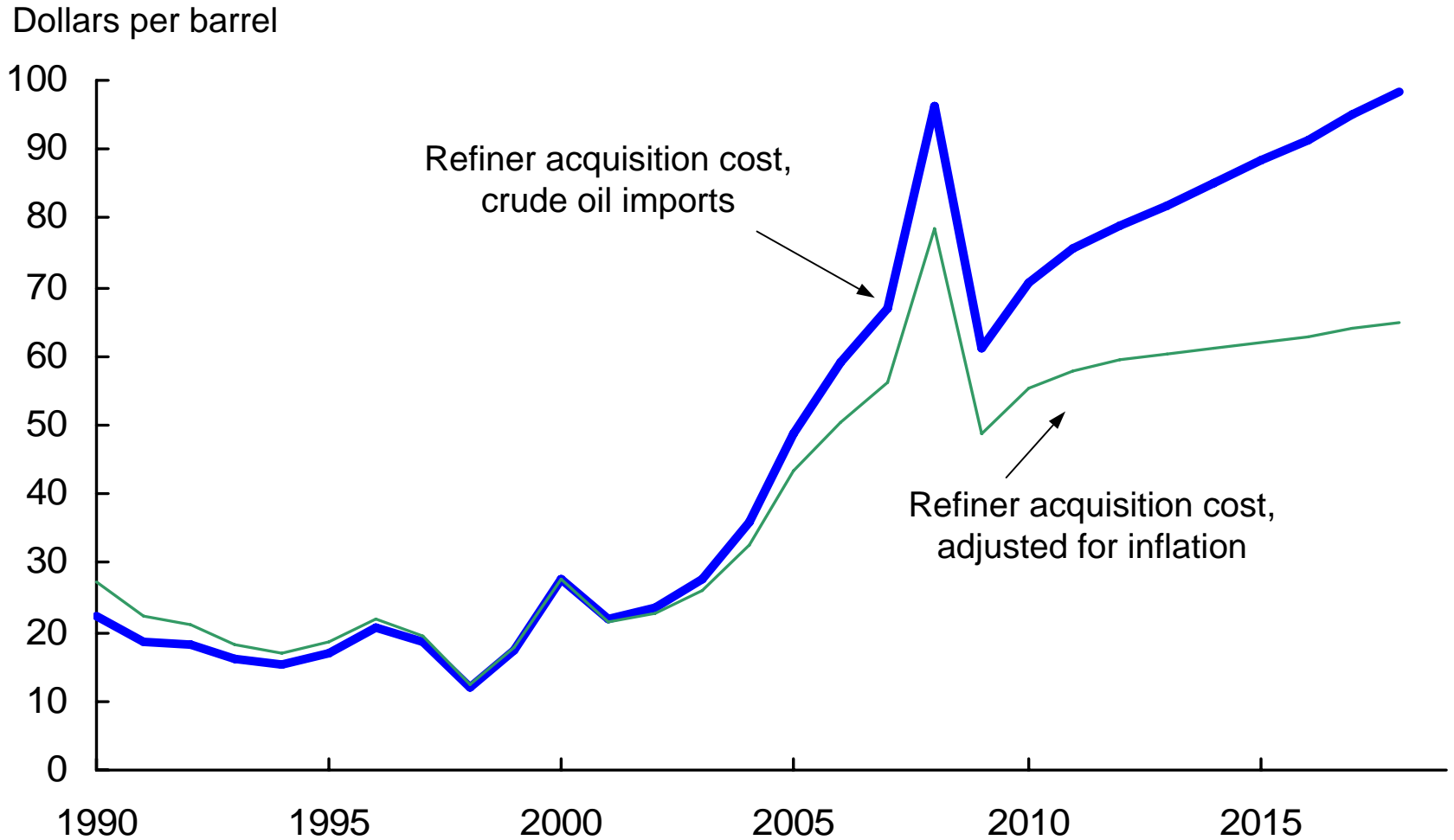
	1970-90	90-08
Production	2.2	1.5
Yields	2.0	1.1
Area	0.15	0.29
Population	1.7	1.3
Per capita production	0.56	0.22

Index: 1970 = 100



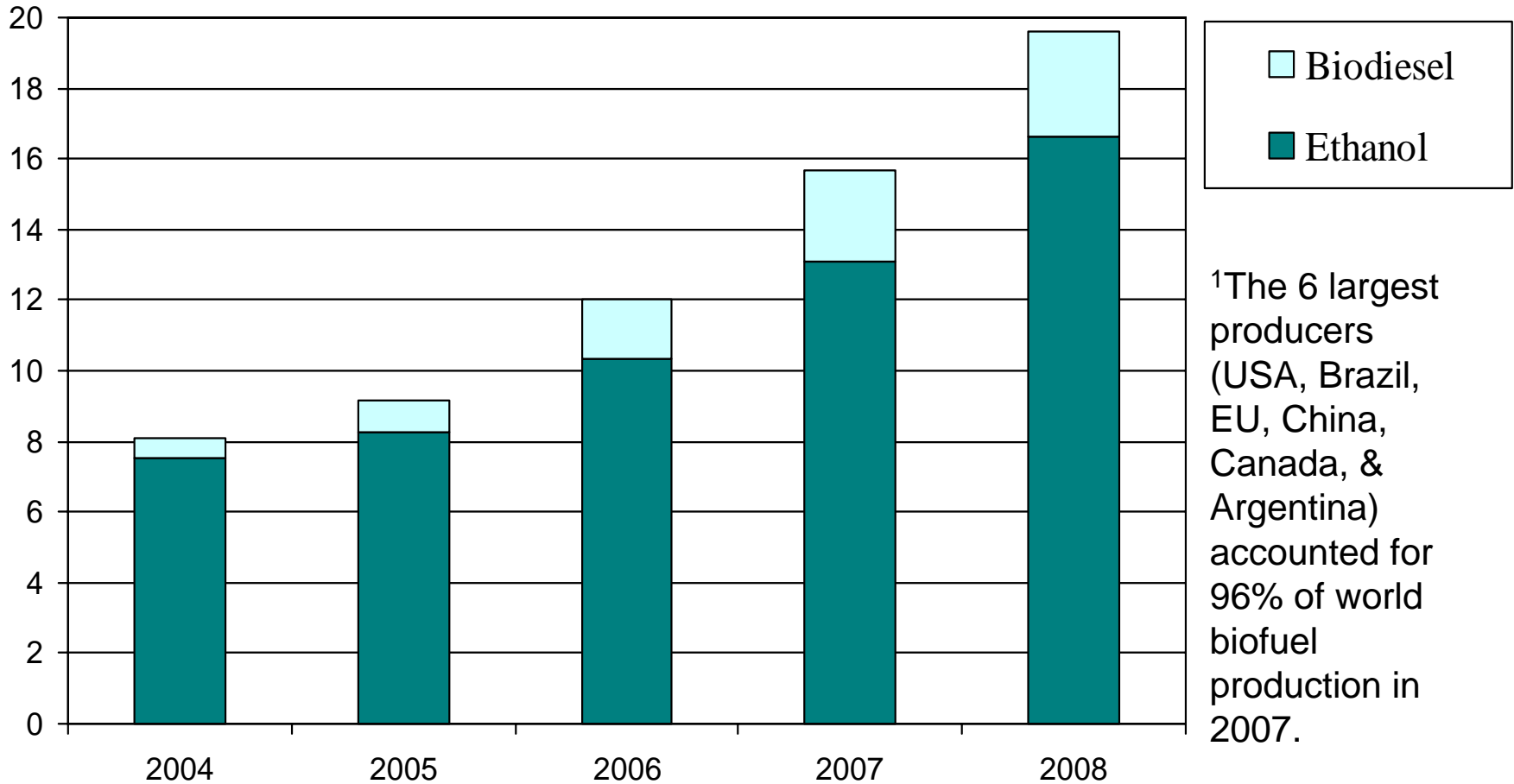
<sup>1</sup> Total oilseeds = soybeans + rapeseed + sunflowers

