

# Role of Trade Liberalization in a Sustainable Global Food System

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World Food Demand  
to Double by 2050  
with  
Larger Fraction Moving  
Through World Trade

# Projected Population Growth

(U.N. medium projections)

• <u>Region</u>	<u>2005</u>	<u>2050</u>	
• World	6,465	9,076	+ 40%
• High Income	1,211	1,236	+ 2%
• Low Income	5,253	7,840	+ 49%
• Africa	906	1,937	+114%
• Asia	3,905	5,217	+ 33%
• Latin America	561	783	+ 40%
• North America	331	438	+ 32%
• Europe	728	653	- 10%

# Dynamics of Food Demand

- 1.25 billion people live on less than \$1/day (70% rural), of whom 840 million suffer undernutrition.
- By \$2 per day, most hunger (calorie) problem is solved
- Between \$2 and \$9 per day people eat more animal protein, fruits, vegetables & edible oils, causing rapid growth in raw ag commodity demand
- After \$10 per day, people buy more processing, services, packaging, variety, and luxury forms, but not more raw ag commodities

# More than Half of the World's Population Lives on <\$2/day

Sub-Saharan Africa	75%
South-Central Asia	75%
China	47%
North Africa	29%
Latin America & Caribbean	26%
Eastern Europe	14%
The World	53%

Source: World Bank [World Development Indicators 2005](#)

# Markets of the Past Are Shrinking

- Most high income countries' food demand shrinking
  - Declining populations
    - Europe's population projected to fall by 10% by 2050
    - Japan's population projected to fall by 22% by 2050
    - Russia's population projected to fall by 24% by 2050
  - Aging populations (Older people eat less.)
  - High income consumers don't eat more when their incomes rise further.
- Exception: United States' population is projected to grow 42% by 2050.

# Projected World Food Demand

- World food demand could double by 2050
  - 50% increase from world population growth (3 billion) – all in developing countries
  - 50% increase possible if low income countries achieve broad-based economic growth
- How many presently low income consumers are lifted out of poverty will be *the most important* determinant of the future size of world food and agricultural product demand.
- The ability of low income countries to export the products in which they have a comparative advantage will constrain their ability to reduce poverty.

# Doubling Agricultural Production in 50 Years: The Challenge

# 90% of World's Land Surface Not Suited for Agriculture

- 40% too dry
- 21% too wet
- 21% too cold
- 6% too rough terrain
- 2% unsuitable soils

# The Land Constraint

- There is at most 10% more arable land available that isn't presently forested or subject to erosion or desertification – and degradation of many soils continues.
- Keen competition is coming for available land among food, fiber and energy production, commercial forest production and conservation of forests.

# Growing Demands on Forests

- The same forces of population and income growth that increase demand for food also increase demand for things made out of wood, e.g. paper, furniture, building materials; poles.
- In rich countries, growing demand for environmental amenities and preservation of (especially old-growth) forested areas.
- And now we're trying to solve the energy problem in agriculture, too.

# The Only Sustainable Way Ahead

- The area of land in world food production could be doubled...
- But only by massive destruction of forests and loss of wildlife habitat, biodiversity and carbon sequestration capacity
- The only environmentally sustainable alternative is to double productivity on the fertile, non-erodible soils already in crop production.

# Water A Growing Constraint

- Farmers use 70% of the fresh water used in the world. They are both the largest users and the largest wasters of water.
- Water is priced at zero to most farmers, signaling that it is much more abundant than in reality. Anything priced at zero will be wasted.
- With rapid urbanization, cities are likely to outbid agriculture for available water.
- The world's farmers need to double food production using less water than today.

