



Safety Security : Food Water

Feeding Future Generations

The world has enough food to feed everyone yet many poor people are malnourished. Siwa Msangi of the International Food Policy Research Institute explains what is going wrong and how the world could feed a future population of nine billion people.



Siwa Msangi, International Food Policy Research Institute

"There has to be some land expansion but there has to be a greater emphasis on productivity improvements and increasing yields from existing farming land."

The world population keeps on growing. Can we feed nine billion people?

There is now enough food to satisfy everyone on a per capita basis but problems like failed markets, poor distribution, and inadequate storage are preventing food getting to the people that need it most. A lot of hungry countries are net importers of food and are now facing high prices. The future depends on whether we have improvements in agricultural productivity and access to food markets.

I am wary of the Malthusian argument that the best way to feed people is to have less of them. Technology is a better way to improve food supplies. Technology increases agricultural productivity and income. Wealthier people don't rely on subsistence agriculture and they have fewer children to feed. Ultimately, food security improves.

Is food security increasing around the world?

Food security has been increasing quite quickly in East Asia. Vietnam has improved tremendously and become a major food exporter. In South Asia we see the highest numbers of hungry people but those numbers are falling faster than in sub-Saharan Africa where a greater proportion of the population lives with food insecurity. In Latin America the trends are improving although places like Bolivia, Honduras, and Haiti have a high percentage of undernourished people.

Food security is threatened by high food prices, driven by a booming global economy. Will food prices go down in a recession?

People are definitely going to adjust their consumption because their income will be less. They will probably eat less meat, which would mean less food-price pressures. A reduced meat diet reduces the water and grain resources used to supply that meat. To the extent that rich people's consumption is driving up food prices, that effect will be dampened.

But a general economic downturn will start affecting the poor because rents and other payments won't fall as fast as income and they will have to eat less. Poor urban residents depend on the food marketing system more than their rural counterparts, and are therefore more vulnerable to sudden price rise. They tend to be the ones we see taking to the streets.

Urbanization Gallery



So we still need more food. Where can we grow it?

There are relatively few regions that can expand their land area for agriculture: Latin America to some extent, and sub-Saharan Africa and Central Asia a little bit. But any land expansion threatens ecosystems and has a carbon cost. There has to be some land expansion but there has to be a greater emphasis on productivity improvements and increasing yields from existing farming land.

For example, because so much sub-Saharan agriculture is rainfall fed, the only way to increase food production is to increase land area. That is not sustainable, and that is why new seed technologies for Africa are being tested through traditional breeding programs and transgenic crops.

Are transgenic or genetically modified (GM) foods the answer to world hunger?

We have to reassess attitudes to GMOs (genetically modified organisms). They could counteract the effects of land degradation. We need salt-tolerant and drought-tolerant crops to maintain the yields we are at now, let alone to achieve the higher yields we want. Other efforts are focused on improving the iron, vitamin A, or beta-carotene content of crops, especially for people who rely on staple foods. Countries need to consider this bio-fortification as a way to improve nutrient intake.

Should farms be bigger in order to increase their efficiency?

Bigger farms are more efficient and get higher productivity per worker. The transformation from small to large farms happens as people get drawn away from agriculture by better wages in urban

areas. That has happened in China and Southeast Asia and will happen in India. Then you will have consolidation of small farm holdings into larger farms. Agriculture then becomes more capital intensive, less labor intensive and more productive.

Related Articles

[Global Food Security: On the Table in Davos](#)

[Hungry for Change: Why the World Is Worried about Food Again](#)

What other kinds of investments could improve food security?

Roads are good investments. Improving roads not only improves food availability but also lowers the transportation costs that producers face. Better seed technologies, as mentioned, are important.

Irrigation is also crucial. Countries dependent on rainfall-fed agriculture often have unstable supplies of food. Africa is under-irrigated while irrigation was a major driver in the Green Revolution in Asia. With irrigation has to come drainage to avoid salinity problems.

Improved storage and distribution are critical. Farmers are less likely to invest in improving output if their crops rot before they get to market. There has been less emphasis on storing adequate reserves of food, partly because of liberalization of food markets and pressure to adopt a just-in-time approach to managing food stocks.

Finally, agricultural trading reform has to be addressed. The protectionist policies of OECD countries have discouraged investment in agriculture in the developing world. Now, while farmers in OECD countries are well placed to capitalize on high food prices, poorer countries can't respond, which is prolonging the food crisis.

editor: James Tulloch

publishing date: October 14, 2008

Comments

[See all comments \(0\)](#)

[Post comment](#)

© Allianz 2007, All Rights Reserved