# U.S. crude oil prices



# Biofuels production: Total of largest producers<sup>1</sup>

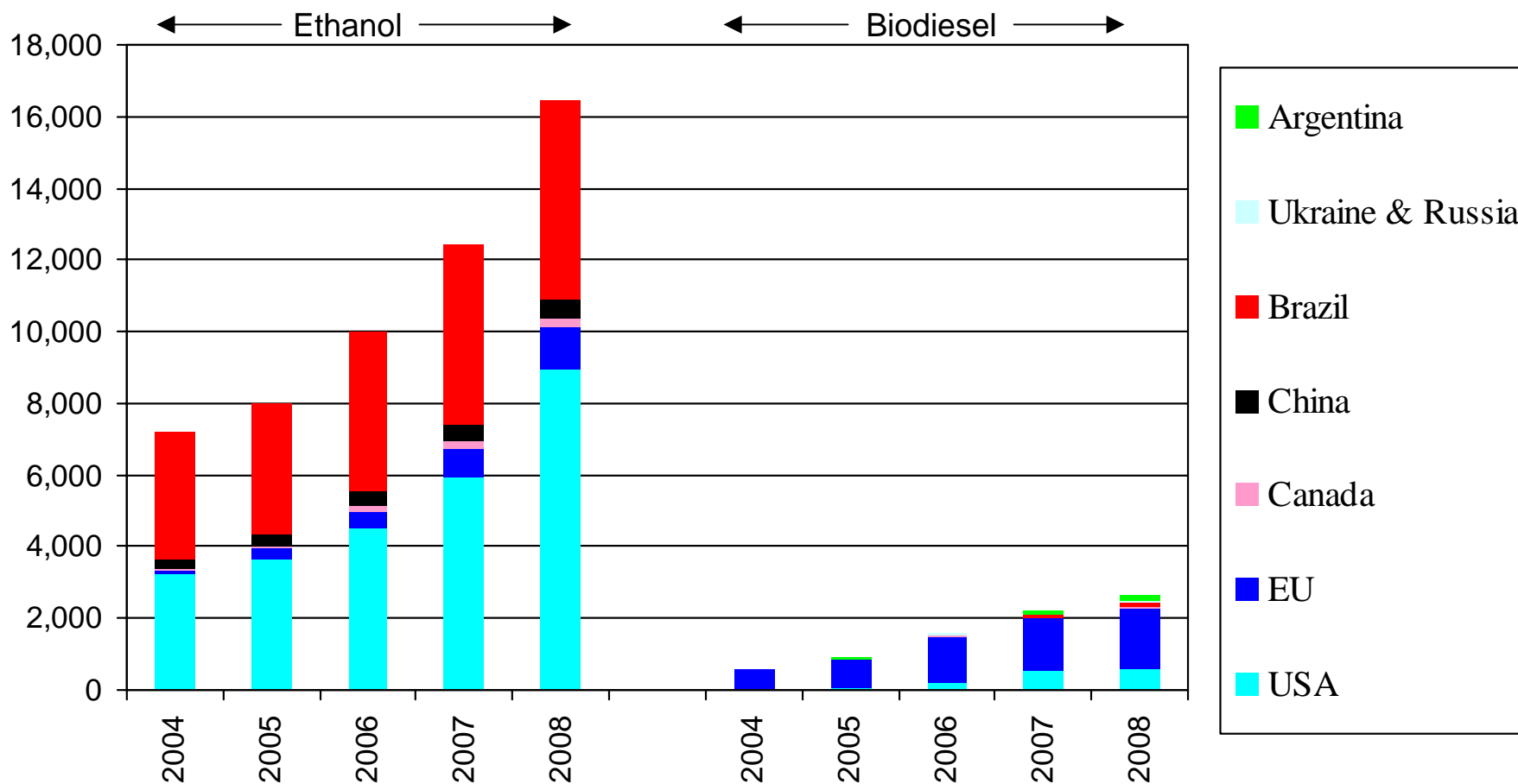
Billion Gallons



<sup>1</sup>The 6 largest producers (USA, Brazil, EU, China, Canada, & Argentina) accounted for 96% of world biofuel production in 2007.

