

Global Food and Fertilizer Prices

Presentation at the WB Workshop on
Food and Energy Price Increases and Policy Options

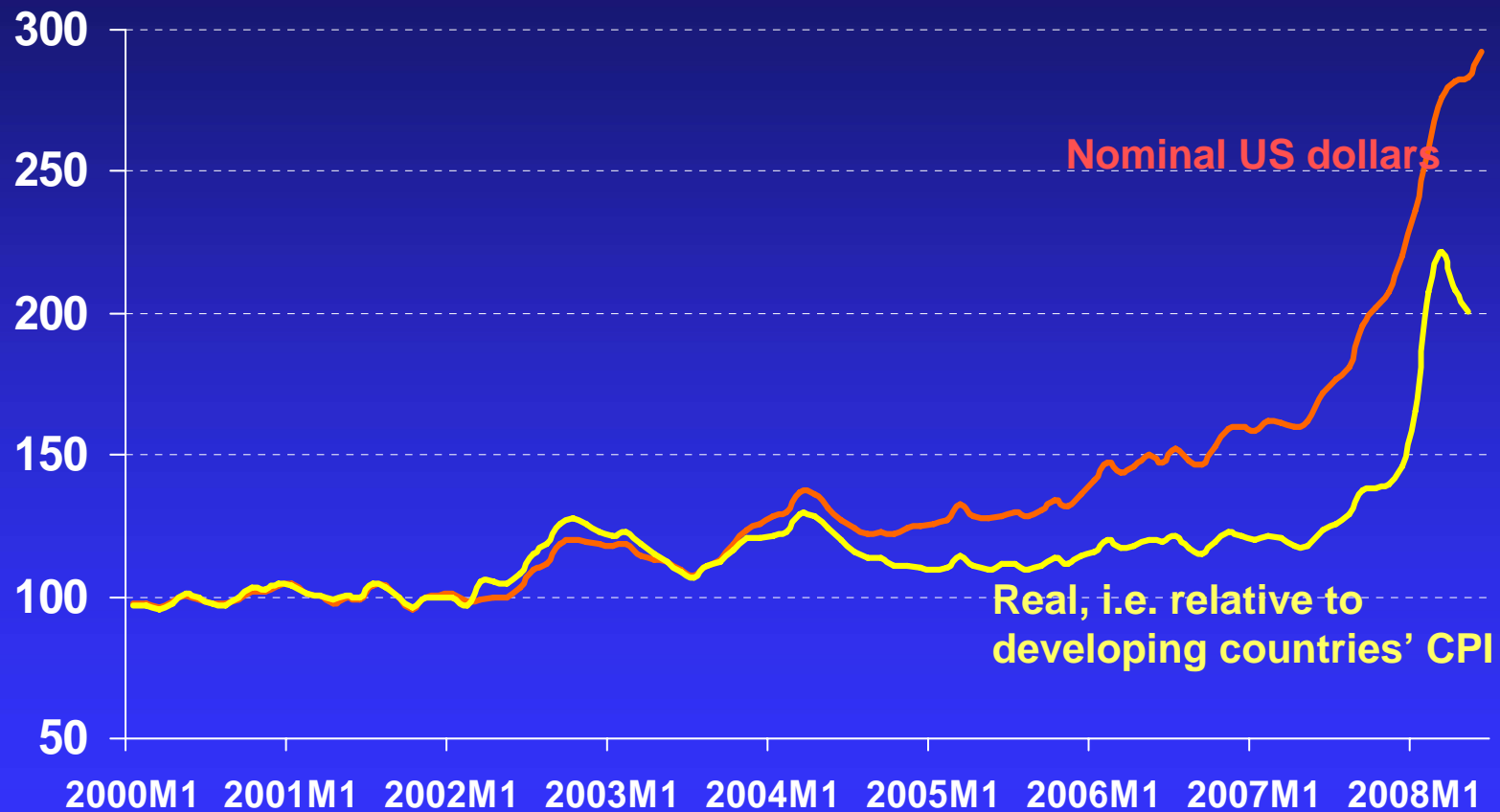
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July 9, 2008

US dollar prices overplay real increase

International food price indices, 2000=100



Source: DECPG

Historical perspective

- Decades of low prices led to underinvestment
- Low food stocks due to policy changes
- Structural changes in demand for energy and metals
- High energy prices raise production costs and increase incentives for biofuels
- Other factors: weak dollar, export bans, speculation