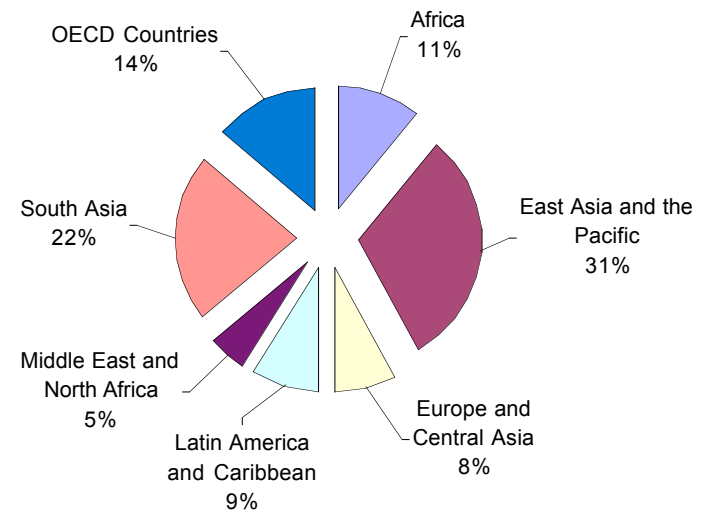
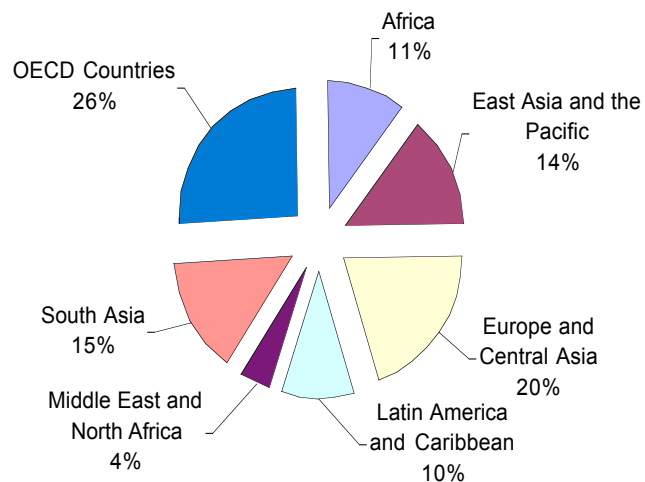
# Need Larger Research Investments

- Since Malthus, prophets of doom have argued population growth will increase food demand faster than agricultural production can grow
- Public and private sector investments in agricultural research have increased productivity faster than demand growth, with resulting 150 year downward trend in real price of grains
- Need to double world food production by 2050 using less water and little more land than today
- Future world market price trends will depend on whether research increases land and water productivity faster than world demand grows

# Larger Fraction of World Food Production to Move Through Trade

- The world's arable land and fresh water are not distributed around in the world in the same proportions as is population.
- With population growth, urbanization and broad-based economic development, expect many LDCs' food consumption to outstrip their production capacity.

# The World's Arable Land (left) Is Distributed Very Differently than Its Population (right)



# World Agriculture in Disarray\*

- Most high income countries subsidize their agriculture, distorting relative returns to producing various outputs and inducing larger total investment in agriculture relative to other sectors.
- Many LDCs' food policies turn the terms of trade against agriculture to keep urban food prices low, reducing the incentive to invest; agriculture underperforms relative to its potential.
- Protectionist import policies and export subsidies further distort what is produced where.

\*to paraphrase D. Gale Johnson's book World Agriculture in Disarray

# OECD Producer Support Estimates (2004, Percent of Gross Farm Receipts)

Switzerland	68
Japan	56
European Union	33
Canada	21
United States	18
Mexico	17
Australia	4
New Zealand	3
30 Countries Overall	30

Source: OECD Agriculture Directorate

# Average Producer Support in OECD Countries, 2004, % of Gross Receipts

Rice	75
Sugar	58
Milk	36
Beef & Veal	34
Wheat	33
Corn	31
Oilseeds	27
Pork	21
Overall	30

Source: OECD Agriculture Directorate

# Ag Policies Alter Production Decisions and Concentrate Wealth

- Distort domestic terms of trade in favor of politically powerful commodities/groups
- Subsidies tied to output of specific commodities stimulate larger production in less efficient locations
- This may adversely affect the environment.
- Subsidies justified on basis of low farm income but distributed in proportion to sales are ultimately bid into land prices, benefiting large farmers & land-owners.

# OECD Policies Depress Commodity Prices Below Long Term Trend

Rice	33 - 50 %
Sugar	20 – 40 %
Dairy Products	20 – 40 %
Cotton	10 – 20 %
Peanuts	10 – 20 %

Source: World Bank. Global Economic Prospects 2003, Chap. 2.