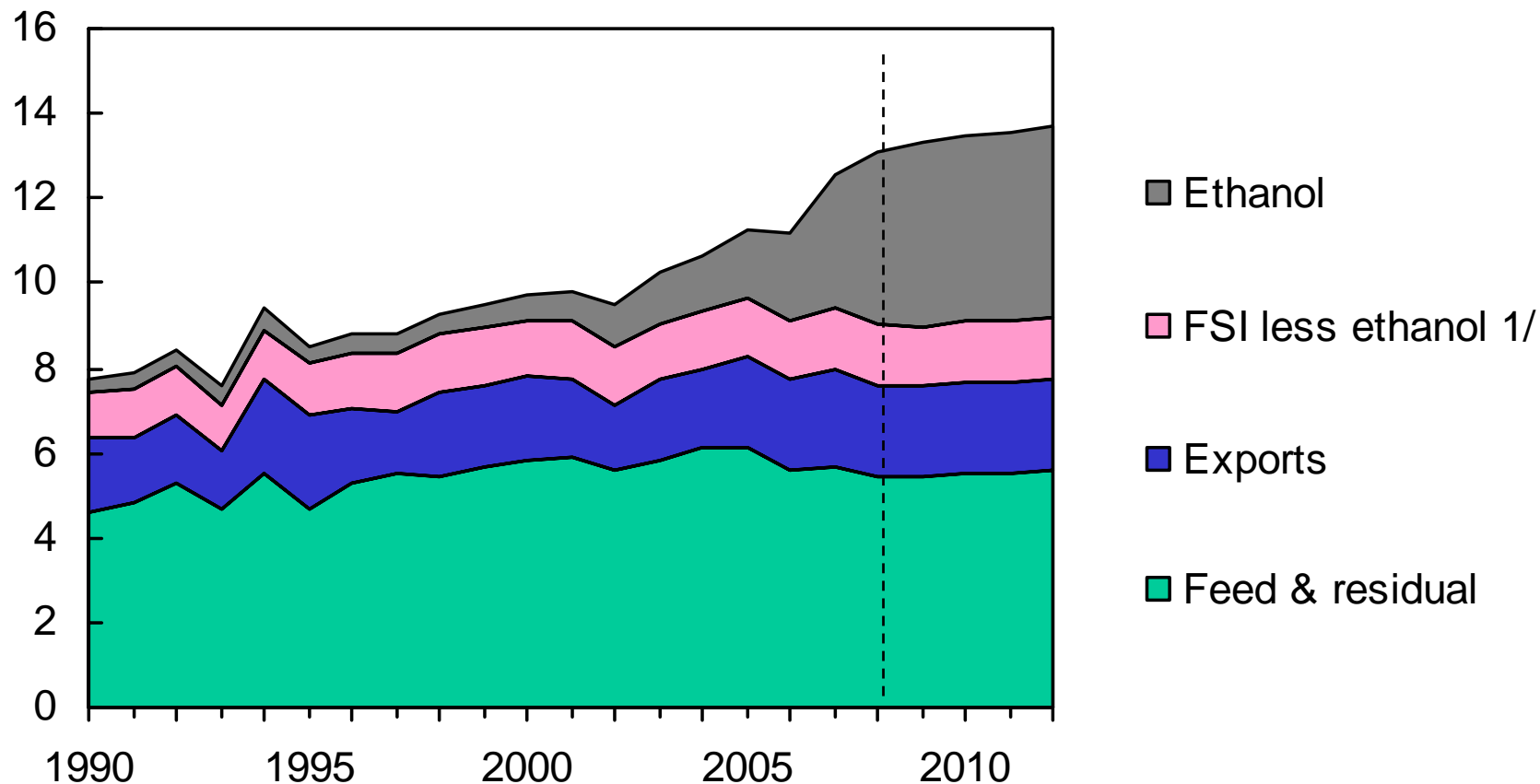
# Biofuels production: Largest producers

Million Gallons



# U.S. corn use

Billion bushels



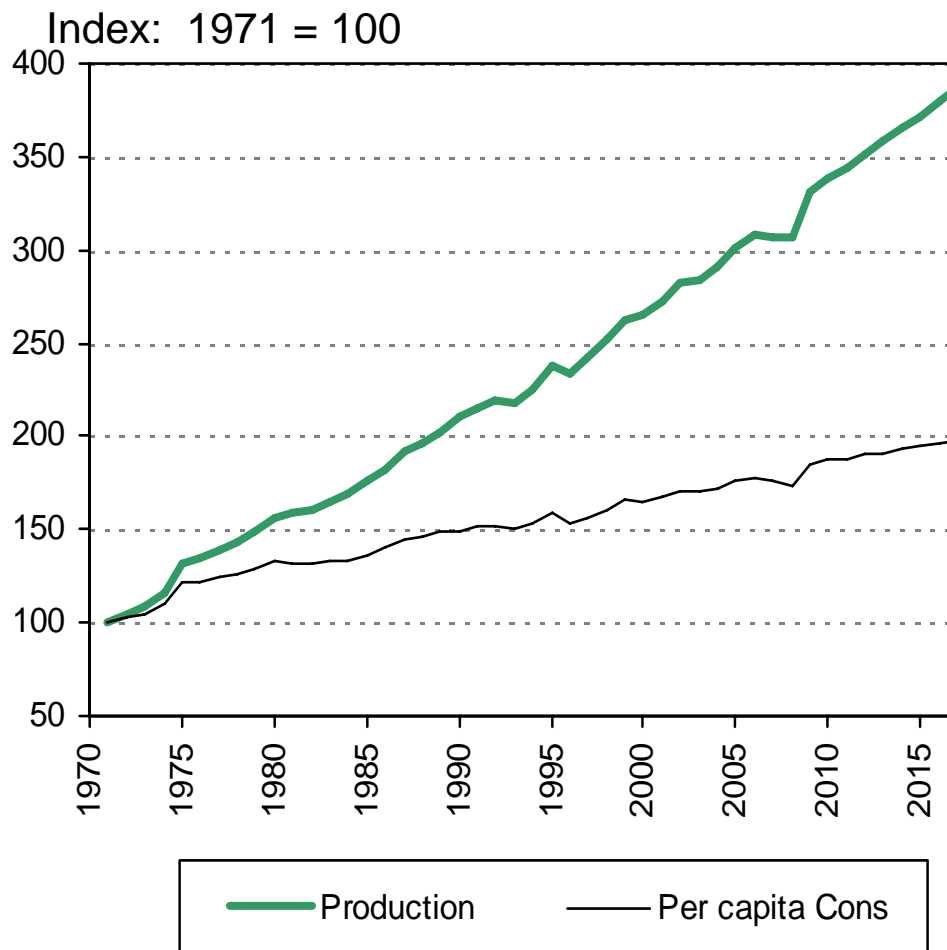
1/ Food, seed, and industrial less ethanol.

# Global meat<sup>1</sup>

## Production, per capita consumption, and population

### Exponential trend growth rates

	1975-90	90-08
Production	3.1	2.6
Population	1.7	1.3
Per capita consumption	1.4	1.2



<sup>1</sup> Total meat = beef + pork + chickens & turkeys.