Biofuels impacts

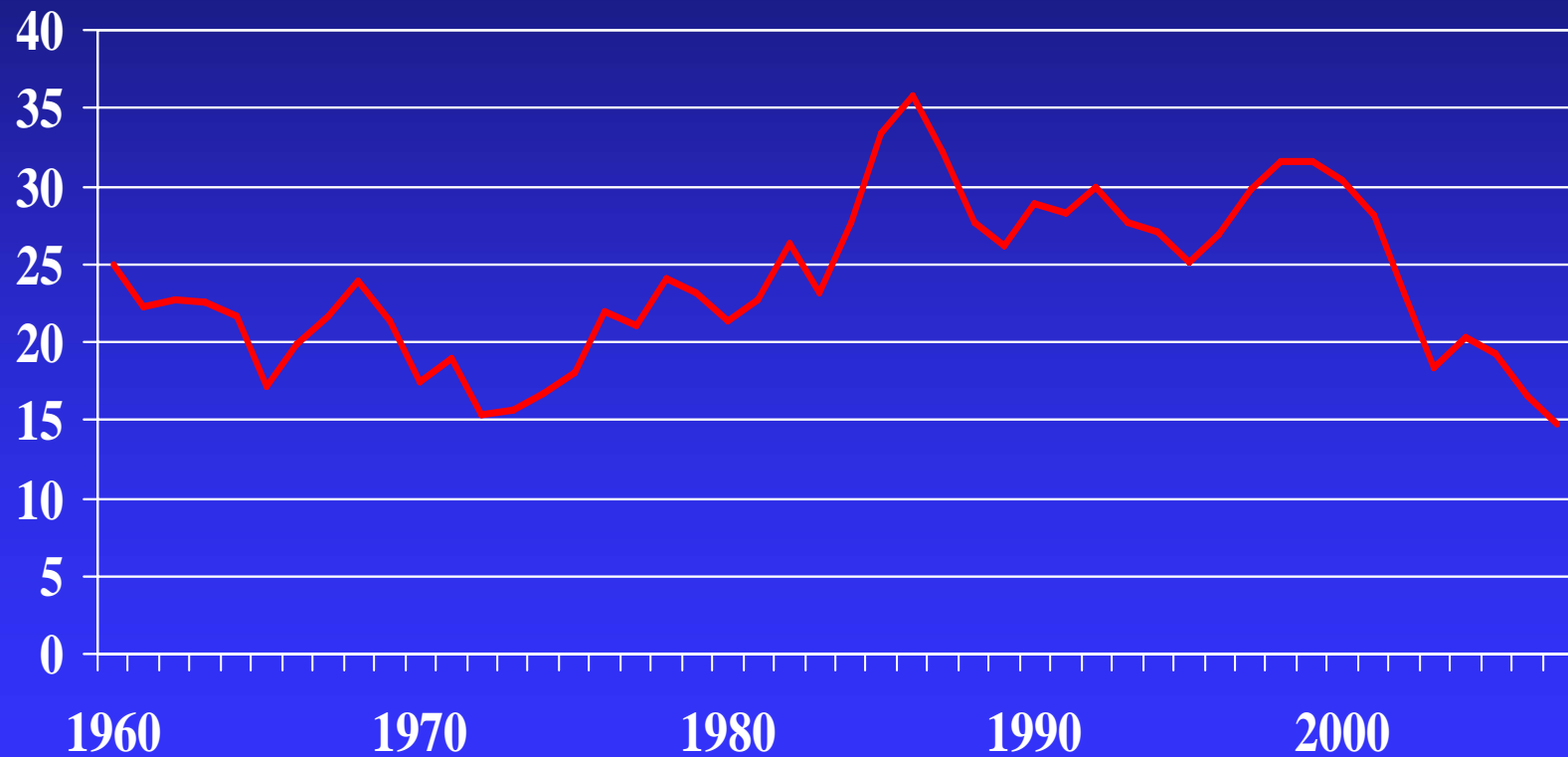
- US used 80 million tons of corn (24%) for ethanol last year and expected 100 million this year (31%)
- 75% of increase in global corn production from 2004-07 went for ethanol in US
- Biodiesel will use about 9 million tons of vegetable oils (7% of global supplies)
- Brazil will use about 55% of sugar cane for ethanol, but sugar exports still adequate to prevent price increases

Biofuel impacts

- Expanded corn area (+24%) in US displaced soybeans last year and raised soybean prices
- Expansion of oilseeds for biodiesel displaced wheat in Argentina, Canada, EU and Eastern Europe. Production potential of that land was more than enough to prevent decline in wheat stocks.
- Imports of vegetable oils increased sharply in EU and US (from 6.4 to 11 million tons) from 2000-07

