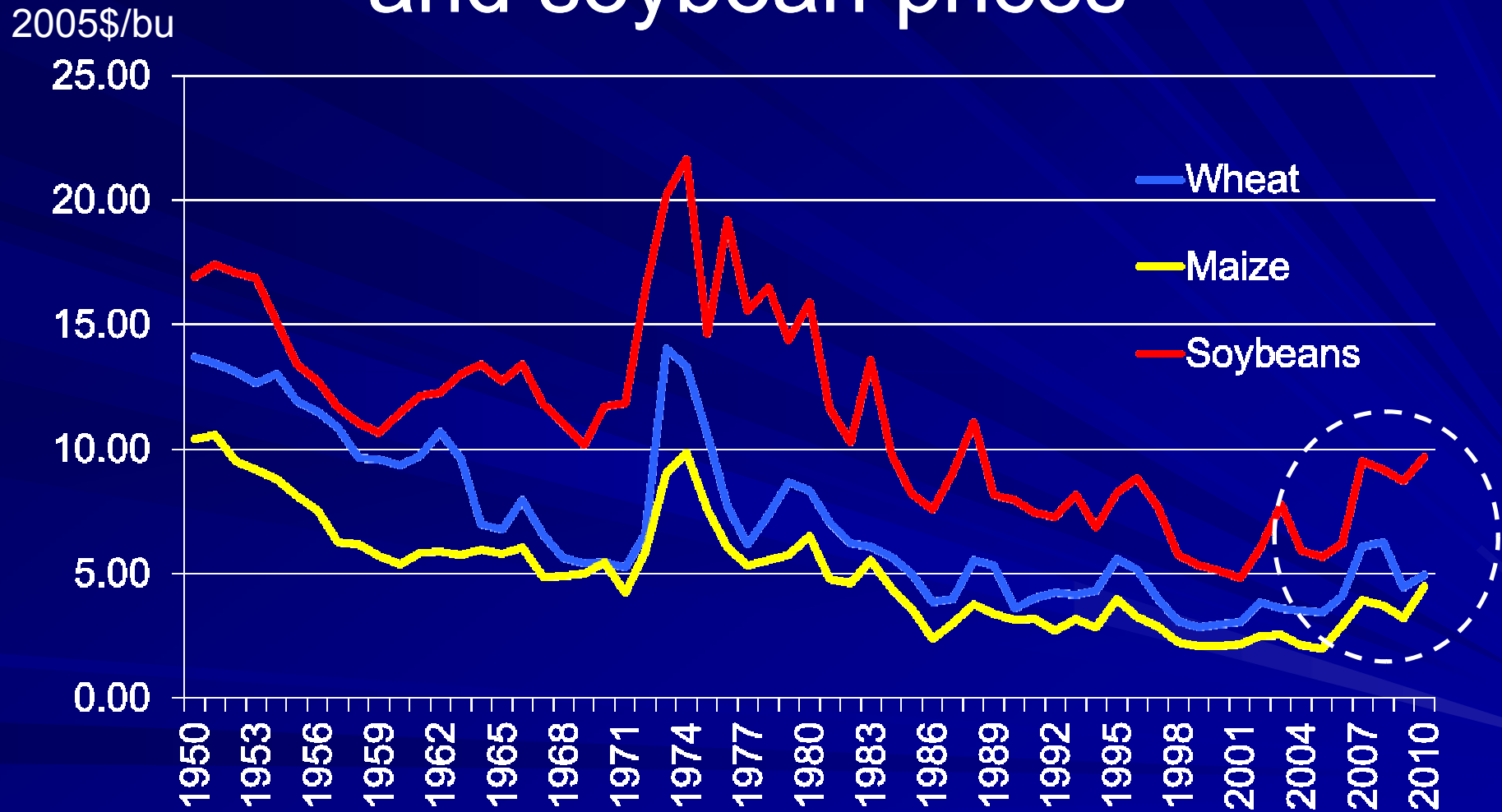


# RECENT TRENDS IN PRICES: TEMPORARY OR SHAPES OF THINGS TO COME?

Joseph W. Glauber  
Chief Economist, USDA

*Oxford Farming Conference*  
*5-7 January, 2012*

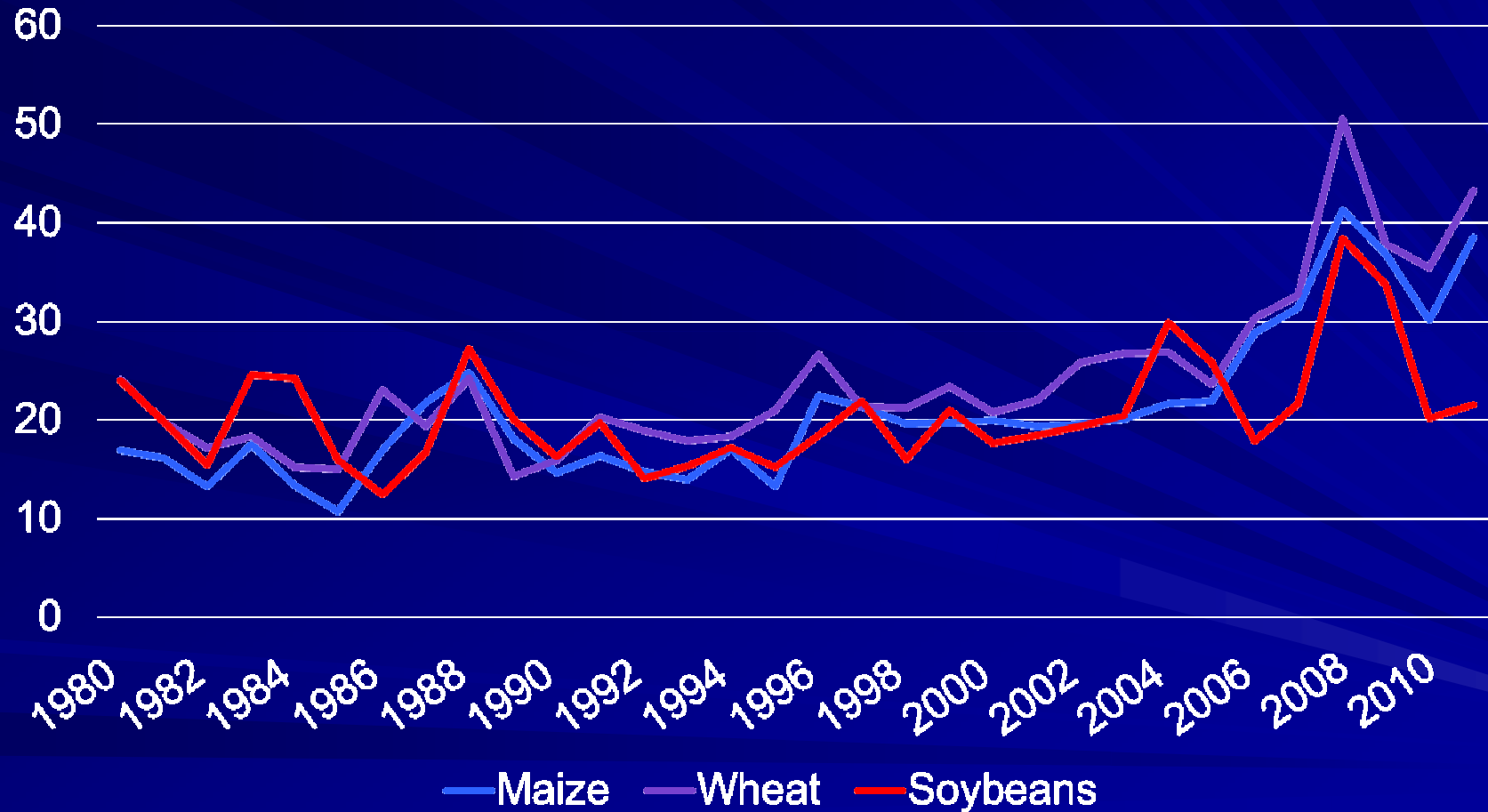
# Secular trends in real maize, wheat and soybean prices



