

THE AGROFUELS TRANSITION

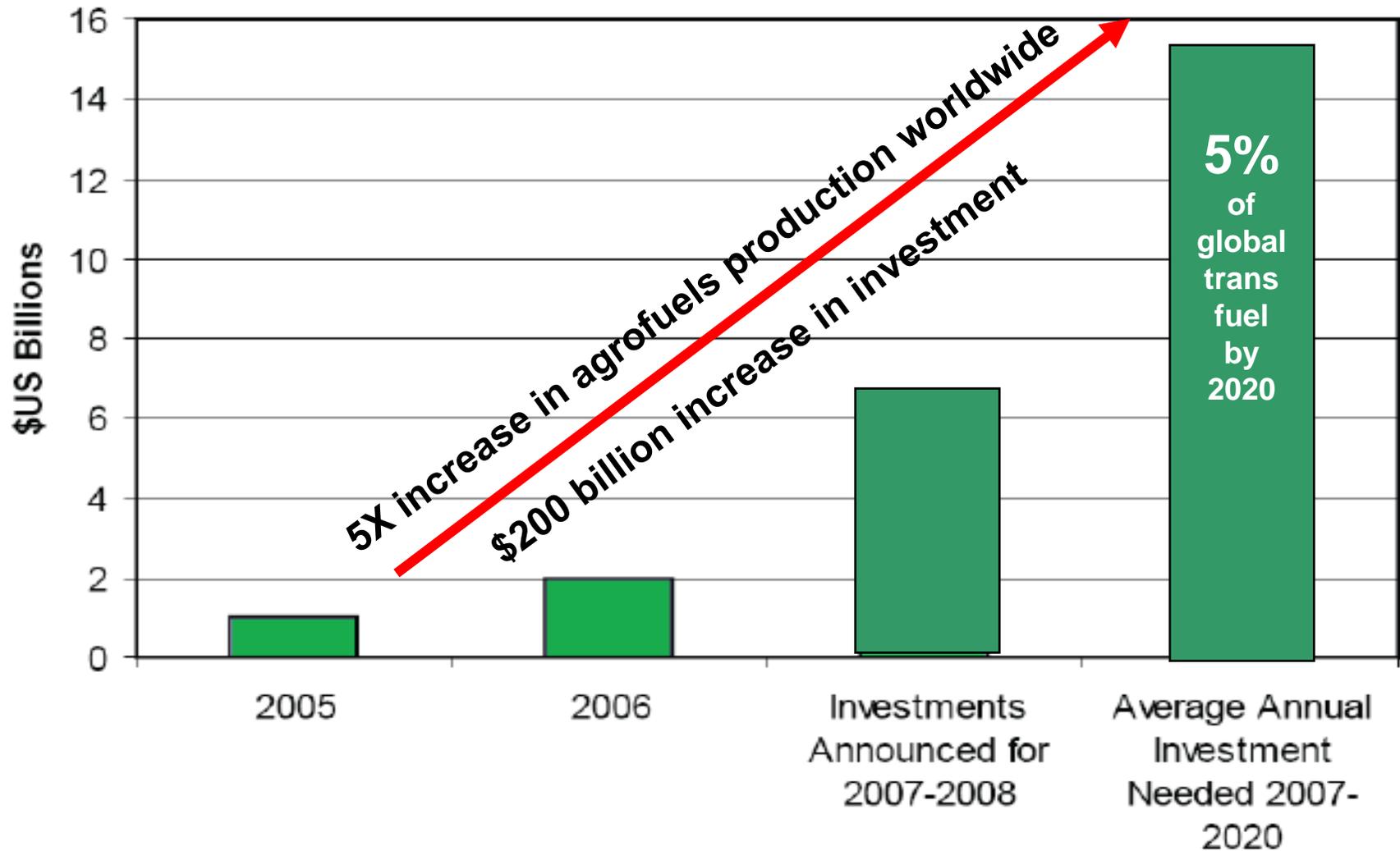
**Industrial
Transformation
of our Food
and Fuel
Systems**