# Weather in the future ??

## Weather played a major role in recent past:

In 2006

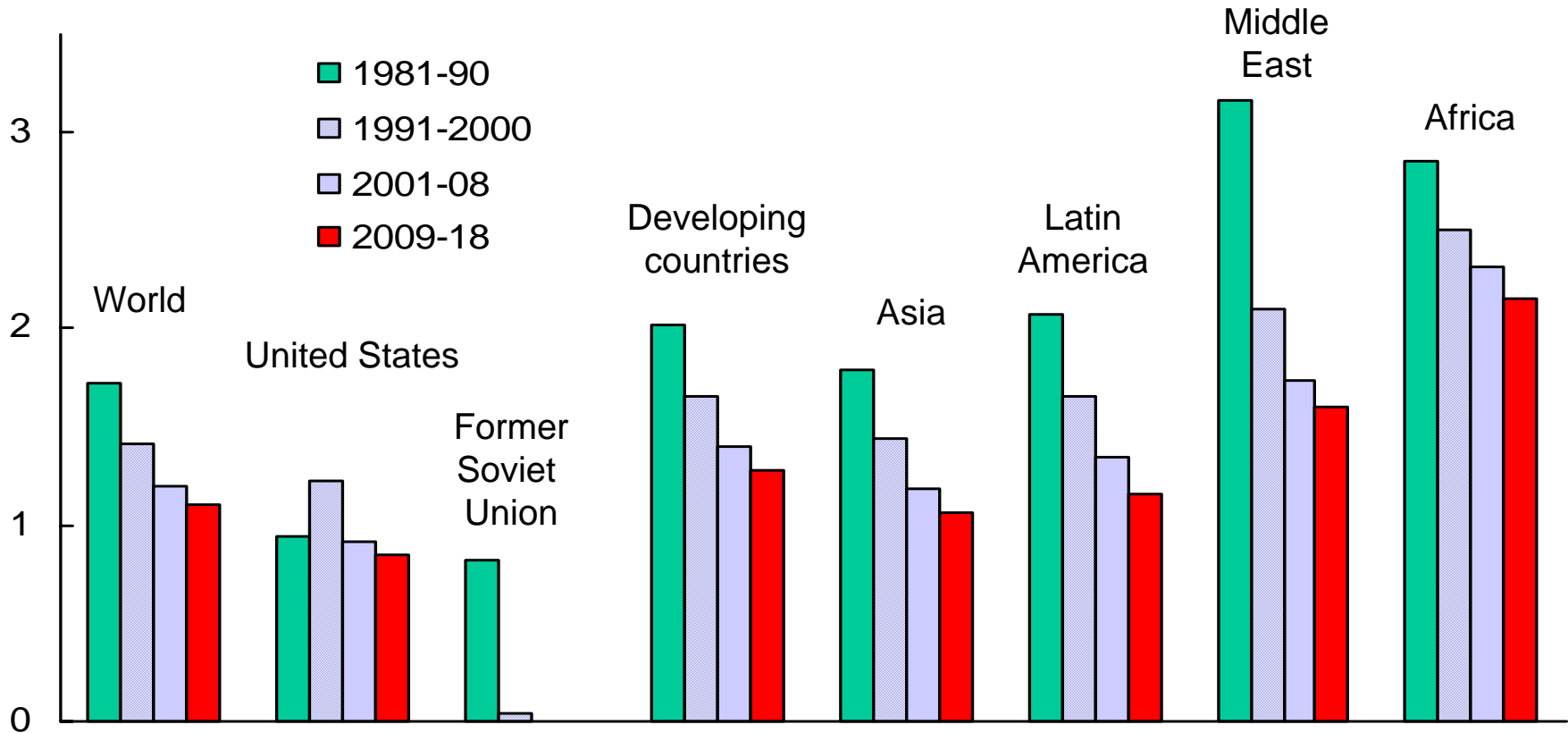
- Australia
- Ukraine & Russia

and 2007

- Europe: dry spring; harvest floods
- SE Europe: drought
- Ukraine & Russia: drought (2nd year)
- USA: late spring freeze
- Canada: hot and dry
- Australia: 2nd year of severe drought
- NW Africa: drought
- Turkey: dry

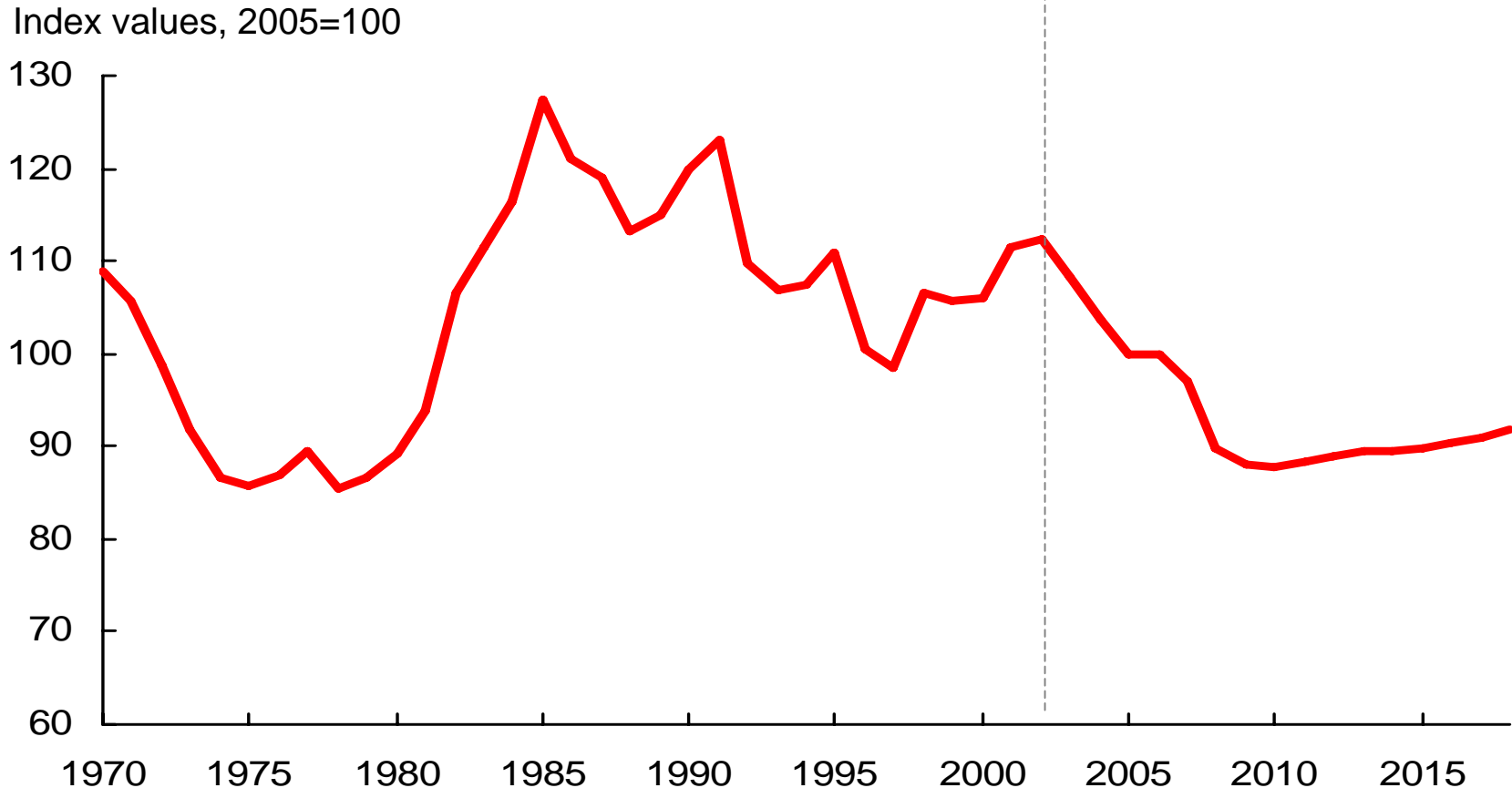
# Population growth continues to slow

Percent



Source: U.S. Department of Commerce, U.S. Census Bureau and U.S. Department of Agriculture, Economic Research Service.

