From Food Crisis to Sustainable Food Security: Can we get there from here?

Per Pinstrup-Andersen

2009 Joint Area Centers Symposium
University of Illinois, March 4, 2009
Selected international cereal prices

Note: Prices are wholesale monthly; for December 2008, three-week average.
Export Prices for Rice

US$/tonne

- US 2/4%
- Thai 100%
- B
- Viet 5%
- Pak Irri-25%
- Thai A1 Super

Dates:
- Nov-07
- Jan-08
- Feb-08
- Mar-08
- Apr-08
- May-08
- Jun-08
- Jul-08
- Aug-08
- Sep-08
- Nov-08
### Percent Decrease in Price Between the Highest and January, 2009

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Highest Month</th>
<th>Decrease Since Then (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>March, 2008</td>
<td>51</td>
</tr>
<tr>
<td>Maize</td>
<td>June, 2008</td>
<td>46</td>
</tr>
<tr>
<td>Soybeans</td>
<td>July, 2008</td>
<td>41</td>
</tr>
<tr>
<td>Rice</td>
<td>May, 2008</td>
<td>60</td>
</tr>
</tbody>
</table>
Causes of Food Price Fluctuations

- Supply-side factors
- Demand-side factors
- Market factors
- Public policy factors
- Private sector action
Where Are the Food Insecure?

- Sub-Saharan Africa: 204 Million
- India: 221 Million
- Other Asia & Pacific: 156 Million
- China: 142 Million
- LAC: 53 Million
- NENA: 39 Million

Source: FAO 2004
Global Progress Towards Meeting the WFS Goal

![Graph showing the progress of meeting the WFS goal from 1991 to 2015. The graph shows the actual and expected values, with a significant reduction from 841 million in 1991 to 794 million in 2015. The expected value is represented by a green line, and the actual value by a red line. The difference between the two lines is highlighted, showing a decrease of 373 million over the period.]
Global Progress Towards Meeting the WFS Goal (Excluding China)

- Actual
- WFS Goal
- Extrapolated

- 1990-92: 624.1
- 1995-97: 630.4
- 2001-03: 672.9
- 2015: 727

312

415 Million
Food Security Consequences of the Global Food Crisis Depend on:

- Price Transmission
- Whether HH is net buyer or net seller
- HH food budget share
- Extent of value addition
- Relative price changes among diet components
- Intrahousehold decision-making process
- Length of run
- Are estimates of 75-100 million additional food insecure based on solid evidence?
Sustainable Food Security: Challenges

- Political issues
  - Lack of commitment in LDCs
  - Adverse perceptions of agriculture in DCs
- Increasing water scarcity
- Soil degradation
- Climate change
- Low productivity (water, land, labor)
- Poor rural infrastructure
- Poorly functioning markets
Sustainable Food Security: Challenges (Con’t)

- Rapid increase in market concentration
- Continued population growth
  - Increasing demand for staples
- Dietary transition
  - Increasing demand for high-value crops and livestock as well as feed
- Increasing demand for biofuel
- Closer link between food and oil prices.
Main Opportunities

- Attention of policy-makers to food crisis
- Application of modern science
- Expanding investment in public goods
- Internalizing environmental costs into private costs
- Improving policies and institutions
Suggested Priority 1

- Large-scale investments in rural infrastructure, domestic markets and Human Resources
  - Feeder roads
  - Appropriate institutions
    - Farmer associations
    - Public sector institutions (contract enforcement, weights and measures, etc.)
  - Market information
  - Water management infrastructure
  - Primary education and health care and improved sanitation
Suggested Priority 2

- A doubling of public investment in agricultural research and technology
  - Improved water management to enhance use efficiency
  - Increased sustainable land and labor productivity and reduced production risks
    - Biotic and abiotic stresses: drought tolerance, resistance to insects and diseases
    - Sustainable production methods
  - Mitigation of impact of climate change and adaptation to changes that will occur
Suggested Priority 3

- Enhanced policy incentives to the private sector to invest in sustainable agriculture
  - Savings and credit institutions for farmers
  - Risk management tools for farmers and traders (for market and production risks)
  - Public goods investments
  - Strengthen the purchasing power of small-holders
  - Establish competitive funds for technology development
  - Assure incentives for private sector innovation
Suggested Priority 4

- Full Costing
- Clarity on water and land tenure
- Pursue win-win-win solutions
The Modified Environmental Kuznets Curve

Deforestation/Soil Mining

- Knowledge
- Full Costing

Stage 1  Stage 2  Stage 3

Income