**Eric Holt-Gimenez, Ph.D.,
Food First, 2008**



The Green Gold Rush

Chart 1b: Annual Global Biofuels Investment



Source: Compiled from Ren21 and Garten Rothkopf calculations From IADB, 2007

Unleashing Investment

Northern Renewable Fuel Targets

- **US: 36 billion gallons a year by 2022**

- 5X current mandated level
- 16 billion gal. ethanol = $\frac{1}{2}$ the nation's corn crop
- 21 billion gal. from “advanced” fuels

- **EU: 5.75 % by 2010
10% by 2020.**

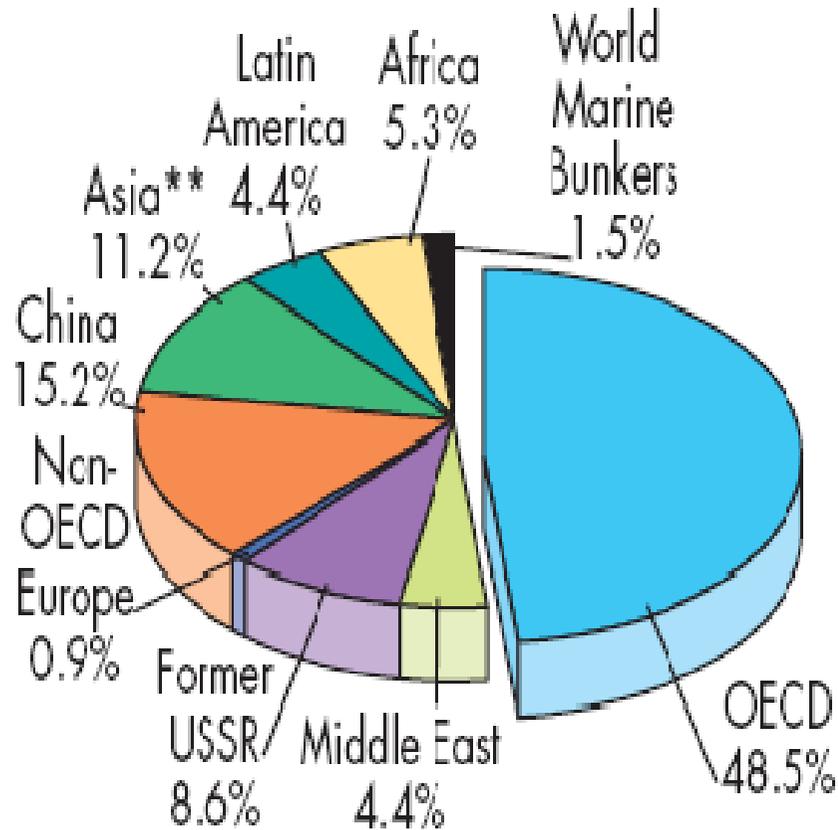
- Planting all US's cornfields to ethanol offsets only 12%--16% of gasoline consumption