Deflated by GDP implicit price deflator, 2005 = 100 (BEA 2011)

# Historical Price Volatility

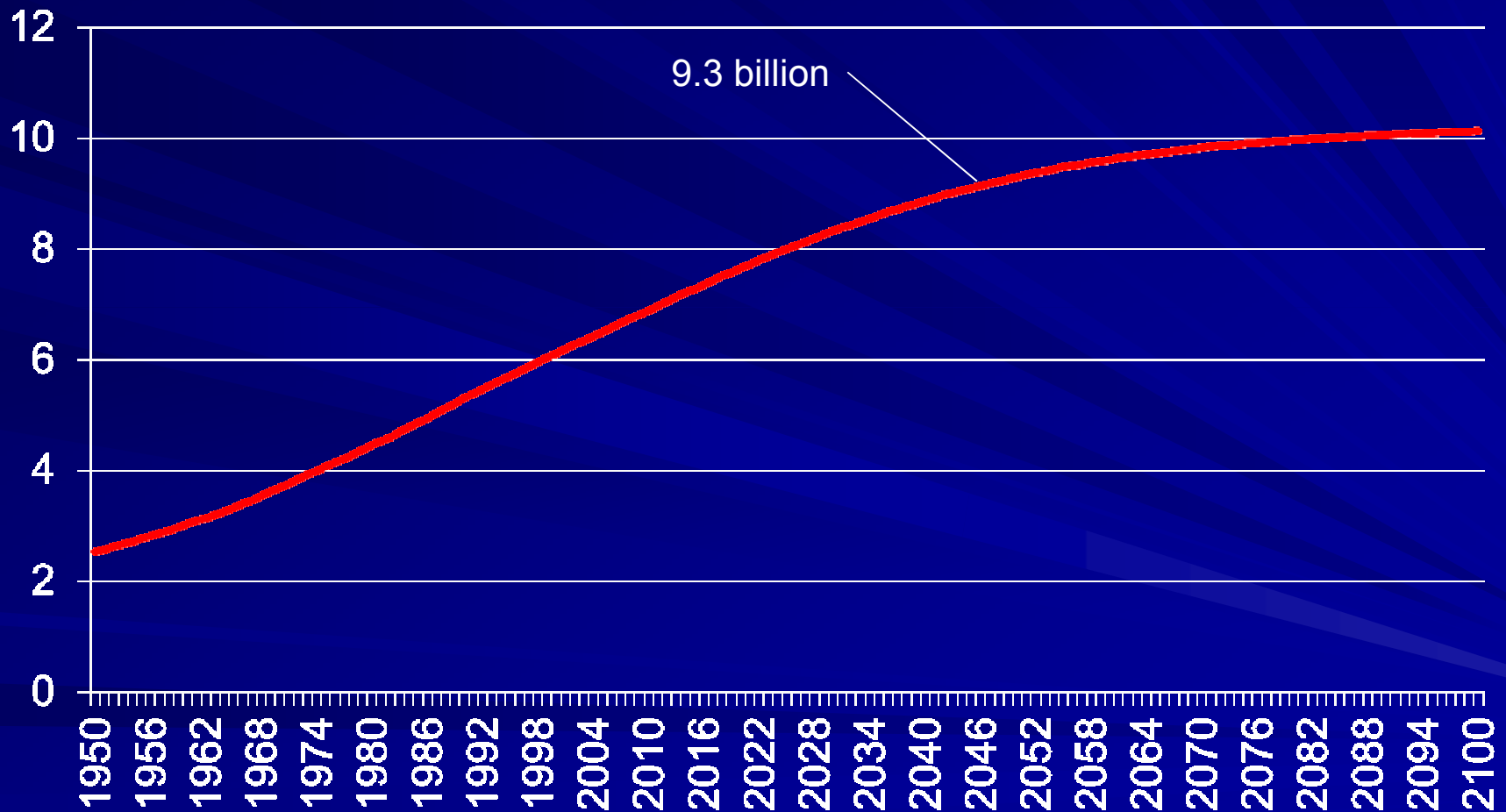
Percent



Source: Chicago Mercantile Exchange