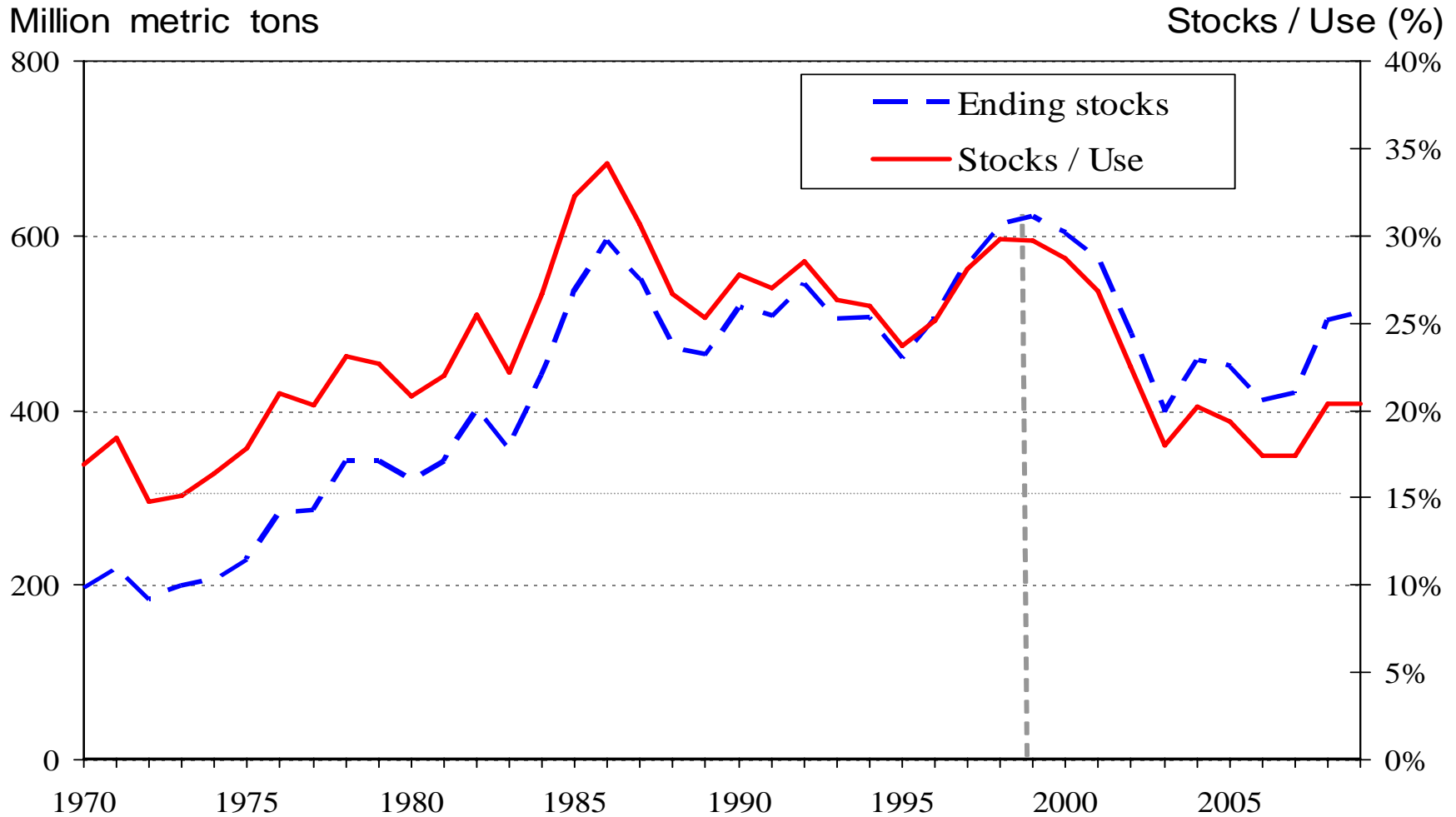
# Value of U.S. dollar declines after 2002; projected to stabilize <sup>1/</sup>



<sup>1/</sup> Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights, based on 192 countries.

# Total world grain & oilseeds

## Stocks and stocks-to-use ratio



# Policy responses to rising prices by selected countries - Exporters

Country	Raised export taxes	Export volume restrictions	Export bans
Argentina	x	x	
Cambodia			x
Egypt			x
Kazakhstan		x	
Russia	x		
Ukraine			x
Vietnam	x		x
China	x	x	
India	x	x	x
Indonesia	x		
Malaysia	x		
Serbia			x

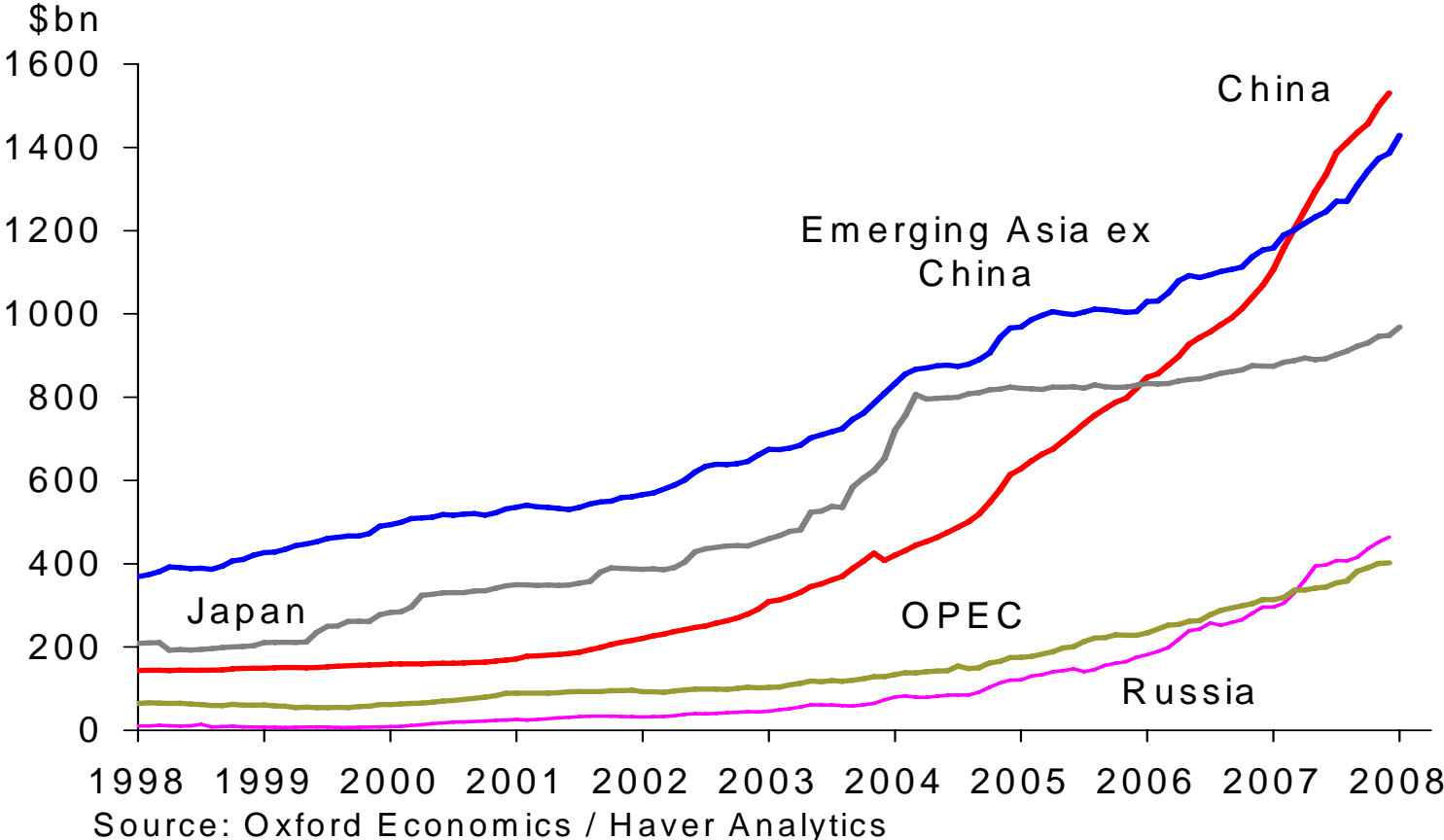
# Policy responses to rising prices by selected countries – Importers 1/