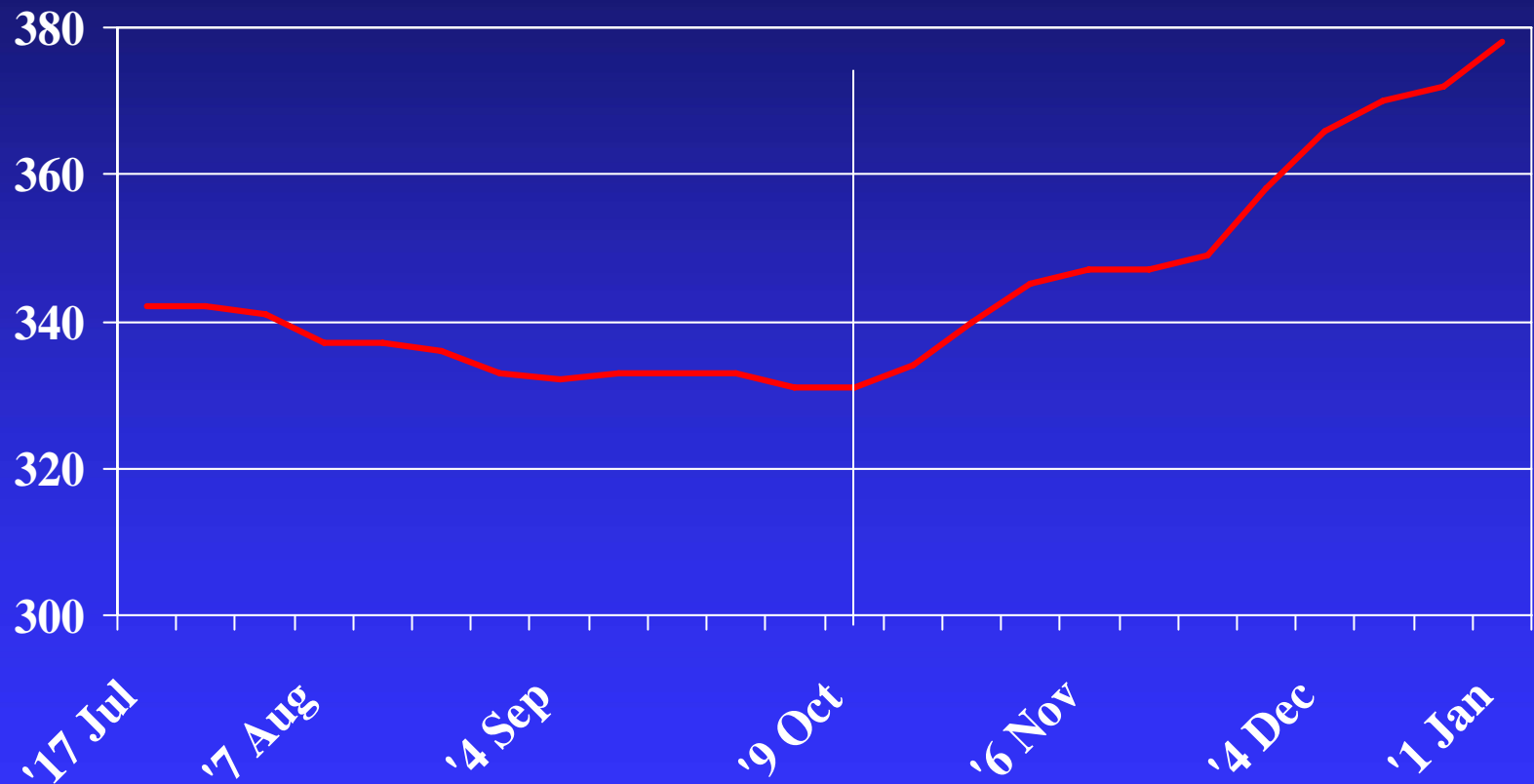
Grain stocks are at record lows

World Grain Stocks-to-Use

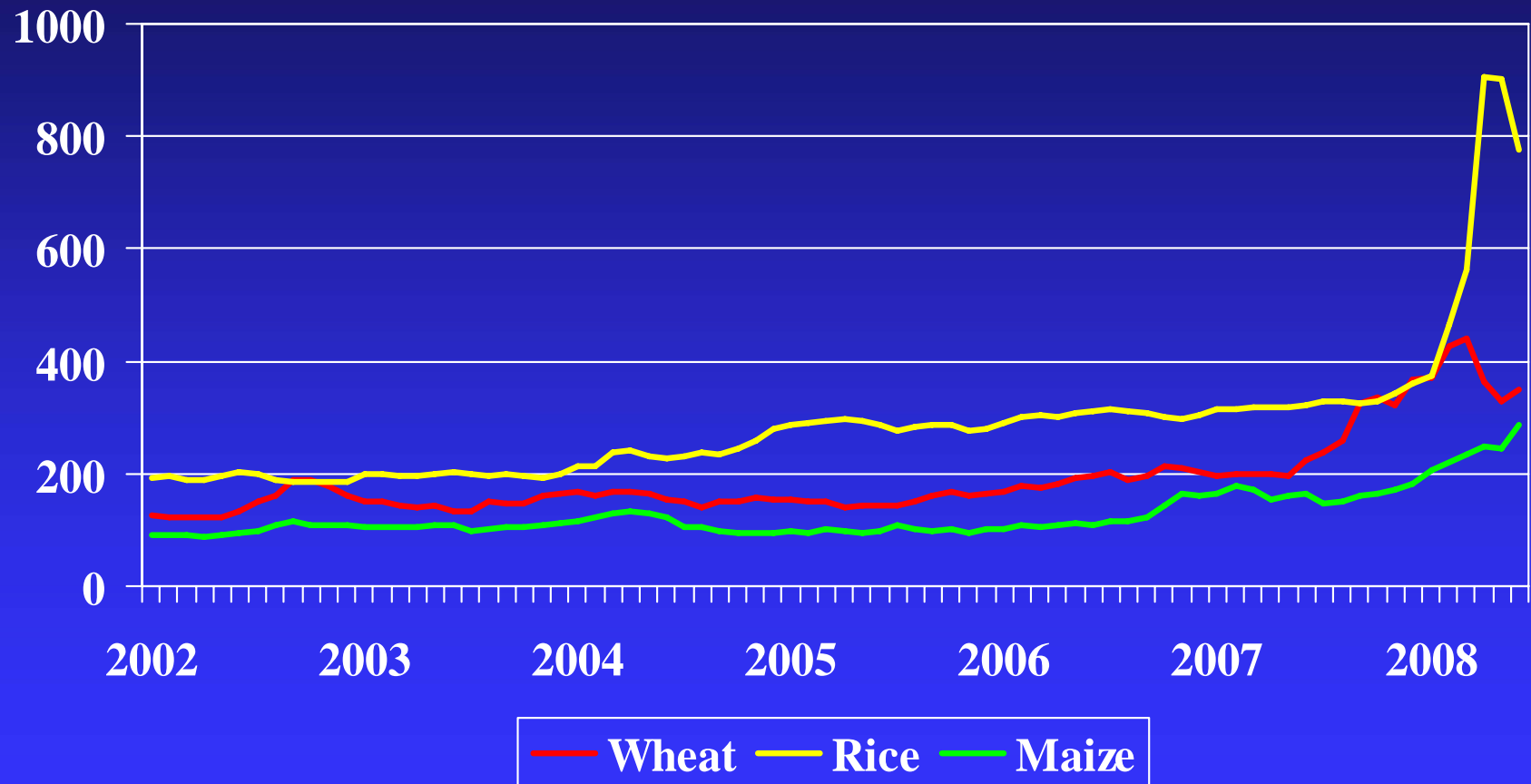


India banned rice exports Oct 9

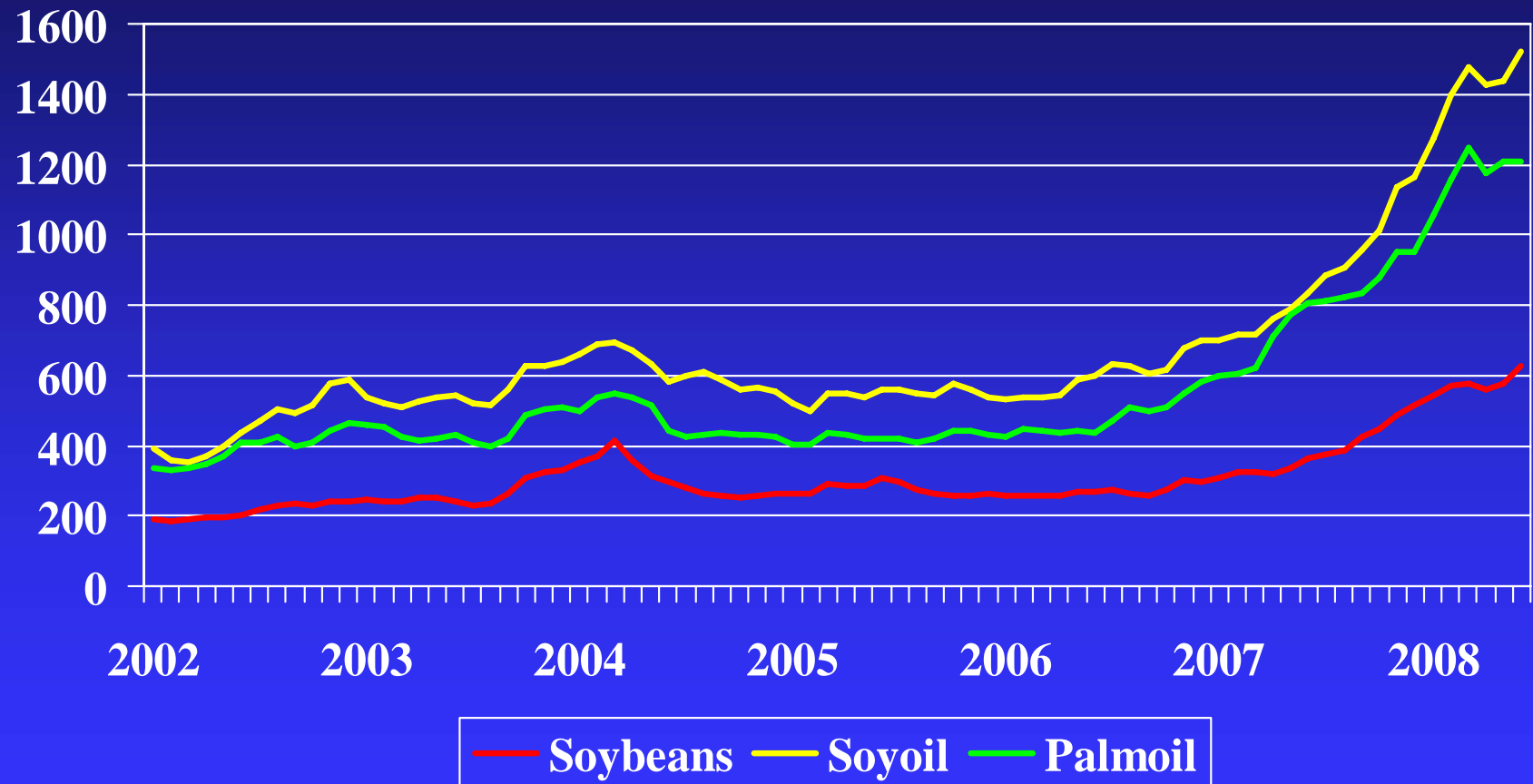
(weekly prices of Thai rice exports in US\$s)



Grain Prices (nominal \$/ton)



Oilseed Prices (nominal \$/ton)