# World Population

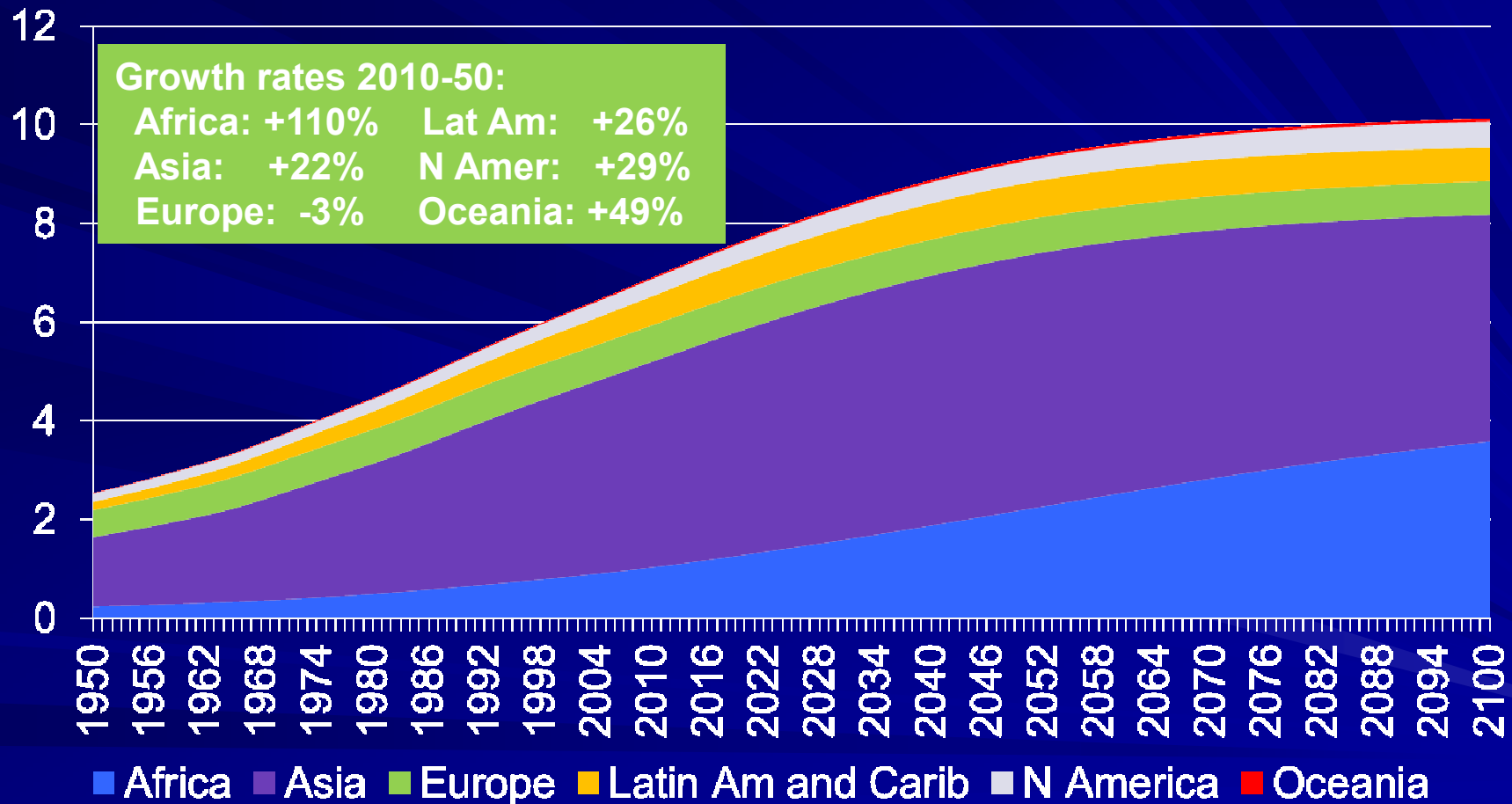
Billion



Source: United Nations

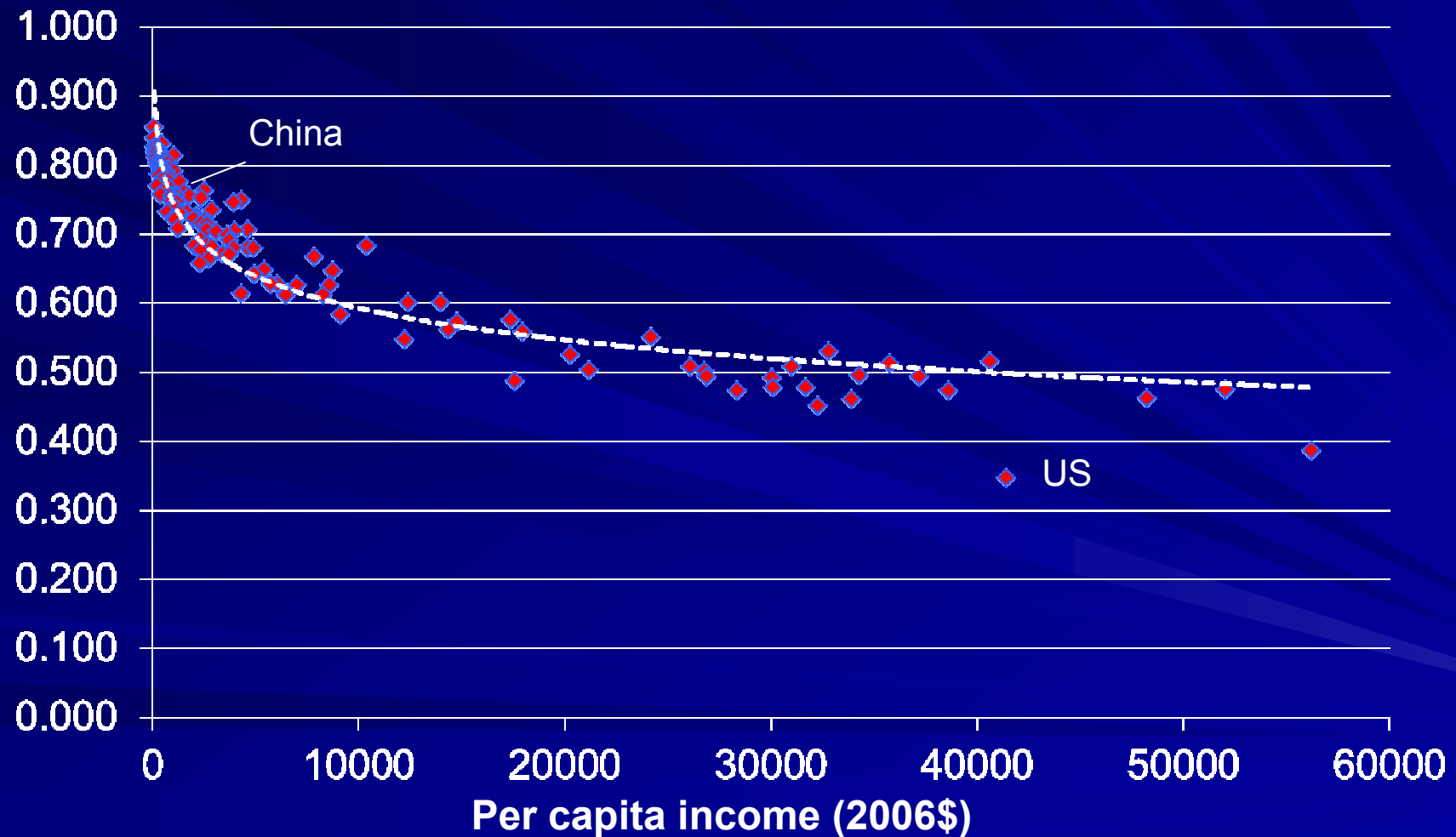
# World Population Projections by Region