- Europe would need to plant 70% of its farmland to fuel crops

Global South to produce North's fuel

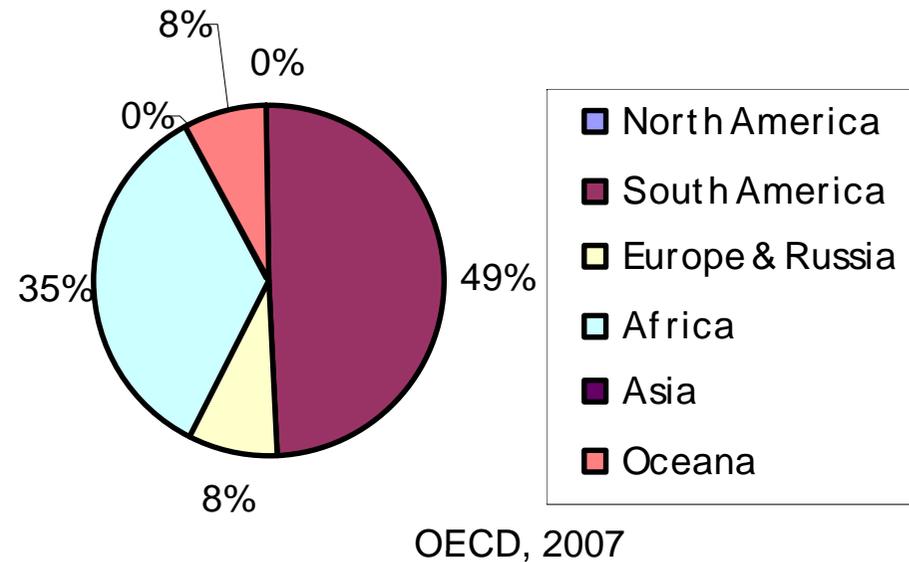
Total Energy Shares

2005



11 435 Mtoe

Additional Land Available for Agrofuels

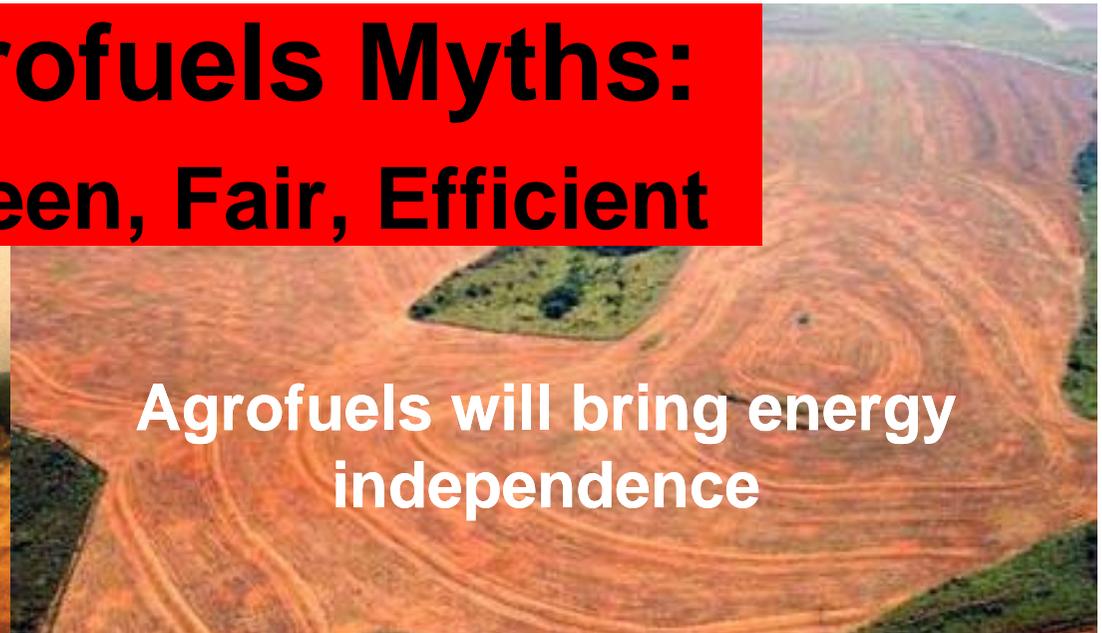


The Agrofuels Myths: Clean, Green, Fair, Efficient

**Agrofuels
mitigate climate change**



**Agrofuels will bring energy
independence**



**Agrofuels will not cause
environmental degradation**



**Agrofuels will bring
rural development...
not cause hunger**



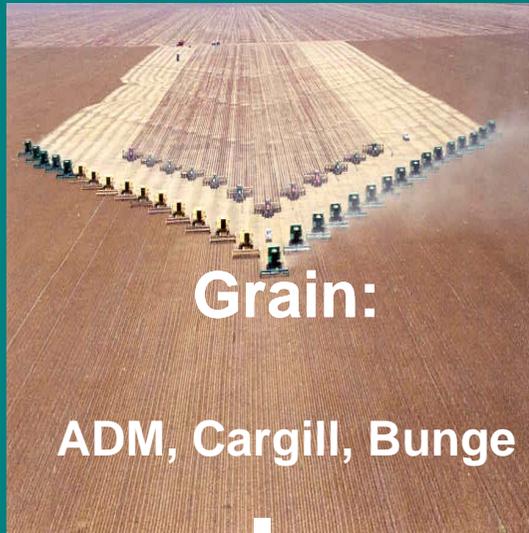
**2nd Generation Agrofuels
are on the way**