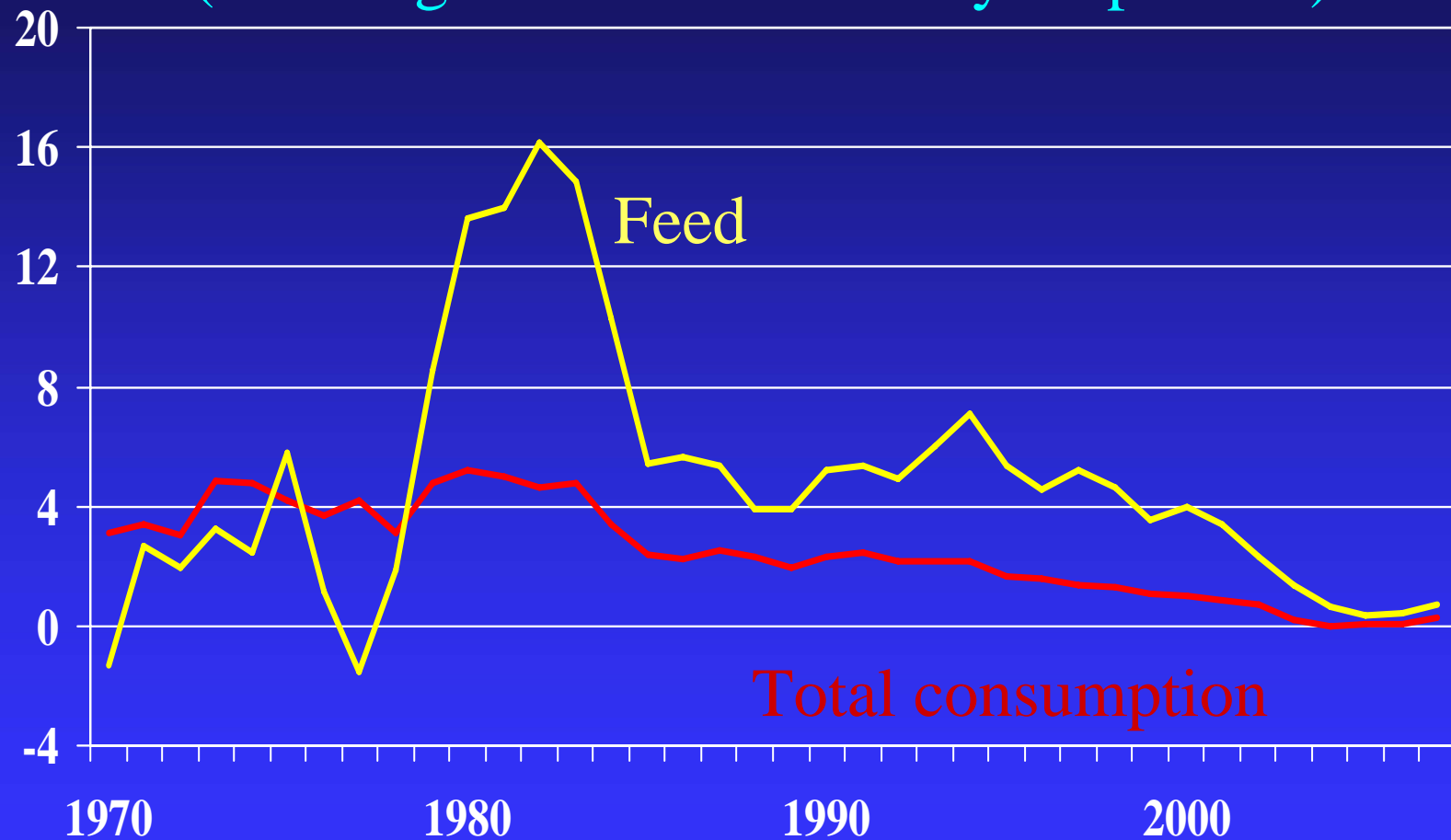


Demand for food and feed

- Global consumption of wheat and rice grew less than 1% per year from 2000-07
- Maize consumption grew 2.1% (excluding biofuels)
- Global grain feed use grew 1.3% from 2000-07
- Growth slowed from previous decade due to slowing population growth and low income elasticities