Country	Reduced import tariffs	Increased consumer subsidies	Imposed price caps
Bangladesh	X	X	X
EU	X		
Mexico	X		
Morocco	X		
Mongolia		X	
Philippines		X	
Thailand	X		
China		X	X
India	X	X	
Indonesia	X	X	
Malaysia			X
Serbia	X		

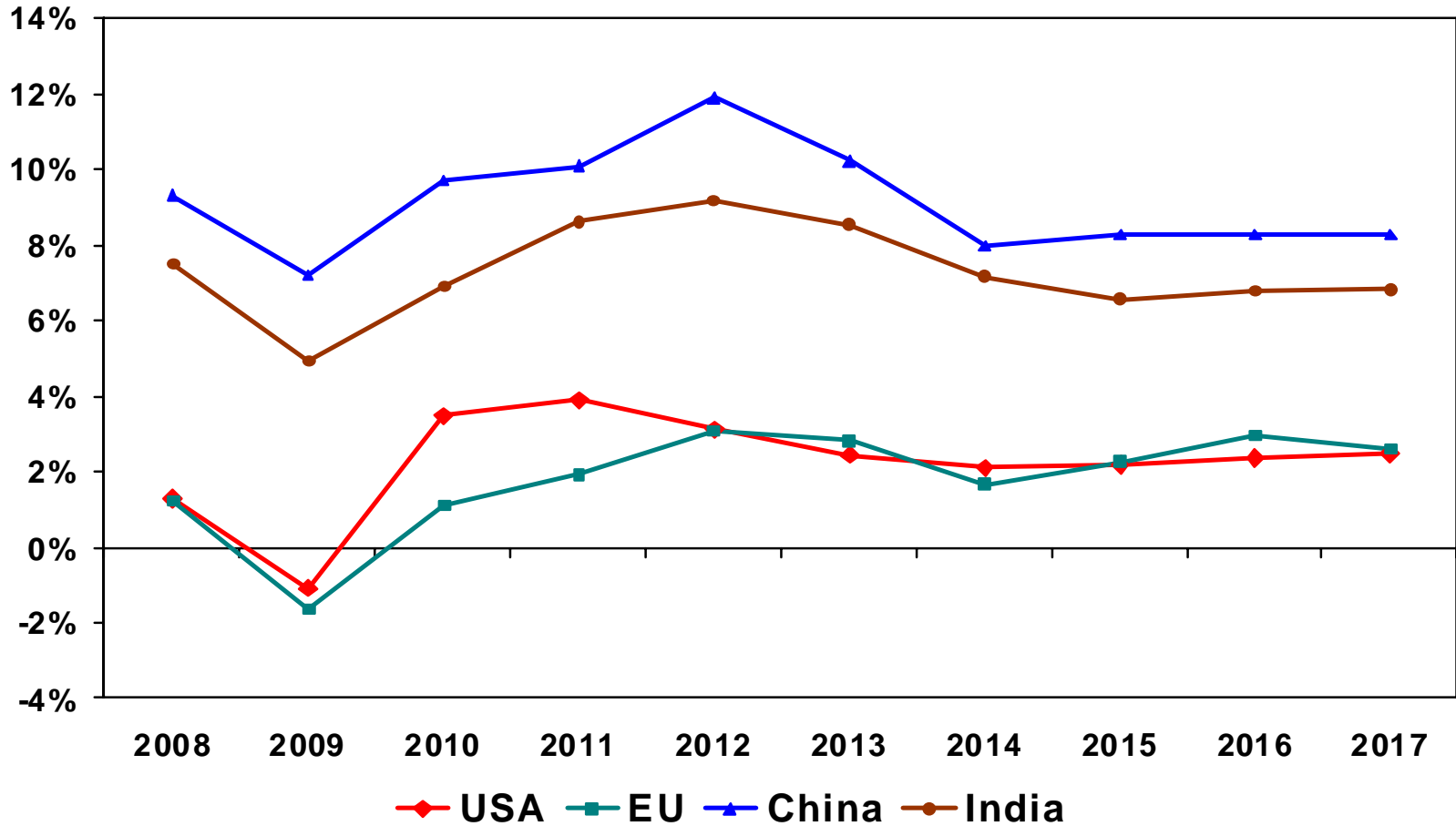
1/ Countries in red font employed both import and export policies