Billion



Source: United Nations

# Food and beverage income elasticities



Source: Economic Research Service

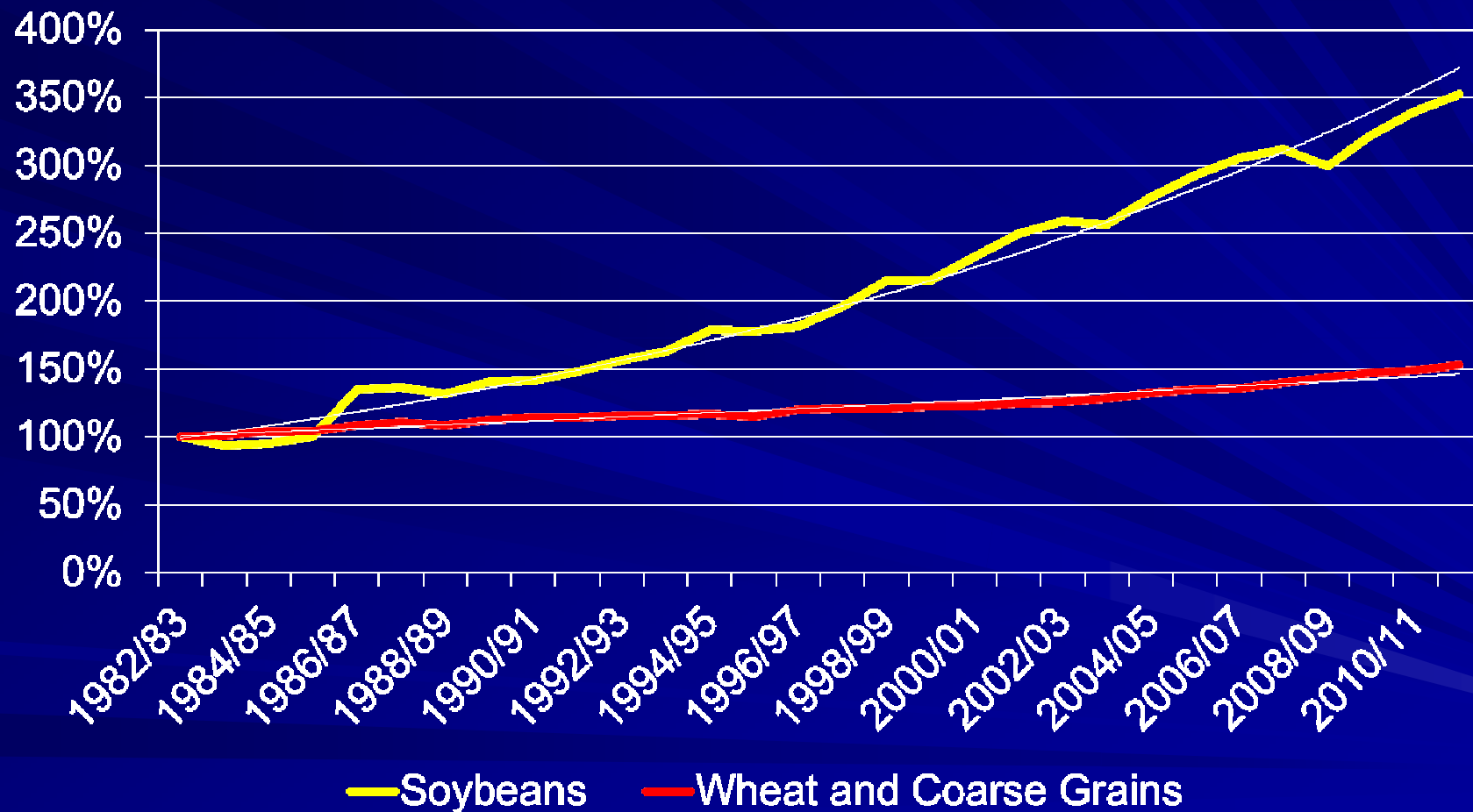
# Changing composition of Asian diets

kg/cap/yr

	1979-81	1984-86	1989-91	1994-96	1999-01	2004-06
Rice	82.3	88.7	89.2	86.0	84.1	78.0
Wheat	54.3	62.5	65.8	69.8	66.7	64.3
Milk	26.1	30.2	32.1	37.5	41.6	48.6
Meat	11.4	14.0	17.1	22.4	26.3	28.0
Vegetable oil	4.6	5.8	6.9	7.8	9.0	8.5
Vegetables	57.1	70.2	76.4	96.3	124.4	139.6
Fruits	27.8	30.1	32.2	40.8	46.0	54.1
Total calories (cal/cap/day)	2286	2463	2550	2637	2680	2624
% from cereals	65.5%	64.7%	63.3%	59.7%	56.3%	54.9%
% from animal	7.9%	8.9%	10.0%	12.1%	13.7%	15.0%