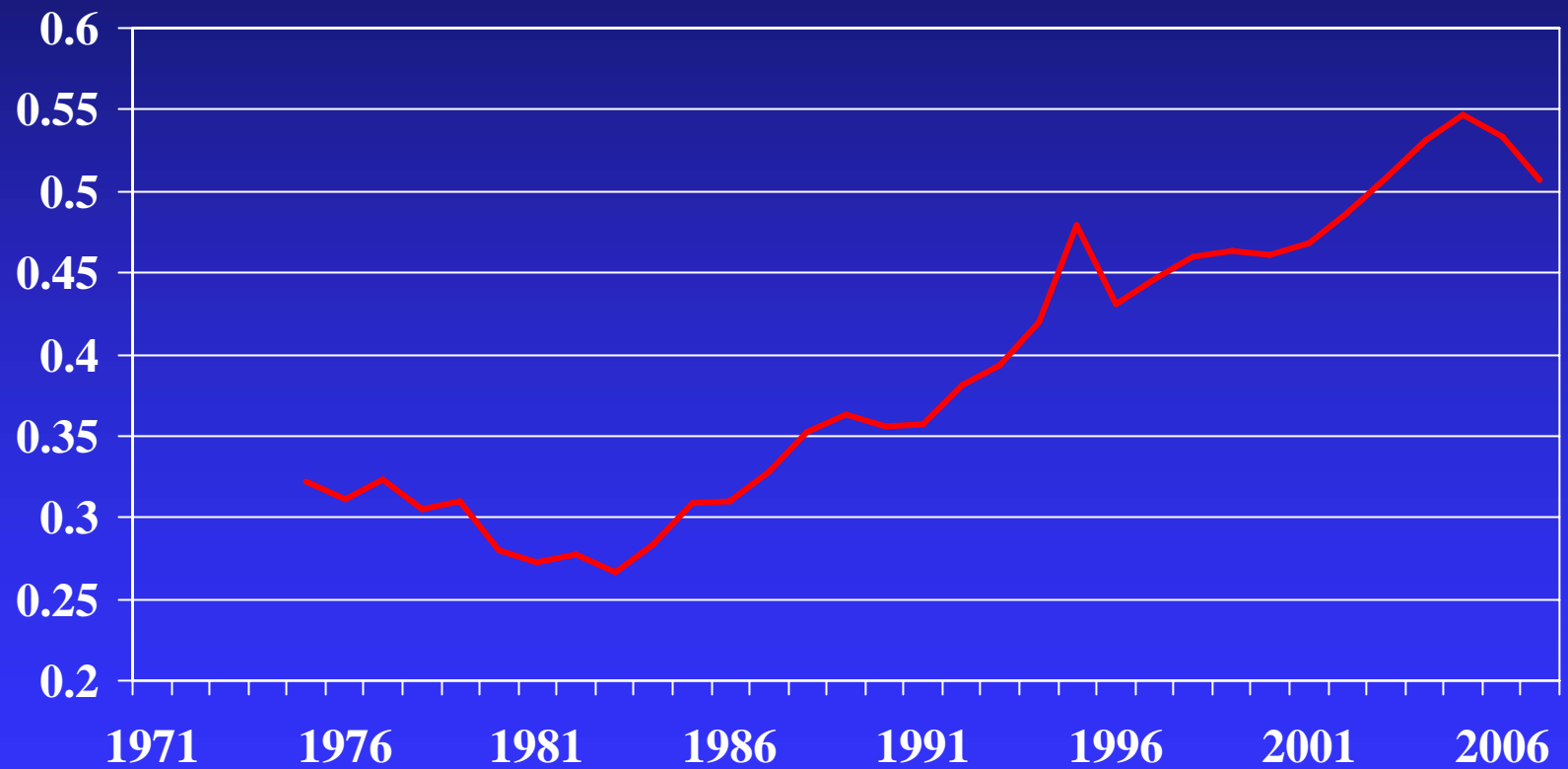
East Asia grain demand (w/China)

(annual growth rated over 5 year periods)



Feed efficiency in East Asia

(Meat produced per unit of grain fed)



Current crop situation

- Major grains and oilseeds areas are projected to increase 1.5% in 2008/09 (same as in 2007/08)
- Grains production is projected to increase 2.3% (wheat +8.5%, maize -0.8% and rice +0.7%)
- Oilseeds production is projected to increase 8.2% (soybeans +10.0%, rapeseed +8.2% and sunflowers +16.5%)
- Flooding in US not fully reflected

Prices to remain high

- Demand for biofuels will probably increase (new US Energy bill in 2007)
- Energy and fertilizer prices expected to remain high
- Surplus production capacity limited (CRP)
- Several countries have pasture land that can be cropped (Brazil, Eastern Europe)

