

CONFIDENTIAL

Food Crisis: Causes & Consequences

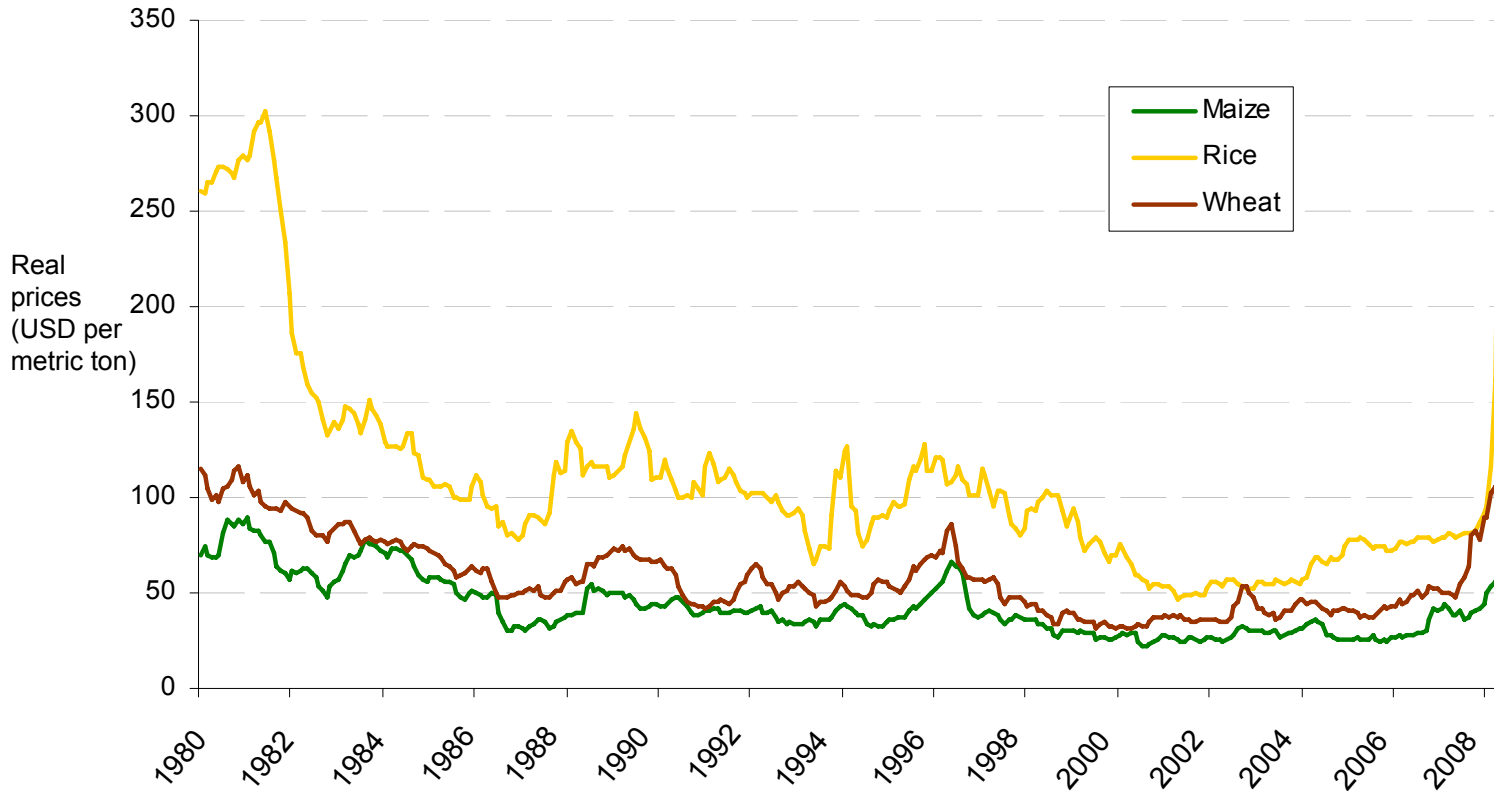
July 21, 2008

Recent data



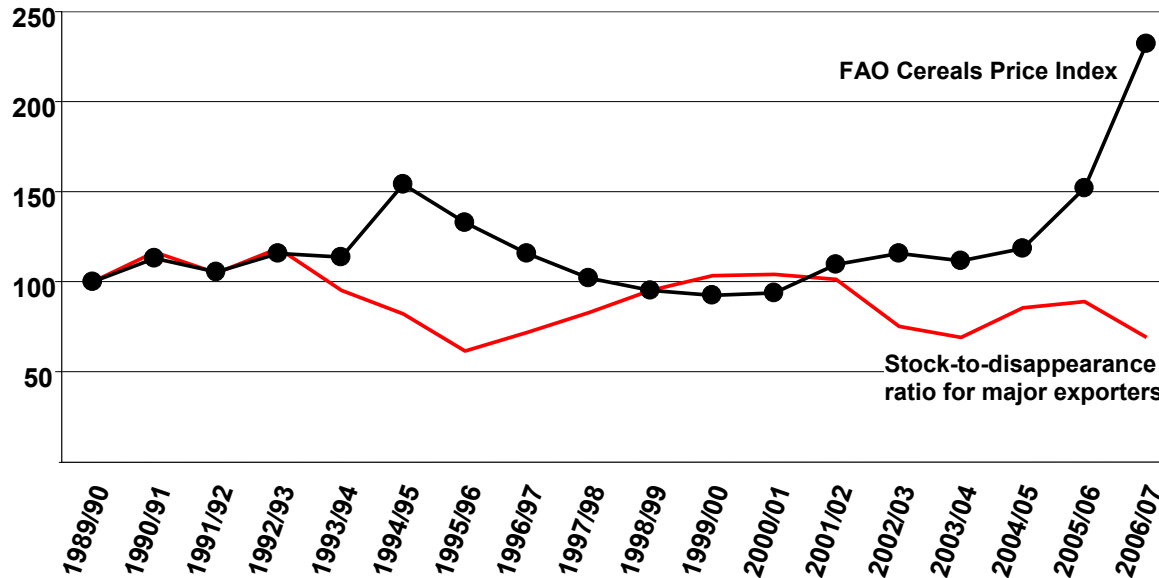
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Reversal in 40-year trend of declining cereal prices



The World Bank's index of food prices increased 140% from January 2002 to February 2008

Global cereal stocks have been declining since the mid 1990s



There has been a **3.4% per year average decline** in cereal stocks since 1995.

Stocks expected to decline a further 5% in 2008, reaching their **lowest levels in 25 years**.

Typically, cereal prices rise when the ratio between stocks and utilization decreases.

Total global cereal production:

