Agricultural productivity: introductory comments

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Tassos Haniotis
Director
Economic analysis, perspectives and evaluations
DG Agriculture and Rural Development
European Commission
Outline

1. Main drivers of world agriculture
2. Main drivers of EU agriculture
3. Why this topic?
"Insecurities" driving the current policy debate

Commodity price developments

- Price volatility
- Price co-movement
- Price level

Demand concerns

- Food chain "bottlenecks" in price transmission
- Structural changes in food, feed and non-food demand
- Poverty concerns and the impact of the economic crisis

Supply concerns

- Terms of trade
- Climate change
- Productivity
Long term commodity price trends

(World Bank MUV-deflated indices, 2005 = 100)

Source: World Bank
Cumulative price change

<table>
<thead>
<tr>
<th>Period</th>
<th>2000-12</th>
<th>2006-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector (real)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Agriculture</td>
<td>+ 82 %</td>
<td>+ 61 %</td>
</tr>
<tr>
<td>Fertilisers</td>
<td>+ 286 %</td>
<td>+ 115 %</td>
</tr>
<tr>
<td>Energy</td>
<td>+ 261 %</td>
<td>+ 55 %</td>
</tr>
<tr>
<td>Metals &amp; minerals</td>
<td>+ 217 %</td>
<td>+ 44 %</td>
</tr>
<tr>
<td><strong>Crops (nominal)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>+ 275 %</td>
<td>+ 163 %</td>
</tr>
<tr>
<td>Maize</td>
<td>+ 337 %</td>
<td>+ 245 %</td>
</tr>
<tr>
<td>Rice</td>
<td>+ 278 %</td>
<td>+ 185 %</td>
</tr>
<tr>
<td>Soybeans</td>
<td>+ 279 %</td>
<td>+ 220 %</td>
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</tbody>
</table>
Long term energy price trends

(World Bank nominal prices)

Long term natural gas price trends

(World Bank nominal prices, $/mmbtu)

4. World: annual growth in consumption/population (%)

- **Grains**
  - 1961-1972
  - 1973-1984
  - 1985-1996
  - 1997-2008
  - 2009-2012*

- **Vegetable oils**
  - 1961-1972
  - 1973-1984
  - 1985-1996
  - 1997-2008
  - 2009-2012*

- **Meat**
  - 1961-1972
  - 1973-1984
  - 1985-1996
  - 1997-2008
  - 2009-2012*

- **Milk**
  - 1973-1984
  - 1985-1996
  - 1997-2008
  - 2009-2012*

* Based on estimations for 2011-2012. Size of bubbles represents total average consumption over a period. Sources: FAO, USDA
5. World Grain demand: annual growth rates (%)

* Based on estimations for 2011-2012. Size of bubbles represents total average consumption over a period. Sources: FAO, USDA
6. World Meat demand: annual growth rates (%)

* Based on estimations for 2011-2012. Size of bubbles represents total average consumption over a period. Sources: FAO, USDA
Agricultural* employment is still declining, but at a lower rate

Source: Eurostat, National Accounts

* Branch A of NACE R2: agriculture, forestry and fishing; employment in number of persons

Source: Eurostat, National Accounts
The number of farms in the EU continues to decrease ...

Source: Eurostat, Farm Structure Survey
... while the agricultural area has stayed stable

EU-27: -0.05%/year

Source: Eurostat, Farm Structure Survey
Farms that remain are bigger in both ha UAA/farm...

Source: Eurostat, Farm Structure Survey
... and in economic terms (Standard Output/farm)

![Graph showing Standard Output (EUR)/farm for EU-27, EU-15, and EU-N12 from 2005 to 2010 with EU-27 showing an annual increase of +5.8%.]

Source: Eurostat, Farm Structure Survey
In countries most affected by the debt crisis, people try to hold on to their farms.
Labour use in agriculture is declining ...

Source: Eurostat, Farm Structure Survey
... but labour productivity has increased significantly

Source: Eurostat, Farm Structure Survey
Annual TFP in the EU – 3 year moving average
A higher TFP growth in the EU-12...
...mainly driven by an increase in labour productivity
...but also an increase in yields...

Cereals

Milk
...and a decrease in capital productivity in the EU-15

2005 = avg(2003/04/05)
Thanks for your attention!

http://ec.europa.eu/agriculture/index_en.htm
http://ec.europa.eu/agriculture/analysis/index_en.htm