Source: FAOSTAT

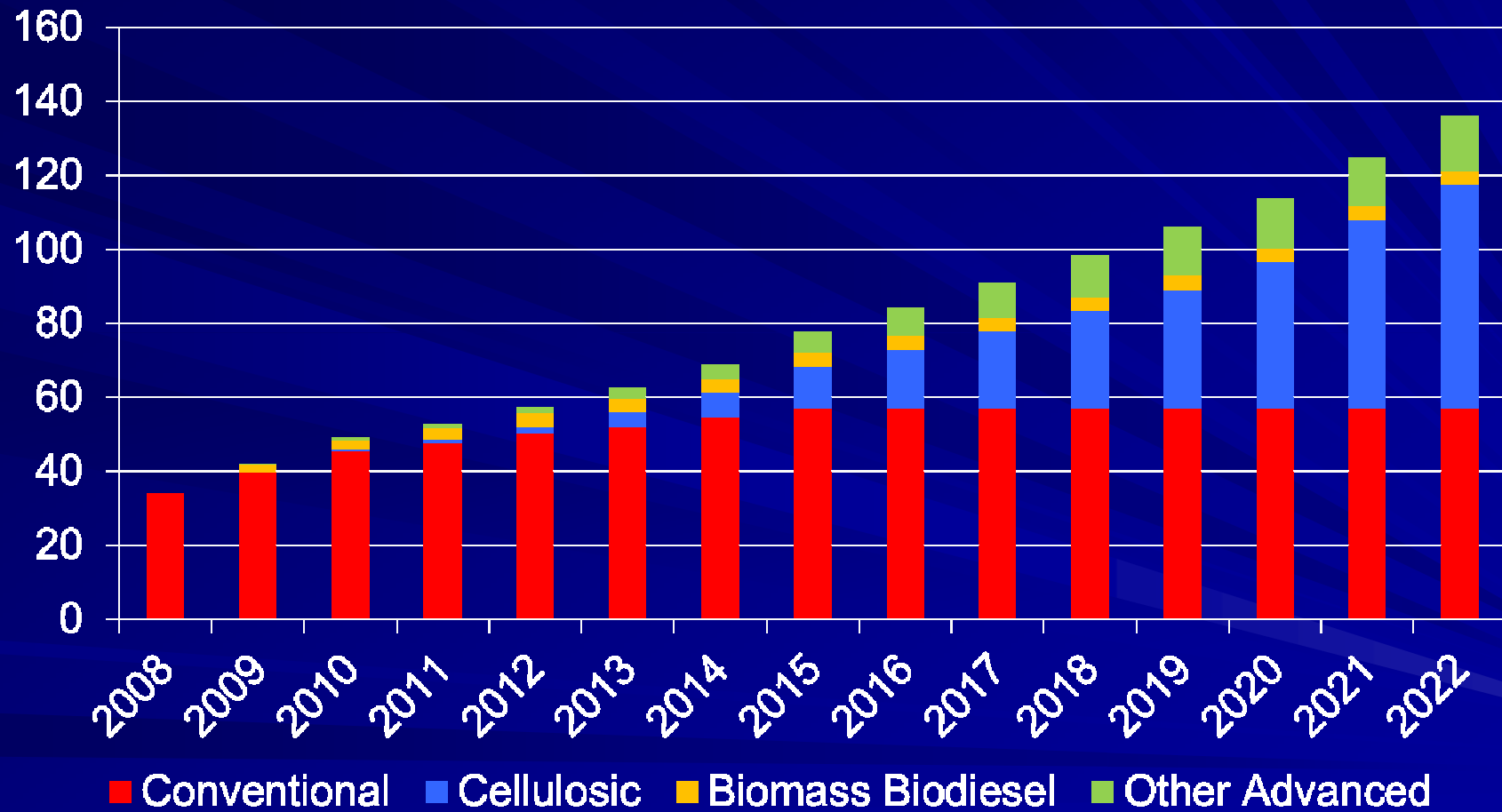
# Growth in Global Demand for Grains and Oilseeds since 1982/83



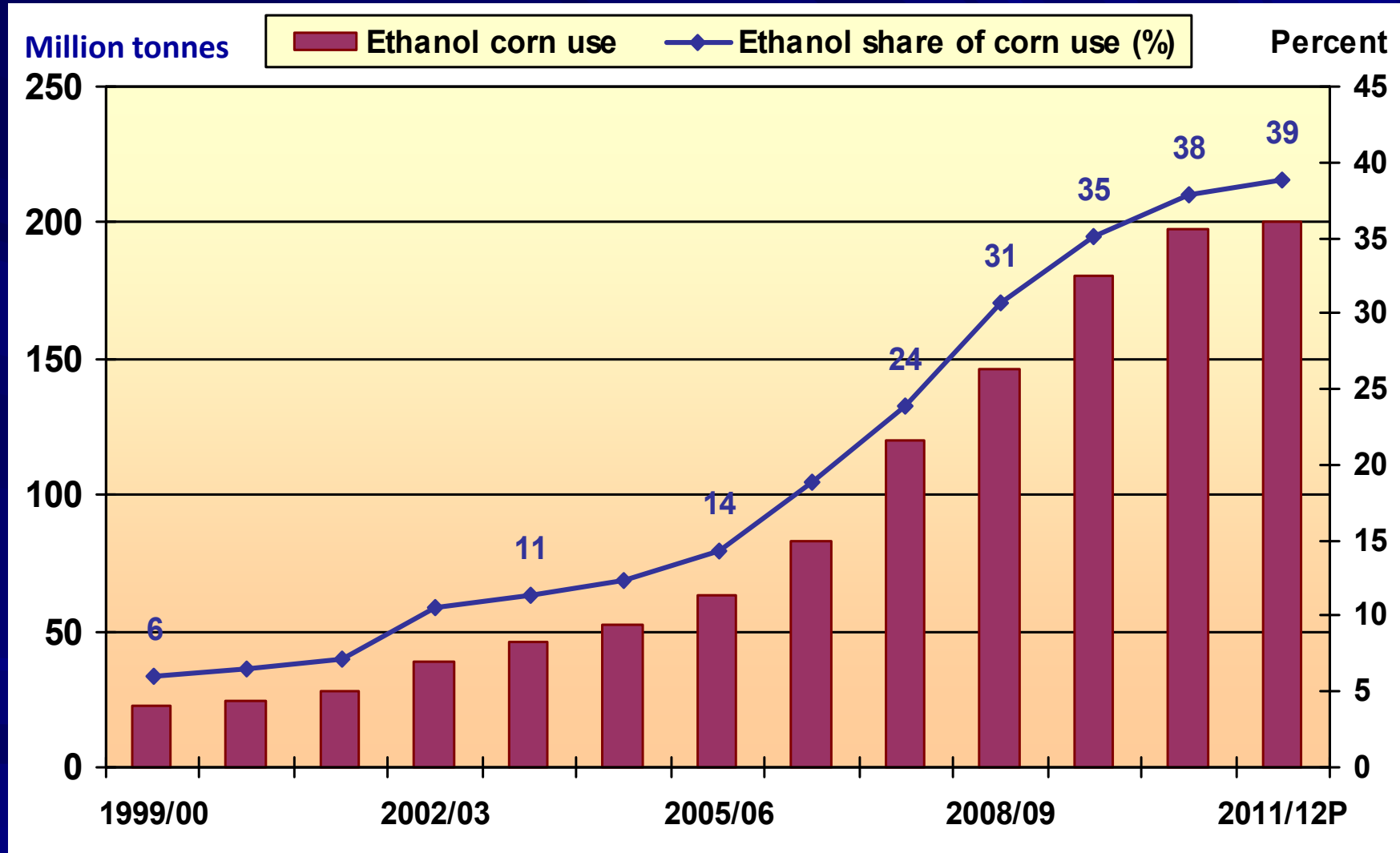
Source: USDA

# US Renewable Fuel Standard

Billion liters



# U.S. Corn Used for Ethanol



Source: USDA-WAOB, *World Agricultural Supply and Demand Estimates* Dec 9, 2011.