2005: -3.6 percent

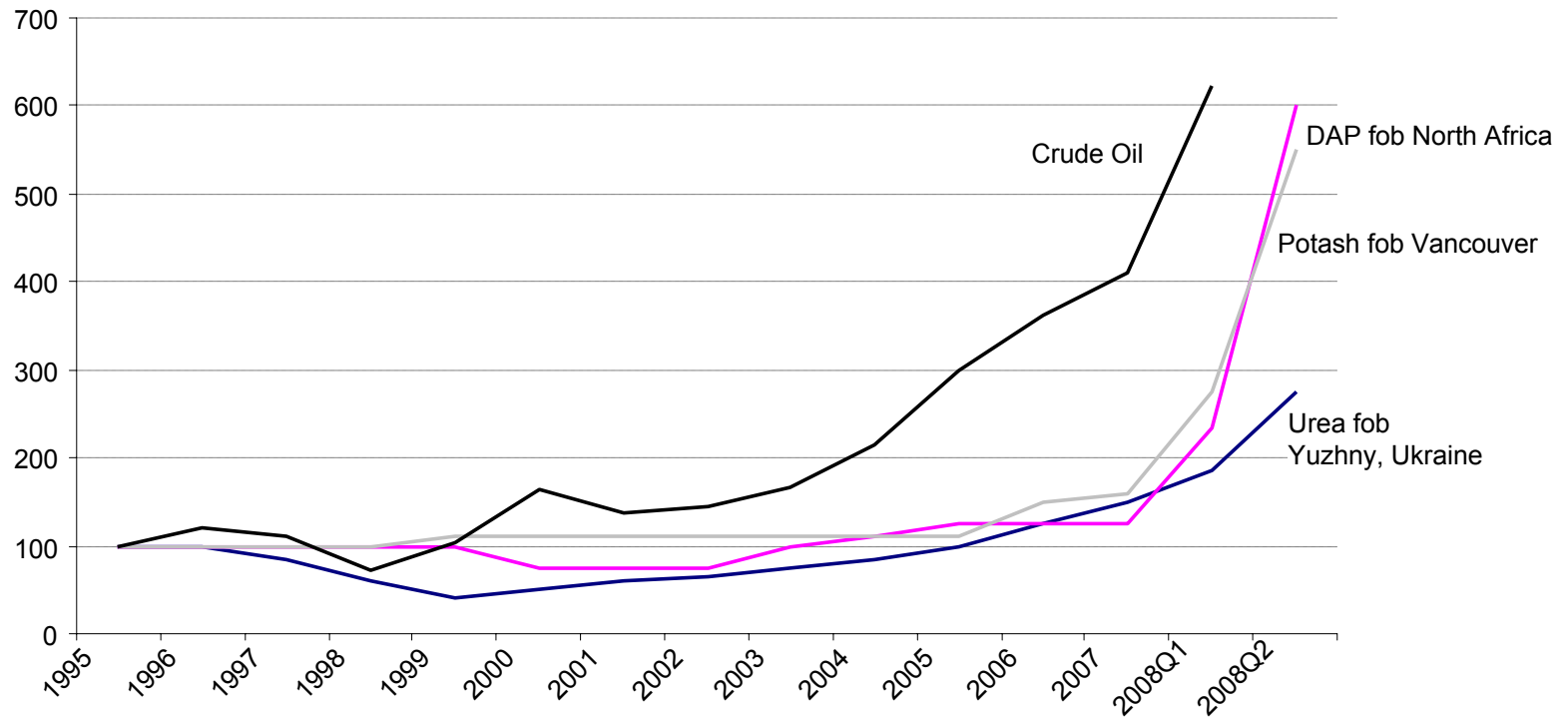
2006: -6.9 percent

2007: +4.7 percent

2008: +2.6 percent

Increase in oil prices leads to rising fertilizer and freight costs

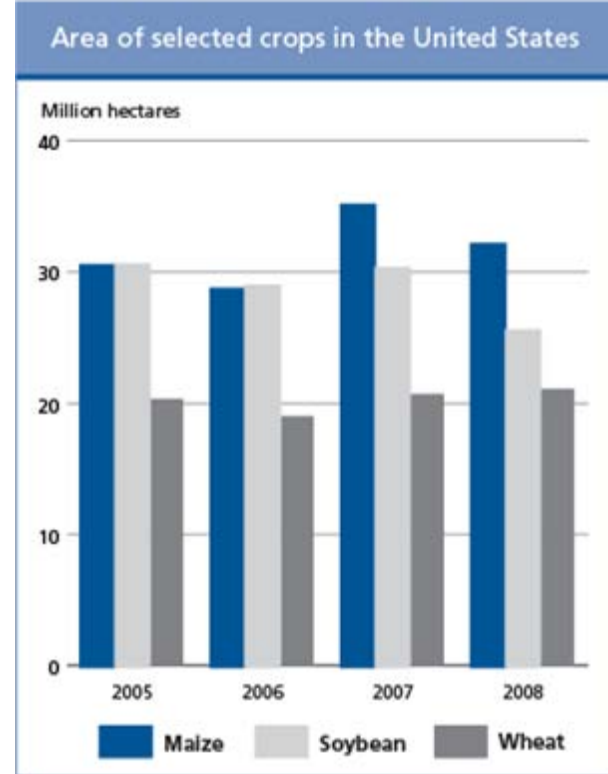
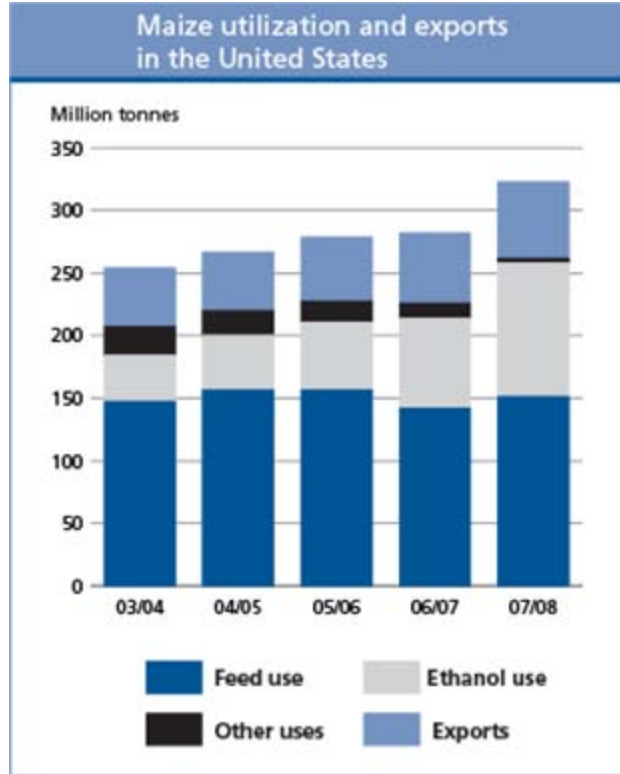
Index 1995=100, current US\$



Fertilizer prices in first quarter of 2008 were **160% higher** than prices in first quarter of 2007.

Freight rates doubled between February 2006 and February 2007, increasing the costs of transporting food and inputs.