The Grand Mythology



We can consume our way
out of over-consumption

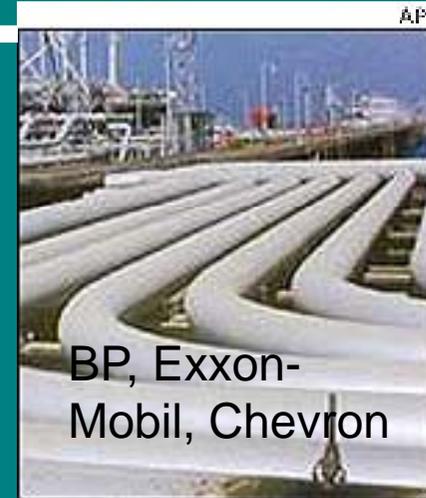
Unregulated Consolidation of Food & Fuel Systems



Agrofuels



Petroleum



Genetic Engineering

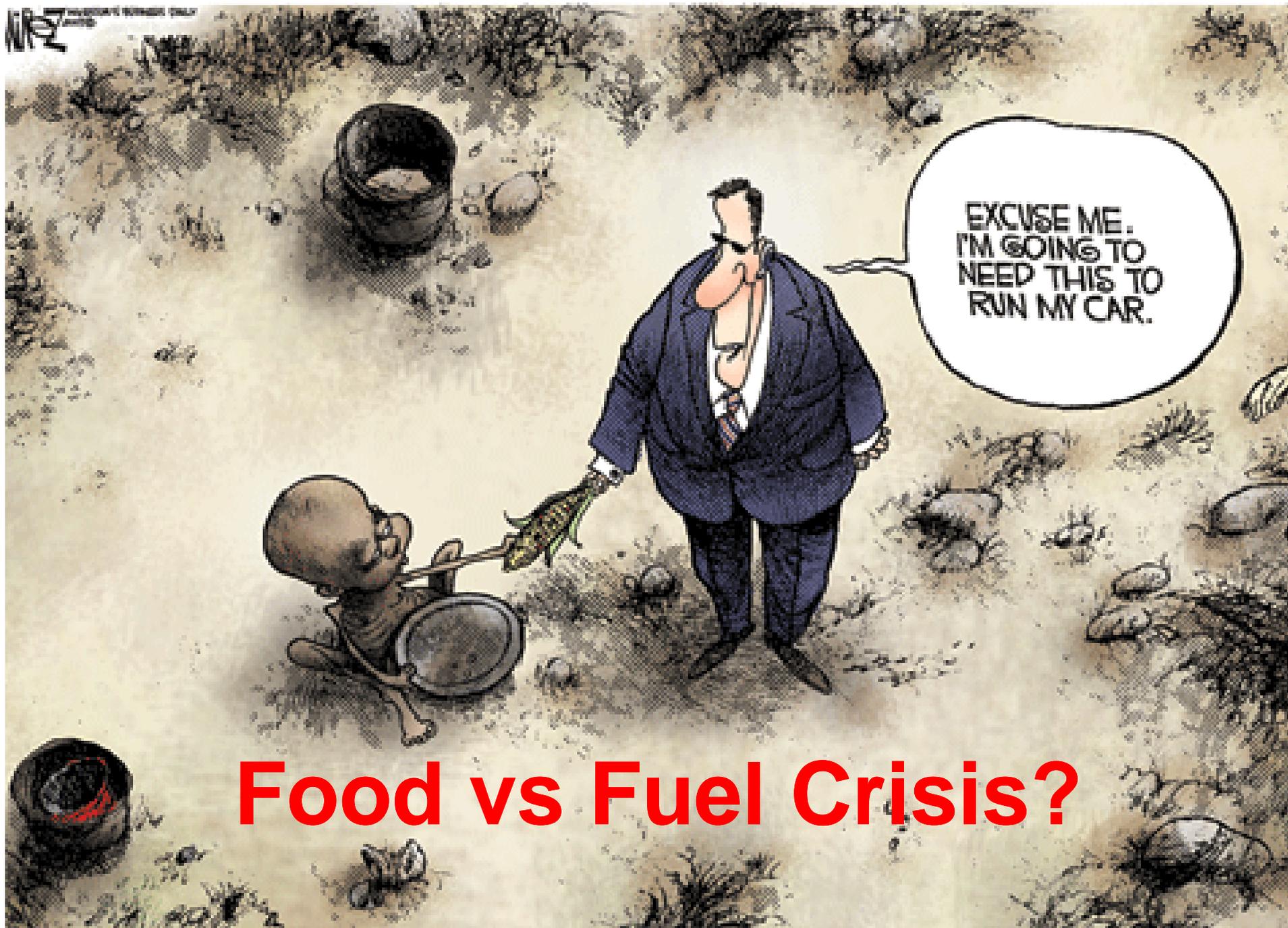


Automobile



Toyota, Volkswagen

Cellulosic:
Chevron-Weyerhaeuser;
BP-DuPont



Food vs Fuel Crisis?