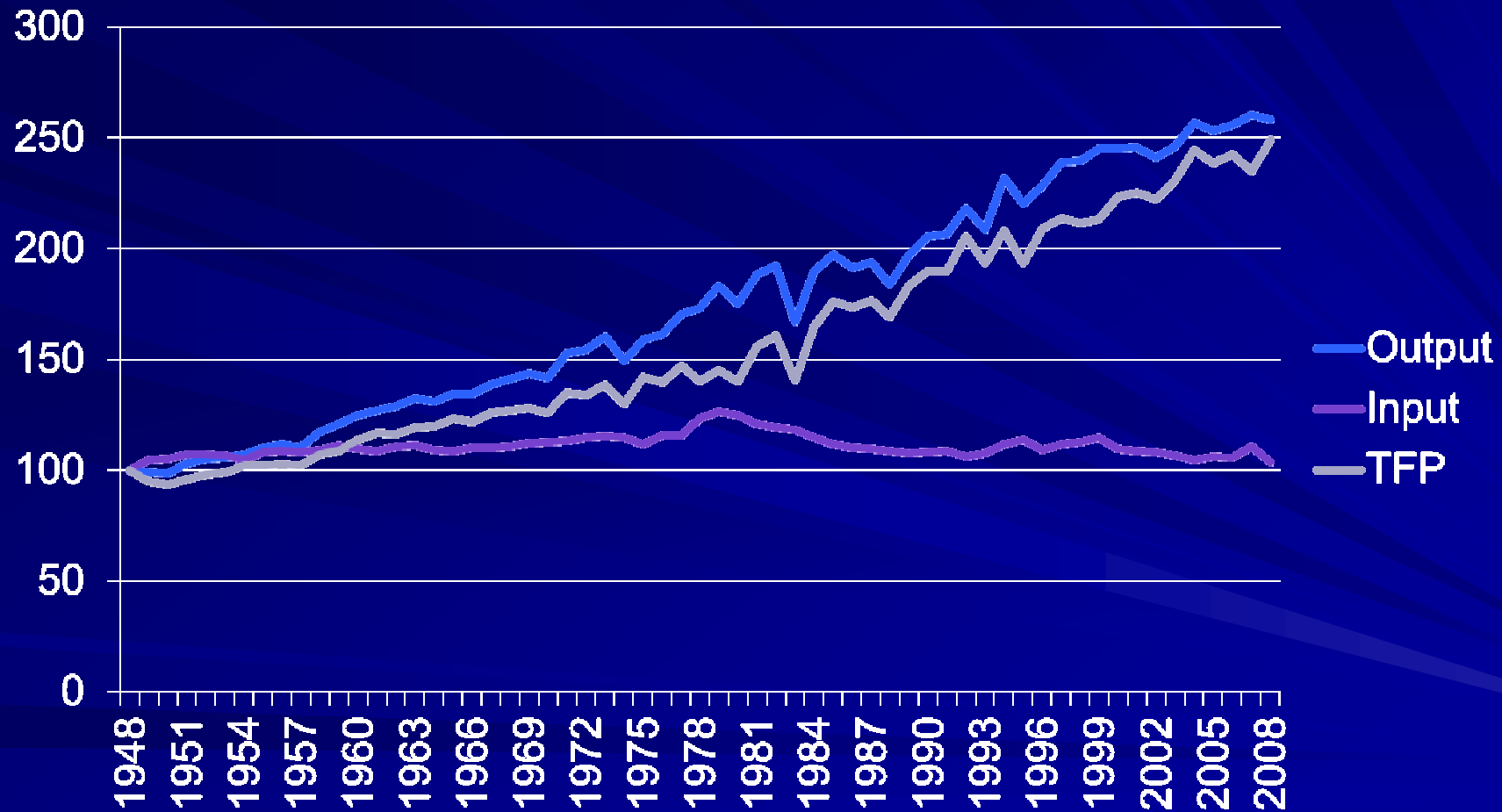
# Sources of Growth in Crop Production to Meet Global Food Needs by 2050 (percent)

	Arable land expansion	Increases in cropping intensity	Yield increases
All developing countries	21	8	71
sub-Saharan Africa	25	6	69
Near East/N. Africa	-7	17	90
Latin America/Carib	30	18	52
South Asia	5	8	87
East Asia	2	12	86
World	9	14	77

Source: Bruinsma (2009)