Diversion of food grains to biofuels contributes to rising food prices



Rapid growth in US maize use for ethanol (mandatory quotas).

Increased ethanol demand for maize met by **increased overall production of maize**. (US maize production increased 40 MT between 2006 and 2007. Of that, 30 MT went to ethanol).

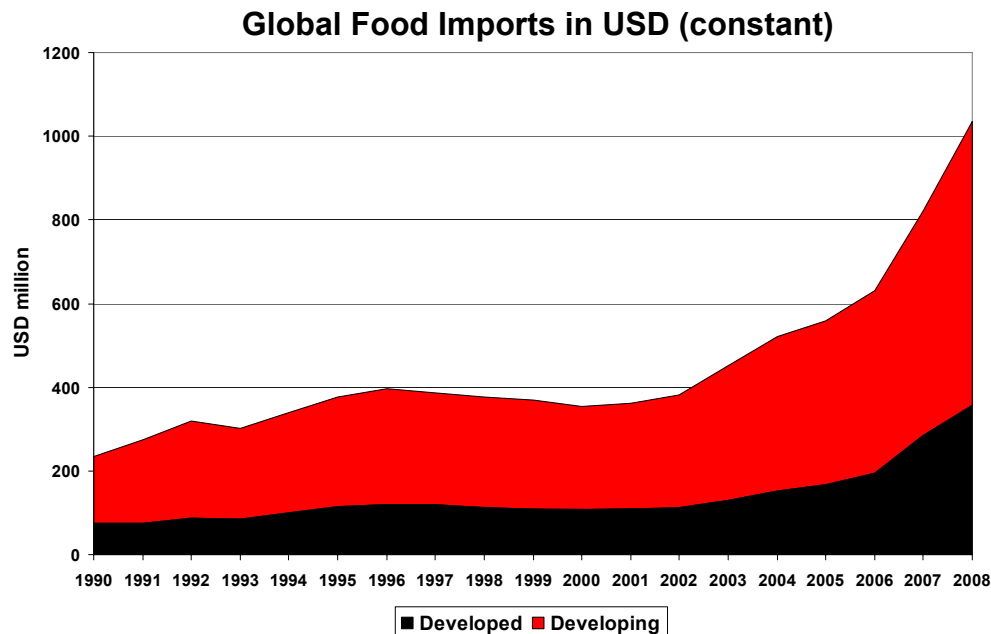
Substitution of land out of soybeans allowed for increase in maize production.