Fertilizer

Primary use is for crop production

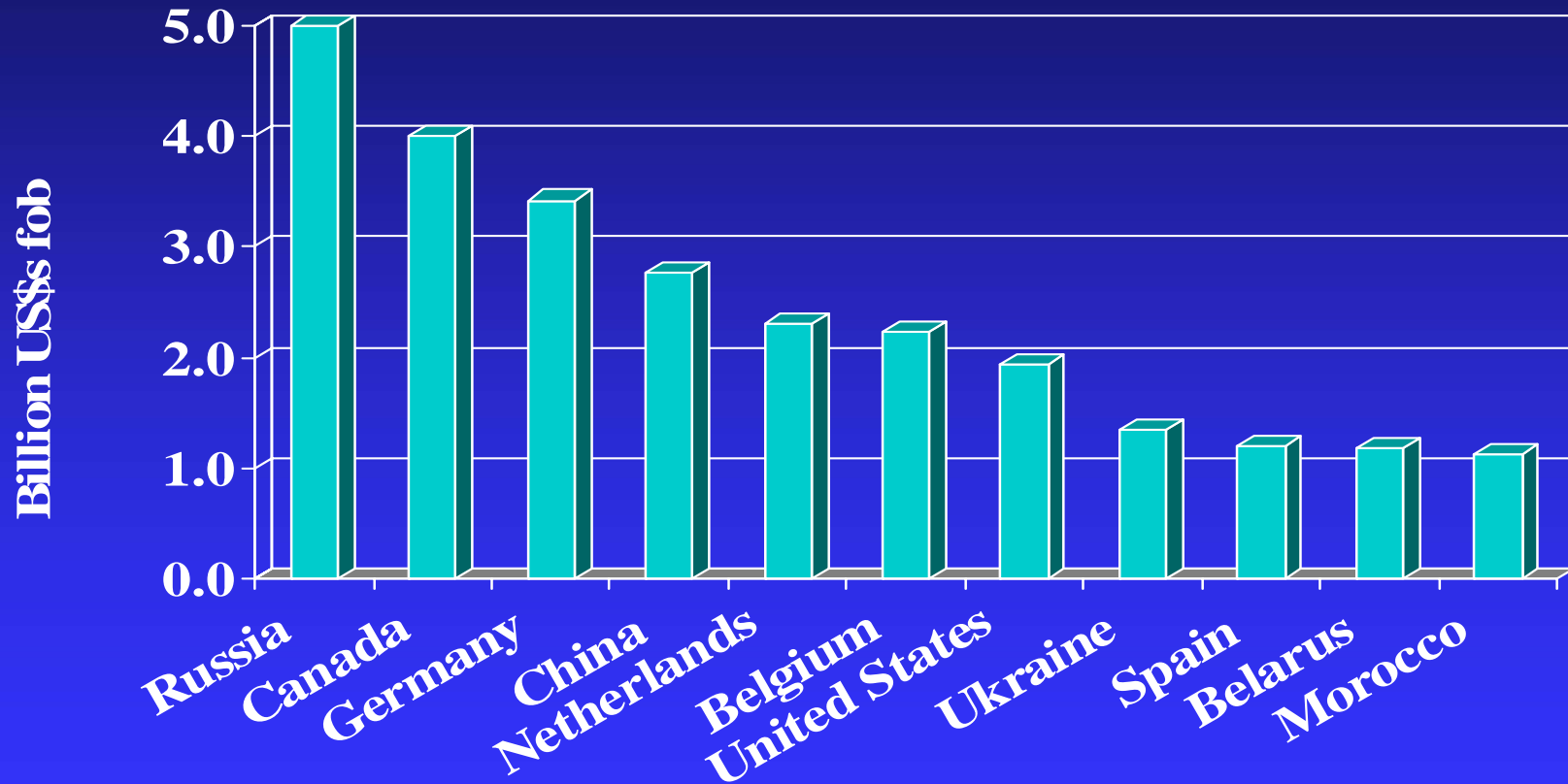
- 52% for grains (wheat, maize, rice, others)
- 15% for fruits and vegetables
- 11% for oilseeds
- 4% each for cotton and sugar
- 18% for all other

Global Fertilizer Consumption (mil tons of nutrients)

	Nitrogen	Phosphate	Potash	Total
2005/06	93.2	37.1	25.8	156.1
2006/07 _p	98.2	39.0	26.7	163.9
2007/08 _e	100.8	40.5	29.0	170.3
% change 2007 _{vs} 06	2.7	3.3	4.9	3.2

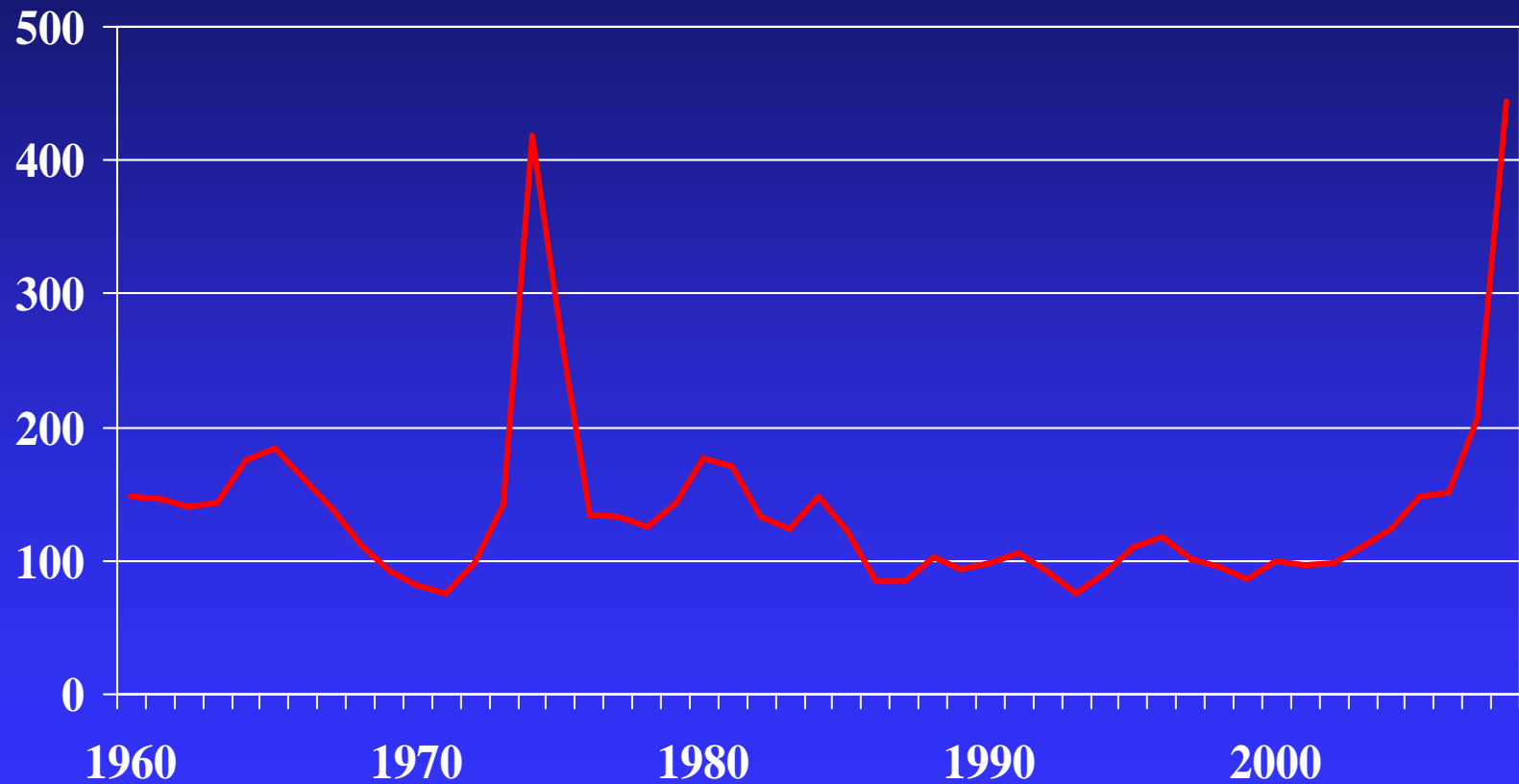
Source: International Fertilizer Association, www.fertilizer.org