# Foreign Exchange Reserves

## Emerging Asia: Foreign exchange reserves

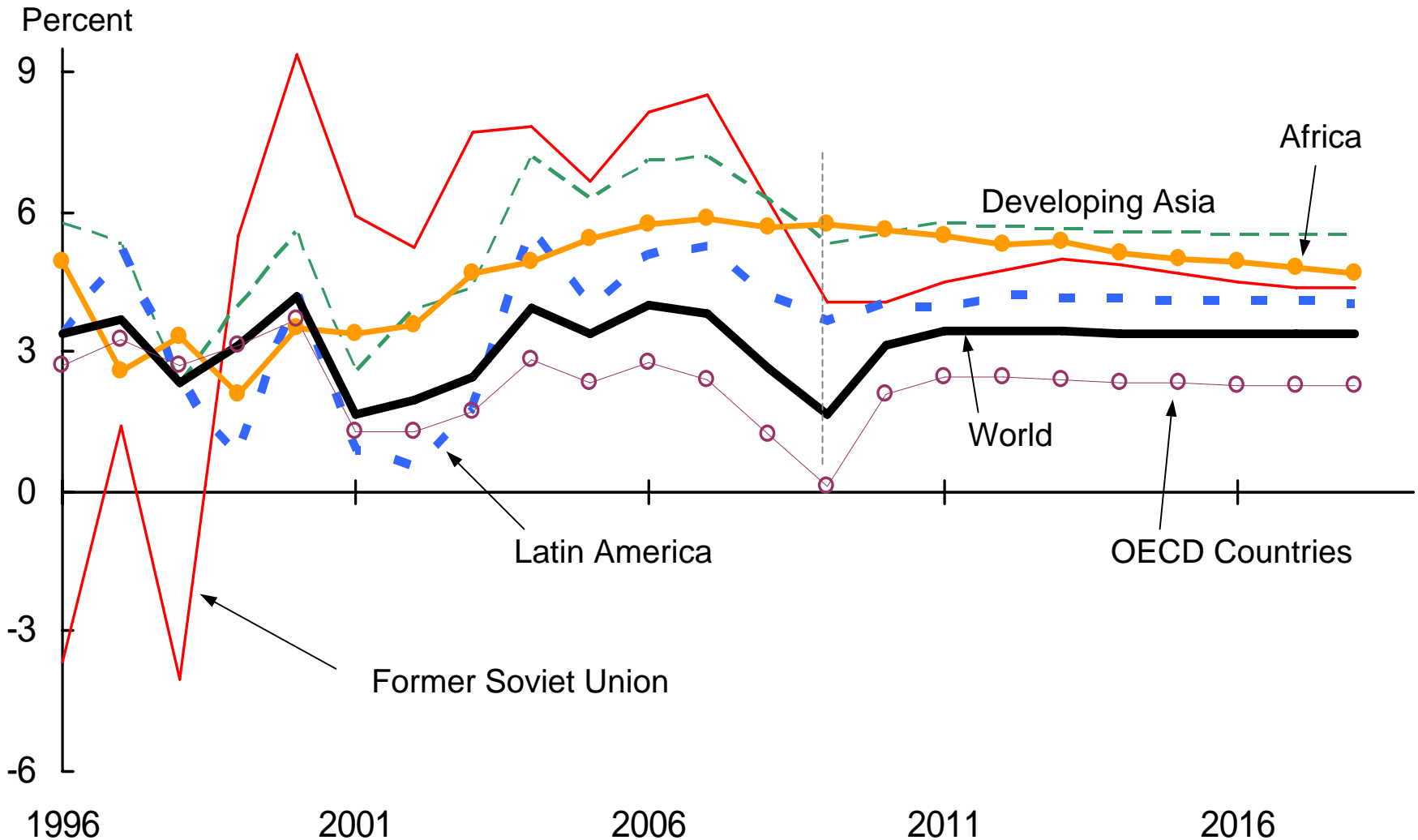


# GDP growth slows in 2009



Source: Oxford Economics, December, 2008

# GDP growth slows in 2008 & 2009 <sup>1/</sup>



<sup>1/</sup> Projections based on assumptions made in October, 2008

Source: *USDA Agricultural Projections to 2018*, February 2009. USDA, Economic Research Service.

# Percent change in value of ag trade during economic slowdown

Country/Region	Latest month of available data	Agricultural Trade Value	
		Fourth Quarter (Oct-Dec) 2007-2008	First Quarter (Jan-March) 2008-2009
Value of Exports			
China	March, 2009	-0.4 %	-17.3 %
Japan	February, 2009	-15.6 %	-53.7 %
USA	February, 2009	-5.5 %	-24.3 %
EU	January, 2009	-10.0 %	-33.7 %
Value of Imports			
South Korea	March, 2009	-3.3 %	-32.0 %
Mexico	January, 2009	-2.7 %	-26.4 %
USA	February, 2009	6.1 %	-11.7 %
EU	January, 2009	-11.8 %	-31.9 %

Source: World Trade Atlas, 2009

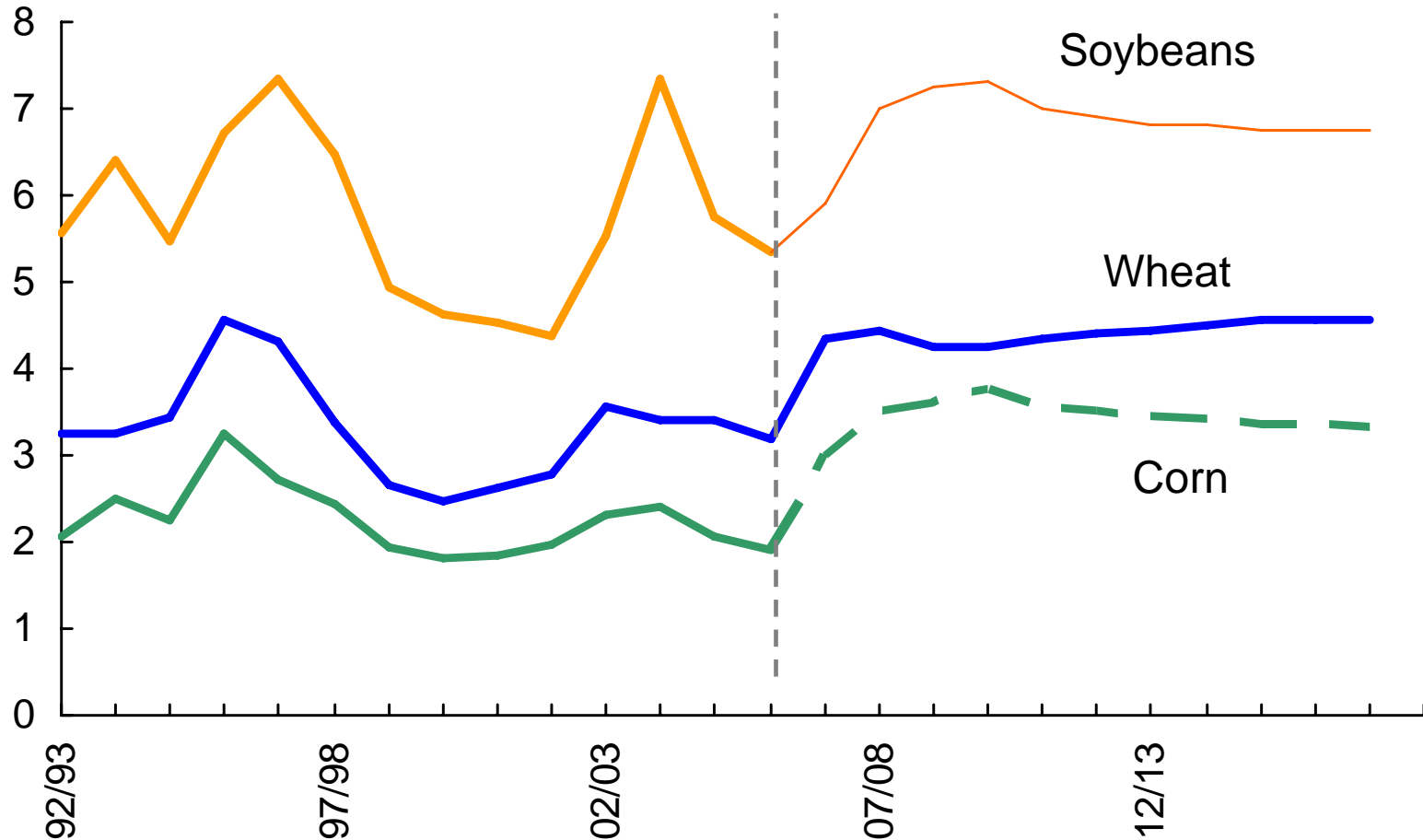
# Factors that may influence future ag prices and trade