# Global Trading Environment Impedes LDC Poverty Reduction

- OECD protectionist barriers to LDC goods reduce their foreign exchange earning capacity & economic growth.
- Food aid is most available in years of OECD surplus, not LDC deficit.
- Depressed world market prices reduce returns to poor farmers, increasing their poverty, and slowing agricultural and national economic growth.
- Widespread poverty in LDCs impedes growth in their food demand, preventing them from fulfilling their potential as growth markets for ag.

# Developing Countries' Own Policies Impede Their Development

- Corruption and/or macroeconomic instability
- Lack of definition or enforcement of property rights and contract sanctity
- Underinvestment in public goods, such as rural infrastructure, education and R&D.
- Cheap food policies to keep urban consumers quiescent – often reinforced by food aid or subsidized exports from OECD
- Lack of technology adapted to local agro-ecological conditions (soils, climate; slope)

# Ag Trade Liberalization

# Why Trade?

- Increase standard of living by obtaining goods that others can produce at lower cost in exchange for things we can produce relatively cheaper
  - By lowering the cost of living, makes a household's purchasing power stretch further
  - Increases a country's GNP by employing its land, labor & capital where they are most productive

# Uruguay Round Agreement on Agriculture: Accomplishments

- Increased market access as % of consumption
- Reduced export subsidies (value & volume)
- Converted all non-tariff barriers to tariffs
- Required scientific basis for all SPS barriers
- Acknowledged that some domestic agricultural subsidies can distort trade and categorized them by degree of trade distortion:
  - “Green box” = non trade distorting investments in public goods and decoupled income transfers
  - “Amber box” = trade-distorting (bound and reduced)
  - “Blue box” = trade-distorting, but offset by production controls or set-asides

# But the Uruguay Round Did Little to Liberalize Agricultural Trade

- Uruguay Round established a useful framework
- But, it did little to open markets, and OECD countries are still spending over \$750 million per day subsidizing their farmers
- Doha Round needs to be more ambitious than the Uruguay Round by closing loopholes and tightening disciplines to prevent circumvention of the intent of the agreement.

# What Is Possible in Doha Round of WTO Ag Trade Negotiations?

- Eliminate all forms of ag export subsidies
- Reduce trade-distorting domestic subsidies (highest the most, but exceptions possible)
- Reduce tariffs (highest the most, but exceptions allowed if increase minimum market access)
- Tighten definition of what subsidies are “non-trade distorting”
- Allow developing countries smaller cuts over longer period

# We Need This to be a Successful Development Round

- Persistent poverty can have adverse geopolitical effects.
- Developing countries are the only potential growth market for agricultural exporters, but that will be realized only if they can also export products in which they have a comparative advantage.
- Developing countries are now the majority of WTO members; there will be no agreement until they perceive something of value to them in it.
- It is the “right thing to do.”

# What Developing Countries Need from High Income Countries

- Market access for goods in which they have a comparative advantage
- Eliminate import barriers and domestic and export subsidies that depress world market prices and increase their variance
- Foreign aid and lending for investment in necessary infrastructure, technology, education, health and to help adjust
- Foreign direct investment

# WTO Ag Negotiations Hung Up on Who Moves First

- U.S. has proposed reducing its ag subsidies substantially, but only if other countries provide much greater access to their markets.
- The EU is proceeding with its reforms, including sugar, while the US reversed course in the 2002 farm Bill
- Developing countries won't open their markets as long as world market prices are depressed by ag subsidies in OECD countries (and they have more than half of the votes in the WTO)
- Despite deadlines set in Hong Kong, negligible progress has occurred in WTO ag negotiations, and the clock is running out.

# Remember

- The Uruguay Round Agreement on Agriculture will continue to set the rules of the road for international agricultural trade until some future round of negotiations changes them.
- If this round fails or is delayed, expect more cases to be filed with WTO against U.S. commodity programs. (No Peace Clause)
- The U.S. risks losing marketing loans, LDPs and CCPs through litigation and get nothing for giving them up. If we give them up in the round, we get something for giving them up.
- The round is not so much about reducing farm subsidies as it is about moving them from trade-distorting to non-trade-distorting mechanisms.