Fertilizer Exports, 2006



Real Fertilizer Prices, 1960-2008*

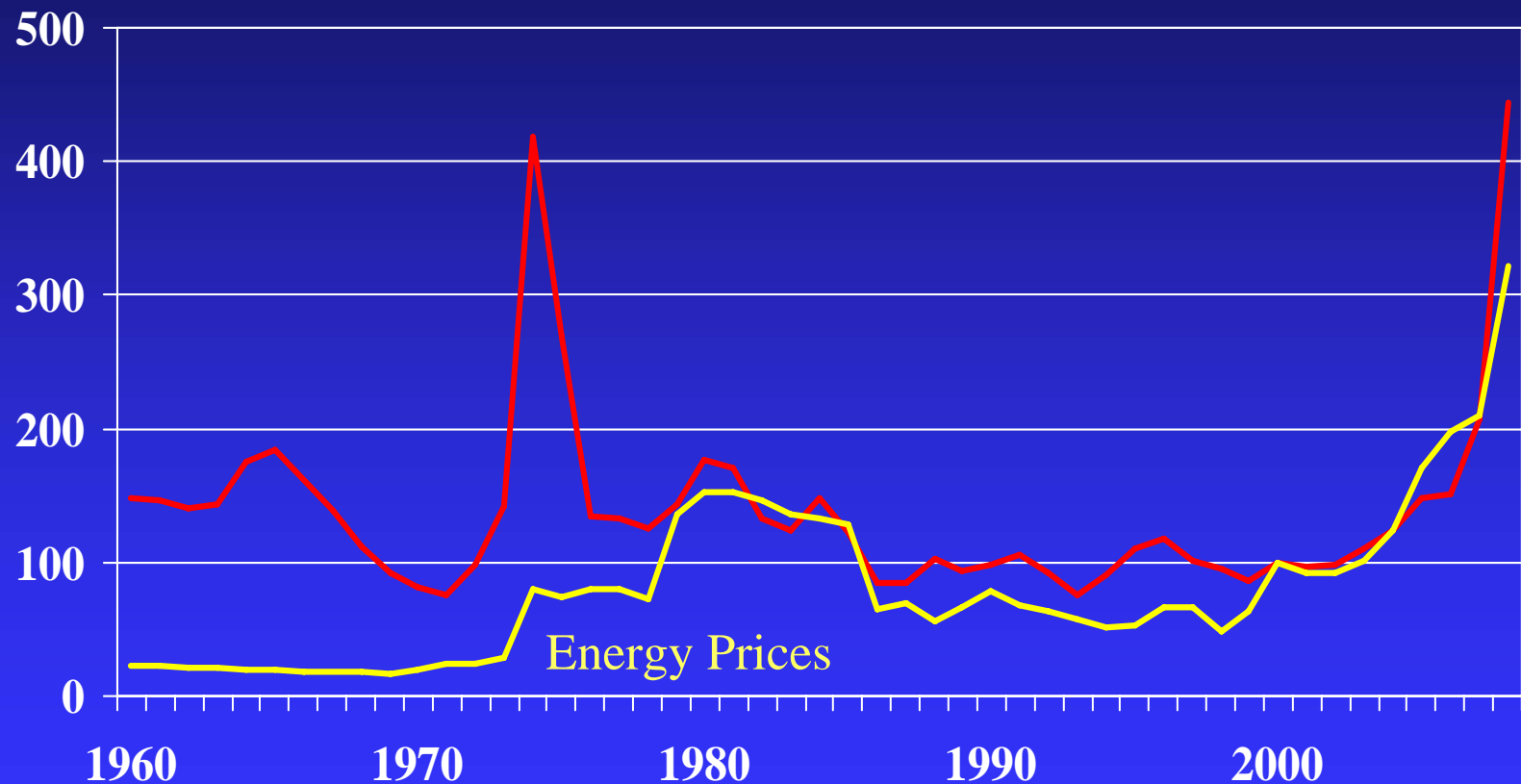
Index in constant 2000 \$s relative to MUV