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- Nearer Term
  - Economic slow down, & recovery
  - Cost of energy (& other non ag prices)
  - Costs of ag production
  - Stock levels (Supply & demand balances; stocking policies; self-sufficiency policies)
  - Policy changes by exporters & by importers
  - Exchange rates (Esp. for commodities denominated in dollars)
  - Weather
  - Import demand: Who will be the importers? (Role of foreign exchange reserves)
- Intermediate Term
  - Biofuels production (Role of policies and profitability)
  - Consumption patterns (Continued increase in per capita meat consumption?)
- Longer Term
  - Technology advancements
    - Continued slowing of growth in productivity? R&D investments. Acceptance of GMO products.
  - Natural resource constraints
    - Land: Ability to expand cultivated area; productive capacity of new land
    - Water: Fertilizer (ability to continue rate of growth in irrigated areas)
  - Climate change
    - Impact of temperature, precip, and growing season changes on cropping patterns & productivity.
  - Potential revisions to projected population growth

# Prices: Soybeans, Wheat, and Corn

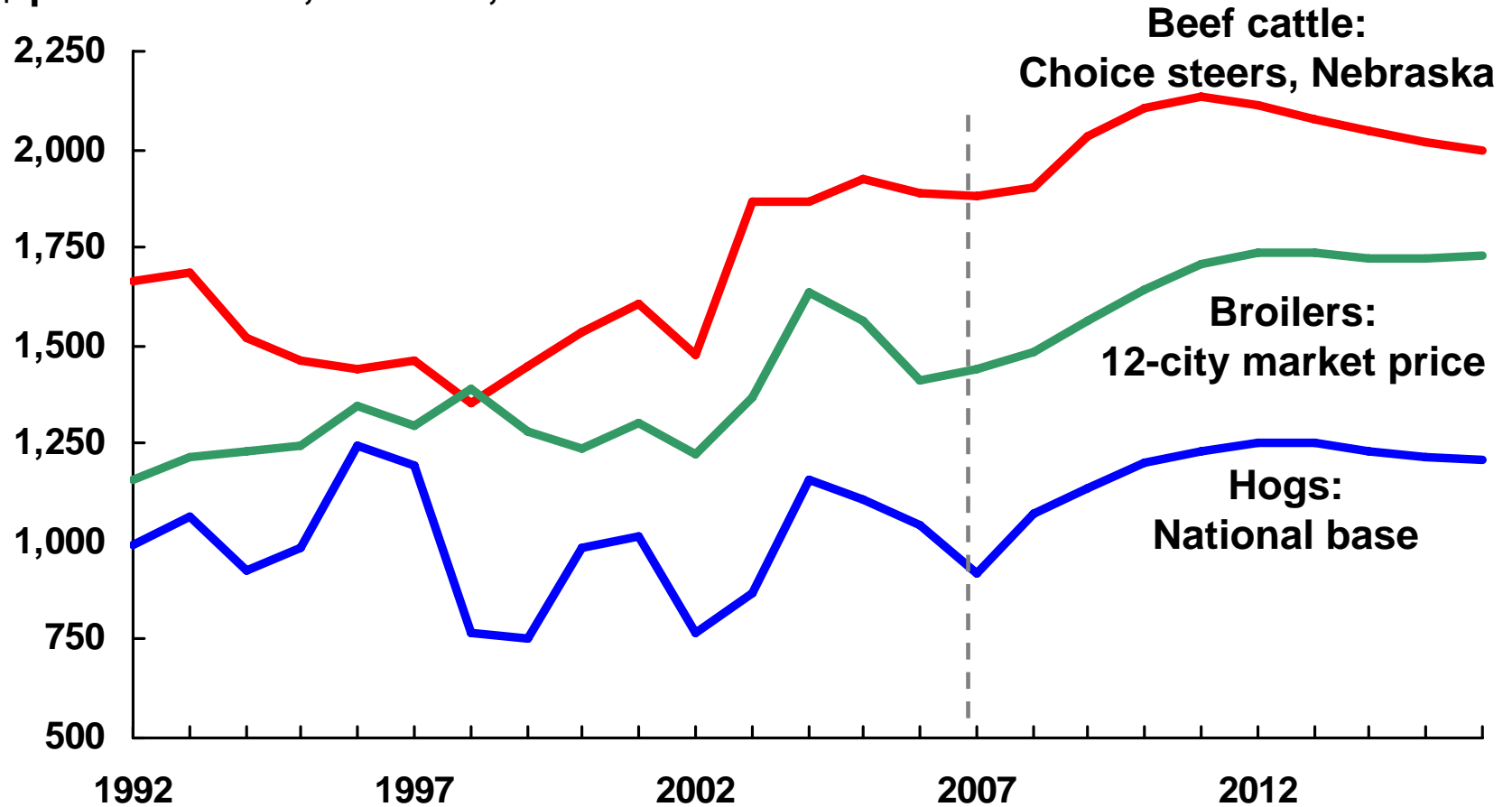
Dollars per bushel, Nominal, US markets



Source: USDA Agricultural Projections to 2016, February 2007

# Livestock Prices

\$ per metric ton, Nominal, U.S. markets



Source: USDA Agricultural Projections to 2016, February 2007

# Who will be the importers?

## Near term:

- Net importers with large foreign exchange reserves?

## Longer term:

- NFood deficit countries with faster population growth?

# Total Open Interest: U.S. Futures Markets for Wheat, Corn, Soybeans, and Rice

Million contracts, by week