Food Rebellions

- **Mexico, Italy, Morocco, Mauritania, Senegal, Indonesia, Burkina Faso, Cameroon, Yemen, Egypt, Haiti, Somalia.**
- **Over 100 people killed**
- **Not lack of food, but high prices**
- **high prices + poverty + entitlement gap + lack of democracy**

Food Price Inflation

- Prices up 83% in the past three years—
- 45% in past nine months
- 100 million more poor people at risk
- Food price index up 9% ('06); 23% ('07)
- 2007-08
 - wheat up 130%
 - rice up 66%
 - maize up 38%

Record Harvests = Record Profits = Record Hunger

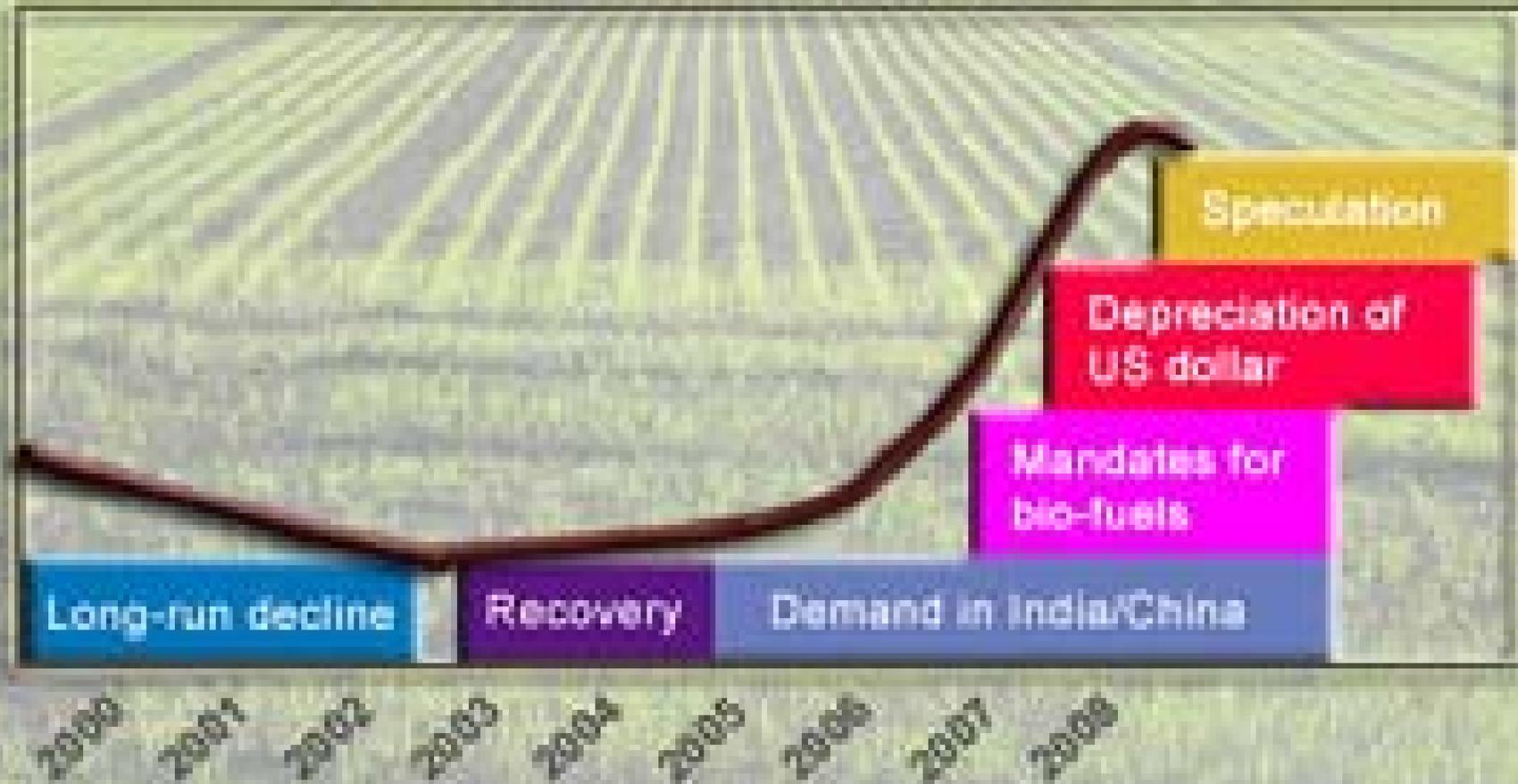
- **2007-08 +5%; highest corn crops in history**
- **Profits: ADM 20%; Monsanto 45%, Cargill 86%; General Foods 61%**
- **950 million people hungry**
- **2025: 1.2 billion people will go hungry (2X)**