* 2008 is January-June average

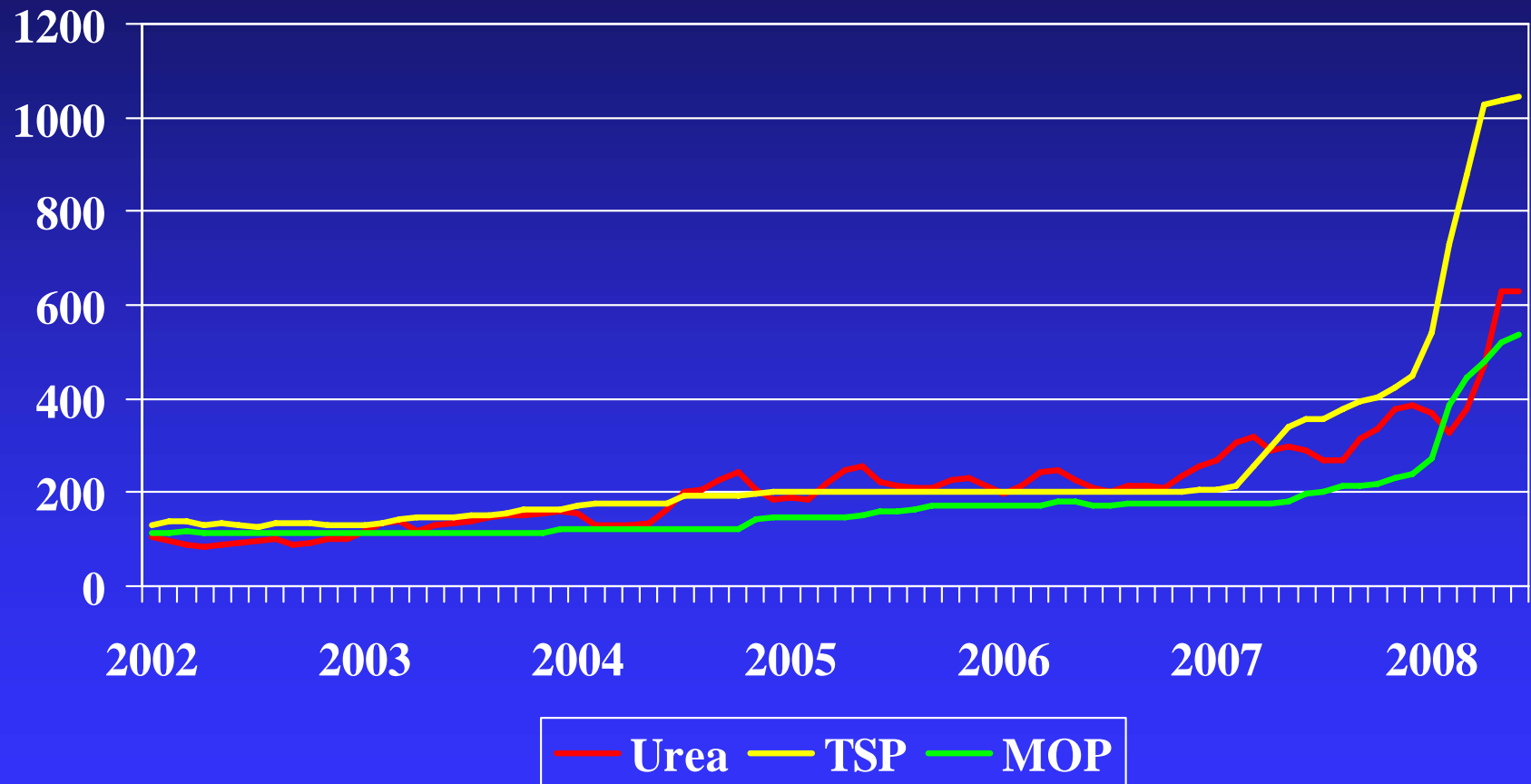
Real Fertilizer Prices, 1960-2008*

Index in constant 2000 \$s relative to MUV



* 2008 is January-June average

Fertilizer prices (nominal \$/ton)



Policy response

- China imposed a 100-135% export tax on all fertilizers in March to ensure adequate domestic supplies
- Contributed to a doubling of fertilizer prices in 2008

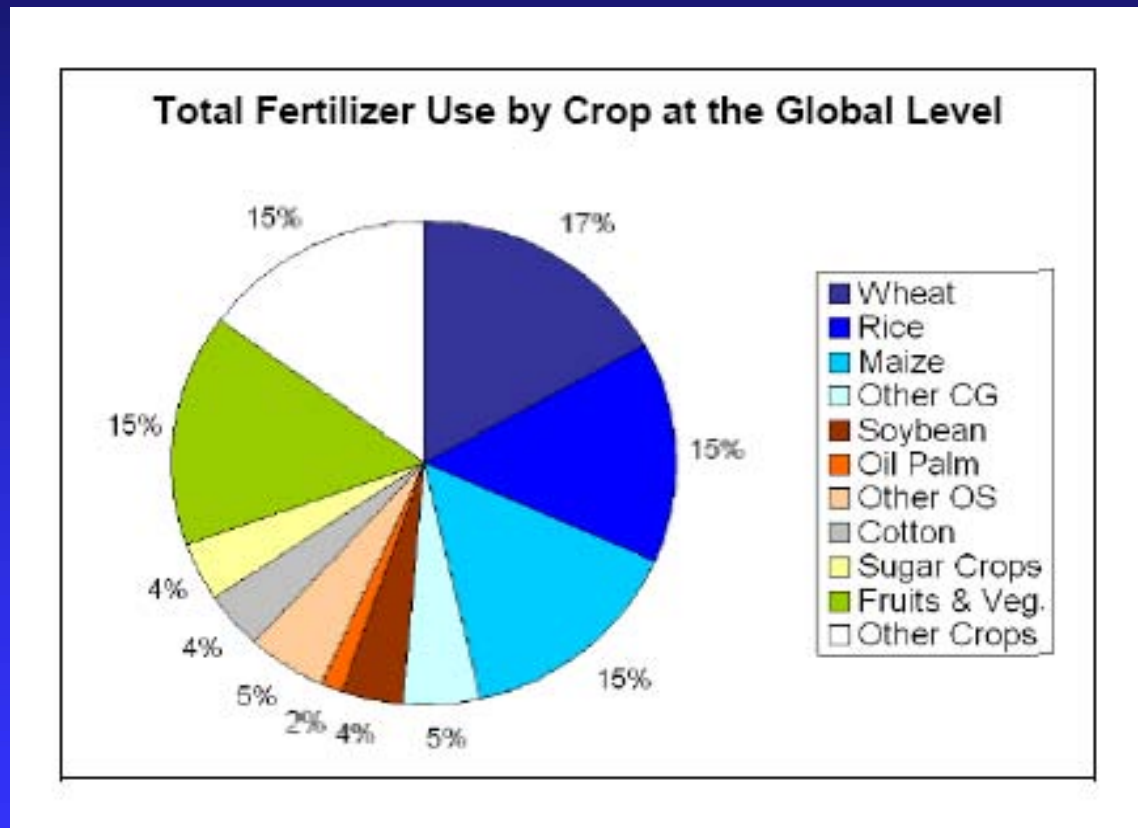
Outlook

- Fertilizer capacity is limited and taking and new capacity takes 3-7 years to build
- Fertilizer prices are tied to energy and crop prices
- Export restrictions by China are adding to price pressure
- Prices likely to stay high for an extended period

Conclusion

- Food and fertilizer prices closely linked to energy prices
- Biofuels policies (mandates and subsidies) are adding to food price increases
- Lower tariffs on ethanol in US and EU would reduce food prices somewhat
- Crop production will expand in Brazil, Eastern Europe and Africa

Fertilizer use by crop



Source: International Fertilizer Industry Association