PNG Update

International Food Price Rises and Food Security in PNG

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International rice trends in rice and wheat

**RICE:**
• increased by 50% between 2001 and 2008;
• increased by 12% between 1996 and 2008.

**WHEAT:**
• increased by 60% between 2001 and 2008;
• increased by 30% between 1995 and 2008;

From 1998 to 2007, PNG imported:

150,000 t/yr of rice*  
130,000 t/yr of wheat

* In 1997, during the ENSO induced food shortages, rice imports were 207,690 tonnes
Source of calories in PNG diets

Rural population

Urban population

Rural people comprise about 85% of the total population.
Food consumption in rural and urban areas 1996
(kg/person/yr)

(Food categories greater than 10 kg/person/yr)

Imported food has a nutritional importance in rural areas

Before the introduction of the cash economy, the nutritional status of PNG populations was “vulnerable”. Many people had low intakes of energy and protein, and as a consequence infant, child and maternal mortality was high, and adult stature small.

Daily intake of nutrients as a proportion of minimum daily requirements (%), 1947

<table>
<thead>
<tr>
<th>Place</th>
<th>Calories %</th>
<th>Protein %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salamaua</td>
<td>67</td>
<td>34</td>
</tr>
<tr>
<td>Markham</td>
<td>88</td>
<td>47</td>
</tr>
<tr>
<td>Wau</td>
<td>102</td>
<td>46</td>
</tr>
<tr>
<td>Trobriands</td>
<td>82</td>
<td>82</td>
</tr>
</tbody>
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It has happened before: previous food price rises 1997-98

The collapse in the value of the kina in from around 1993 resulted in a 200% increase in the PNG price of imported foods by 2002.
Fall in value of kina increased the price of imported foods
What did these price rises do to consumption of imported food?

Since around 1990, per annum per capita consumption of imported food has fallen or remained steady.

Figure 2.7.3 Average per person wheat imports and growth trends by decade, 1961–2005

- 1961–1970 annual growth rate 12.8%
- 1971–1980 annual growth rate 3.5%
- 1981–1990 annual growth rate 5.7%
- 1991–2000 annual growth rate 0.9%
- 2001–2005 annual growth rate 2.9%
Rural food in urban markets

About 4,000 tonnes of sweet potato is shipped annually from the highlands to Port Moresby. This trade alone is worth K2–5 million per year.

• Rural food replaces imports and is cheaper.

• Fresh food sales redistribute money from urban to rural areas – fresh food sales provide income to the greatest number of rural people.

The major constraints to urban marketing are poor transport infrastructure, lack of middlemen, lack of proper facilities, lack of working capital, poor information, law and order problems.
Increases in the price of imported food results in increases to the price of the domestically produced staple.

Price of sweet potato in urban markets – Port Moresby and Madang, 1970-2005

Highlands suppliers were able to use roads to meet the demand in Madang, but not in Port Moresby, which is not connected by road to the highlands.
Sweet potato supply in the highlands also influences the price in Port Moresby

Volume of sweet potato shipped from Lae to Port Moresby and price of sweet potato in Port Moresby markets, 1996-1998

Source: FPDC
Should PNG grow its own rice?

• Every National Agricultural Plan and Food Security Plan since Independence has contained proposals to replace imported rice with domestically produced rice.

• Import replacement of rice or wheat by domestic production of rice and wheat will be very difficult and probably unwise.

• Rice grown in PNG is presently less than 0.1% of imported rice. No wheat is produced in PNG other than experimental plantings.

• To replace present rice imports would require about 73,000 ha of good quality, flat, irrigable land.

• It would incur very high capital costs of irrigation infrastructure, processing plants, storage facilities, agro-chemicals and fertilizers, all imported, using a weak currency, in the face of steeply rising costs of fuel and fertilizer.
Can rural areas meet the increased demand for food in urban areas?
Source of most sweet potato sold in Port Moresby, Lae and Madang
Good quality land is in short supply in PNG
Can local technologies meet the urban demand for more food?

Composted mounds in Enga

Drained swamps at Tari
Domestic food production is not problem free all of the time but sweet potato has no critical pests and diseases, yet.

Invest in agricultural research on the staple foods, \textit{not} on import replacement of rice and wheat.
Population growth is a greater long term threat to food security in PNG than rises in world food prices.

Population growth rate 1966 to 2000:
2.4% to 2.6% per year

Doubling time 30 years

Population growth is a greater long term threat to food security in PNG than rises in world food prices.
HIV/AIDS

• 2006 modeling for PNG finds possible 11% infection rates in 15-49 year old age group by 2025.

• PNG population growth will slow, but not become negative.

• In Zimbabwe – 37%-61% decline in food production with death of head of household.

• In Malawi, increase of over 120% in production of cassava with sick or dead head of household.

• Household vulnerability associated with substitutability of labour, land and capital resources; and flexibility in sequencing agricultural labour.
The End