# US agricultural output, input, and total factor productivity (TFP) indexes

1948 = 100



Source: USDA, Economic Research Service

# Trends in public and private food and ag research spending in the United States

Billion 2006\$

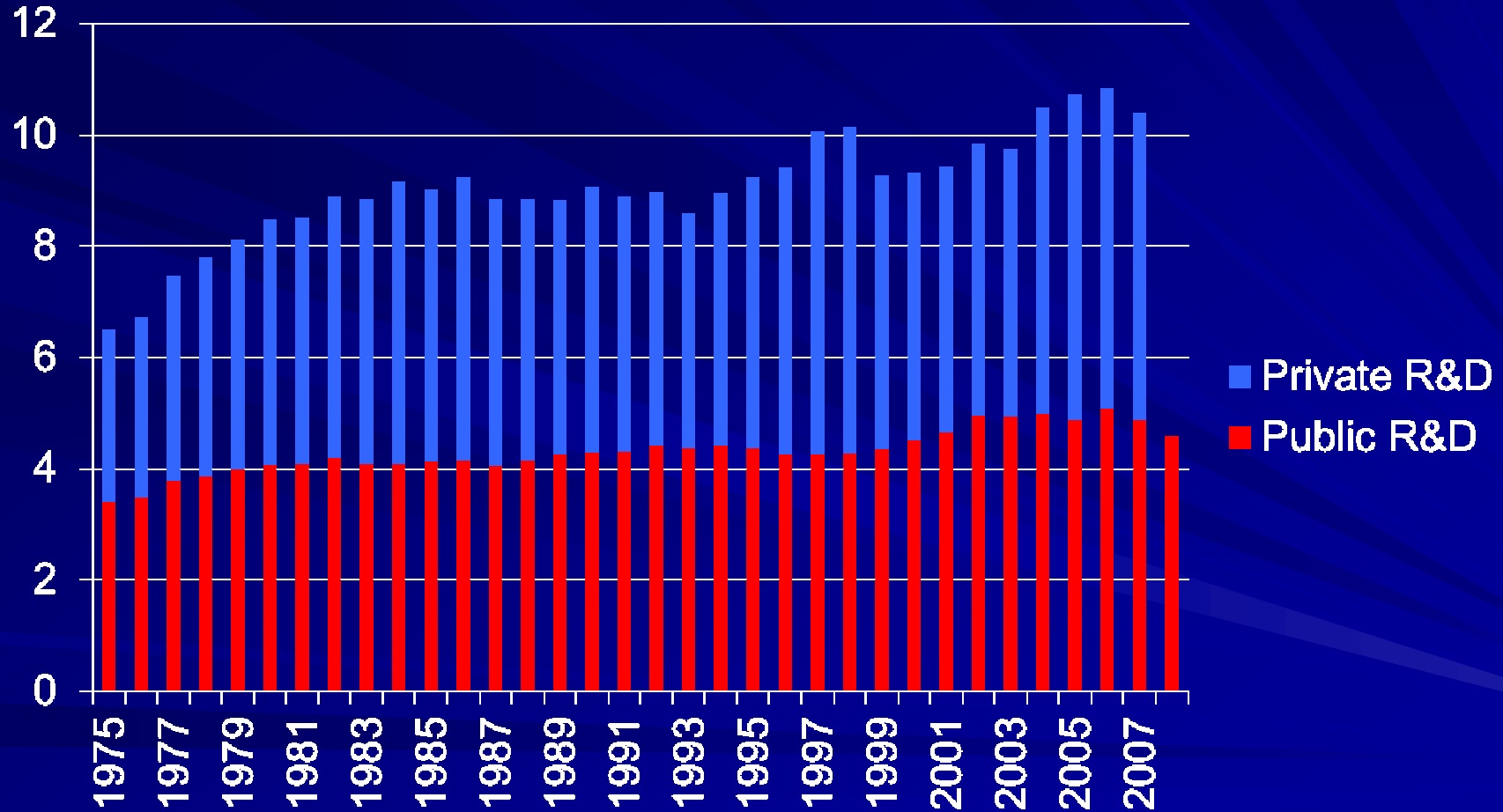
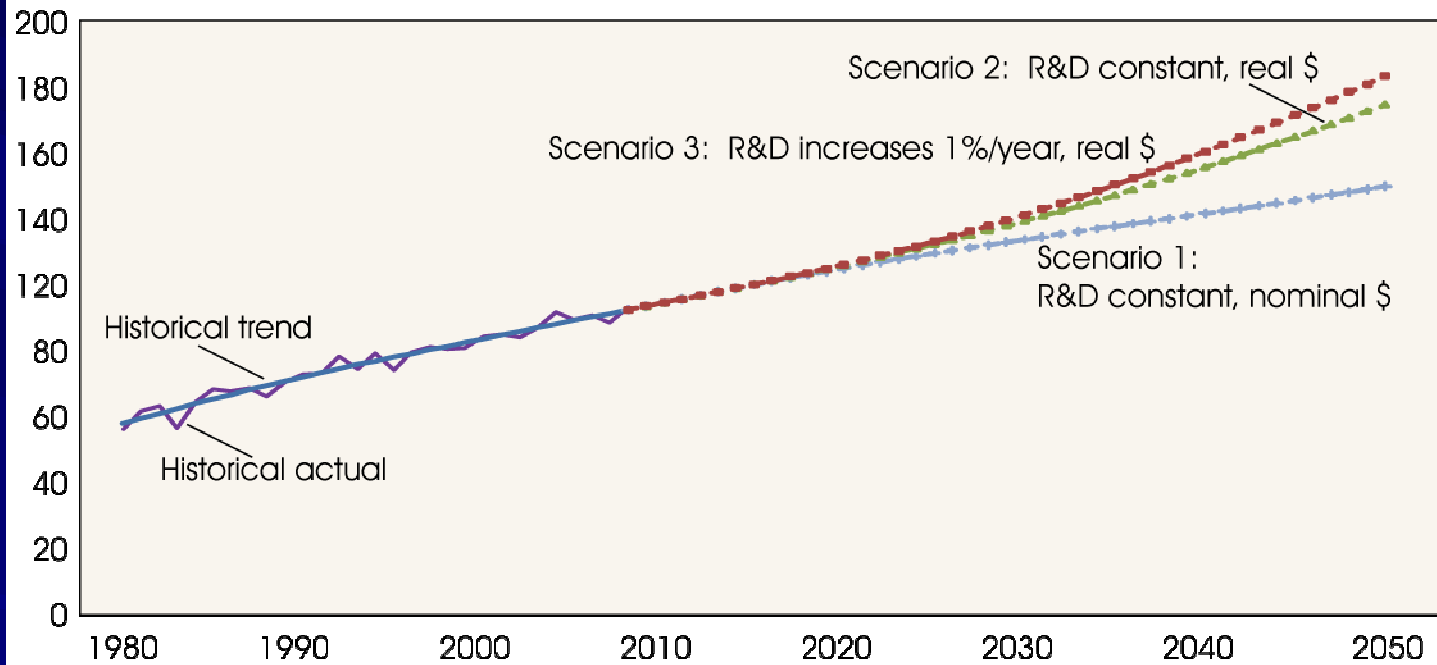