Higher food import bills for African governments

The global cost of imported foodstuffs in 2008 is forecast to reach **USD 1.0 trillion**, a 26% increase over last year's peak.

Low income food deficit countries face the highest impact:

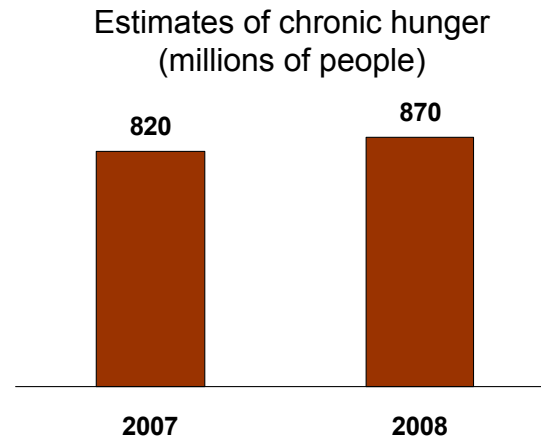
- In 2008, a total of 82 high risk countries are expected to spend nearly US\$ 169 billion on food imports, compared to US\$121 in 2007 (a 40% increase).
- By the end of 2008, the food import bills of high-risk countries could cost four times as much as 2000, a tremendous burden on these countries.



More people suffering from hunger

FAO estimates that as a result of high food prices, the number of **chronically hungry** people worldwide has **increased by 50 million in 2007 to reach an estimated 870 million.**

The World Bank estimates that **total world poverty may have increased by 73 to 105 million** people due to recent food price increases, with 30 million additional persons in Africa alone.



Most of those who have recently fallen into hunger are located in Sub-Saharan Africa and South Asia.

Poor households are the hardest hit

In both urban and rural areas, the poor suffer disproportionately from rising food prices.

Impacts include:

- Reduction in the number and diversity of meals consumed
- Depletion of household assets
- Reduced spending on essential non-food expenditures, such as health and education

Female-headed households suffer a larger proportional drop in welfare as a result of an increase in food prices relative to male-headed households.

Food Price Outlook: 2008 to 2017

The OECD-FAO Food Outlook (2008-2017) predicts:

- a sharp decline from current spike
- followed by 10 years of sustained high prices (relative to 2003 levels, in nominal terms)
- and a return to long-term declining trend in real food prices by 2017

	Long term projected price increase (2008-2017 projection vs 1998-2007 average, nominal prices)
Beef & Pork	+20%
Sugar	+30%
Wheat & Maize	+40-60%
Oilseeds & Vegetable Oils	+60-80%

Projected Supply Response

Higher food prices are expected to trigger a supply response in OECD countries and in commercial farming areas of developing countries.

- High response developing country areas (Argentina, Brazil, South Africa, and Kazakhstan) will account for 25 million additional tons of cereals in 2007/08.
- Record cereal harvests are expected in China, India, Indonesia, and Thailand. Area expansion in Asia is less feasible, growth arises from increased intensification and higher yields.

The least developed countries of the world (especially those in Sub-Saharan Africa) are not expected to exhibit a positive supply response.