Figure 4

TFP index projections

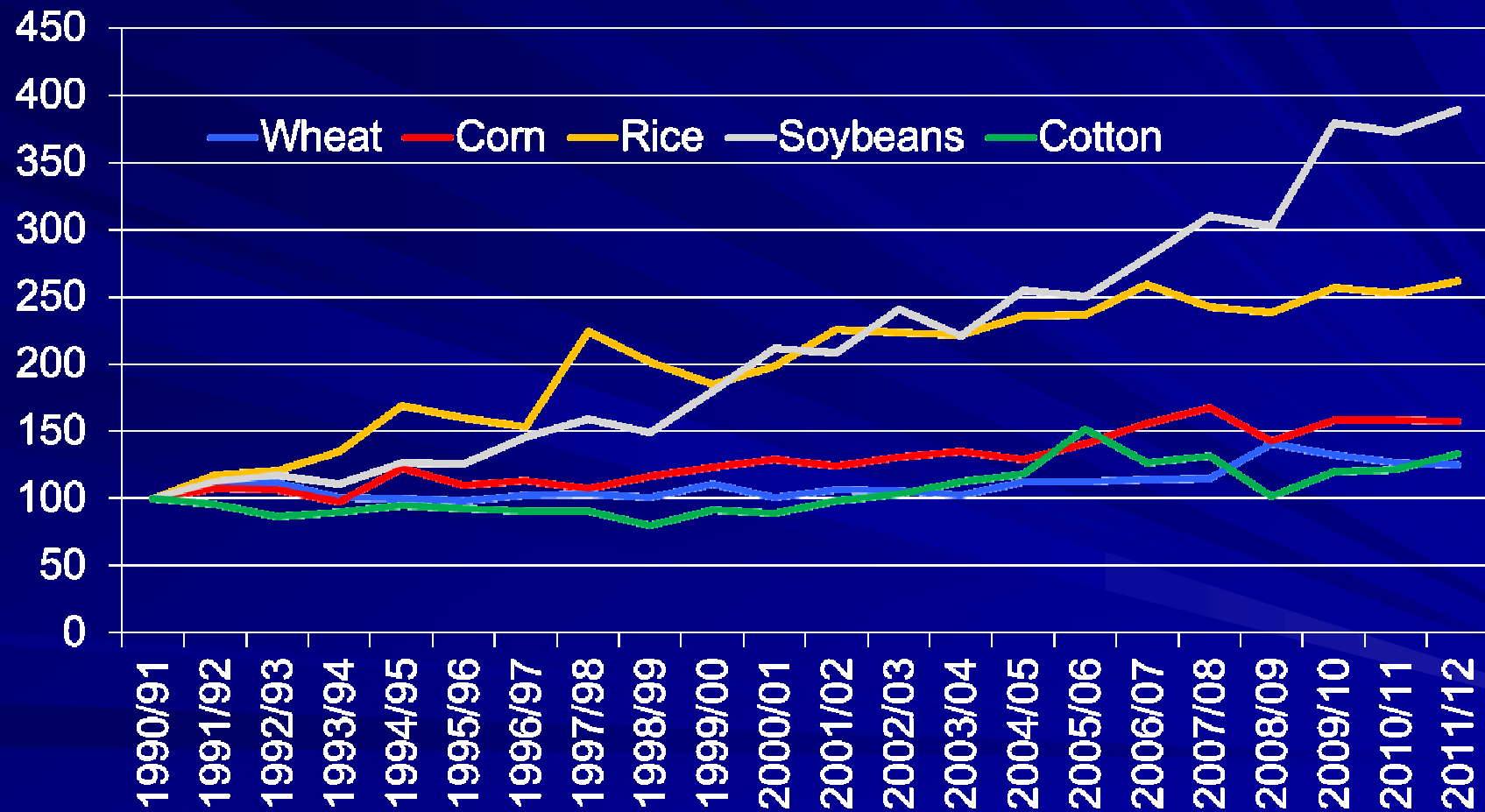
Base year 2008 = 100



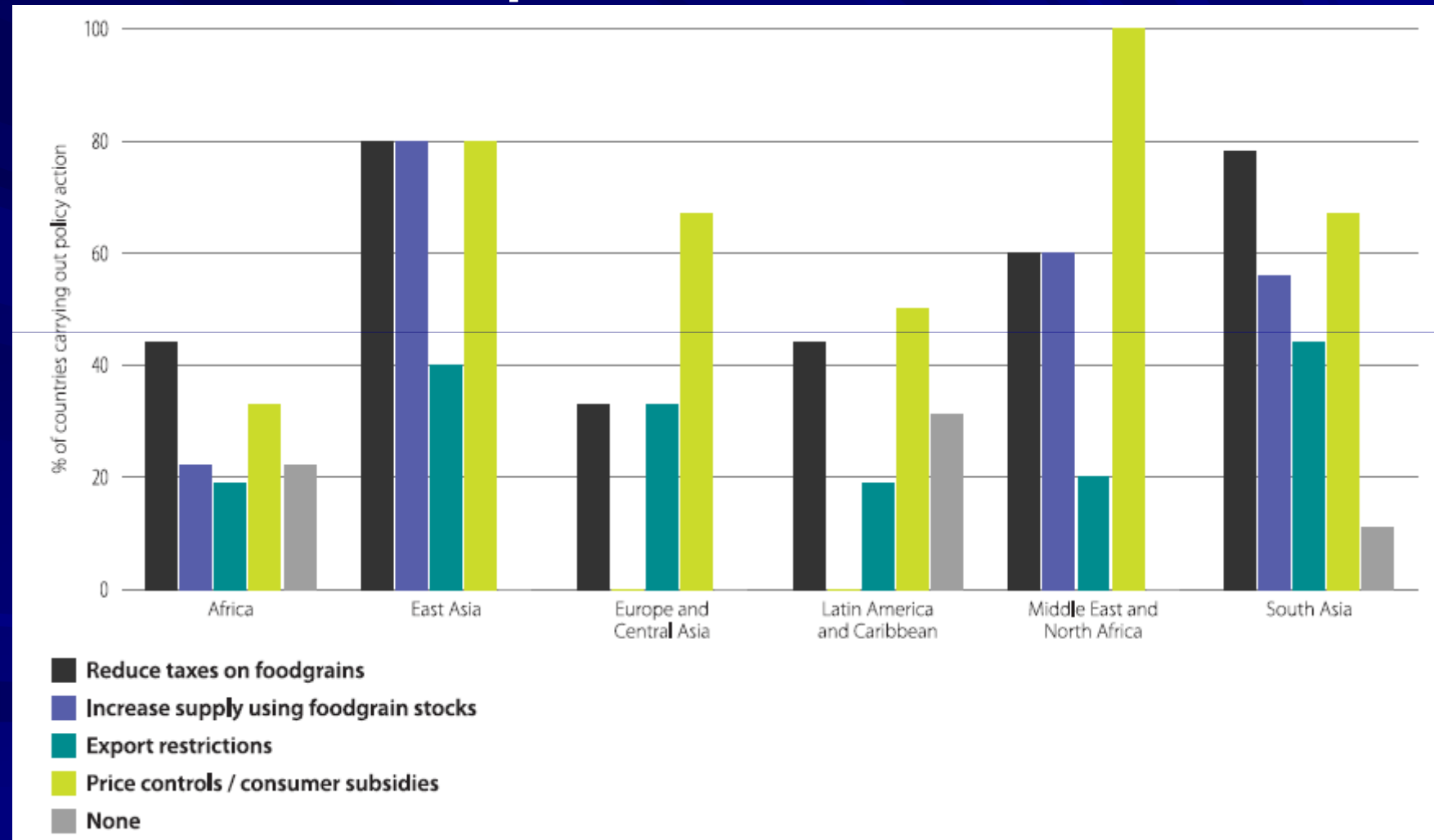
From Heisey, Wang and Fuglie 2011

# Growth in world trade

1990/91 = 100



# Policy actions to address high food prices, 2007-08



Source: FAO 2008

# Conclusions

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- Prices for agricultural commodities have declined in real terms since 1950—will this trend continue despite recent reversals?
- Over next 10 years, yield growth will likely result in stock rebuilding => moderate prices
- Tight and volatile markets in near term
- Over longer term, sustained productivity gains will be needed => significant investment in r&d
- Need for domestic and trade policies that allow consumers and producers to make decisions based on market prices