Proximate causes

- Climate; droughts
- Rising meat consumption
- 5% fall in cereal production 2005-06
- Low grain reserves (<54 days)
- Higher oil prices: 2X transport, 3X fertilizer costs
- Agrofuels: 10 billion gal in US; 5% world's cereals: accounts for ½ of rise in demand maize over last 3 years

Figure 1

Demand Factors Contributing to Food Price Formation Since 2000



Root Causes

- **Vulnerable food system:**
 - 91% cropland cotton, maize, wheat, rice & soy
 - Economic shock
 - Environmental shock
- **Industrial Agri-foods Complex**
 - Grain traders/processors
 - Seed & genetic engineering
 - Retail & distributors

Rise of the Industrial Agri-foods Complex

- **Green Revolution 1960-80s**
- **Structural Adjustment Policies 1980s-90s**
 - removal tariff barriers
 - dismantling of marketing boards, reserves
 - non-food export crops
- **Free Trade “mania” 1990s-present**
 - WTO, FTAs
 - Subsidies, Surplus, Dumping
 - De-regulation

Results?

- **Global South Food 1970-2001 :**
 - **\$ 1 billion surplus—\$ 11 billion deficit**
- **62% Agro Exports concentrated in countries with 15% population**
- **Industrial Agriculture: 20% GHG; 80% water; 2,500 kms**
- **Loss of 75-90% crop diversity**
- **Increase food per capita = increase hungry = 11%**
- **Cost of 20 years Trade liberalization sub-Saharan Africa = US\$272 billion = amount that the region received in aid**
- **Immigration: 1.3 million Mexican smallholders bankrupt (1994-2004)**
- **GR: \$10.2 billion/yr U.S. corn and soy production**
- **ADM, Cargill, Bunge 80% grain; Monsanto 1/5 seeds**
- **Food surplus (1.5X food needed)**

Crisis of Accumulation

Globalization's economic growth rates are dismal:

1960s--3.5%;
1970s--2.4%;
1980s--1.4%;
1990s--1.1%;
2000s--<1%

The World Commission
on the Social Dimensions
of Globalization, 2004 in
Harvey, 2007



But the concentration of wealth is dramatic:

<u>Wealth (\$)</u>	<u>Number</u>
Millionaires	14 million
Billionaires	500 million

- Half the world — nearly three billion people — live on less than two dollars a day
- Top 1/5 of humanity controls 4/5 of the wealth
- 51 percent of the world's 100 hundred wealthiest bodies are corporations.

World Institute for Development Economics Research
of the United Nations University, 2006

Market Solutions, New Deals & Green Revolutions

- Privatization & de-regulation
- Speculation
 - Sub-prime mortgage crisis
 - Grain commodities
- Transformation of surplus
 - “Public works” (Global infrastructure & War)
 - Extractive Industries (Gold, water, lumber, etc.)
 - Cheap grain into expensive feed & agrofuel
- New Green Revolution: New markets
 - Seeds, inputs, land

Agrofuels: A keystone commodity for Industry's next Agrarian Transition

Transfer of agrarian surplus to industry

- Privatization of land, water, seeds
- Cheap & coerced labor
- Sale of agricultural inputs

- Agrofuels... food now “competes” with fuel
- Advances deregulation and global free trade

The Agrofuels Transition

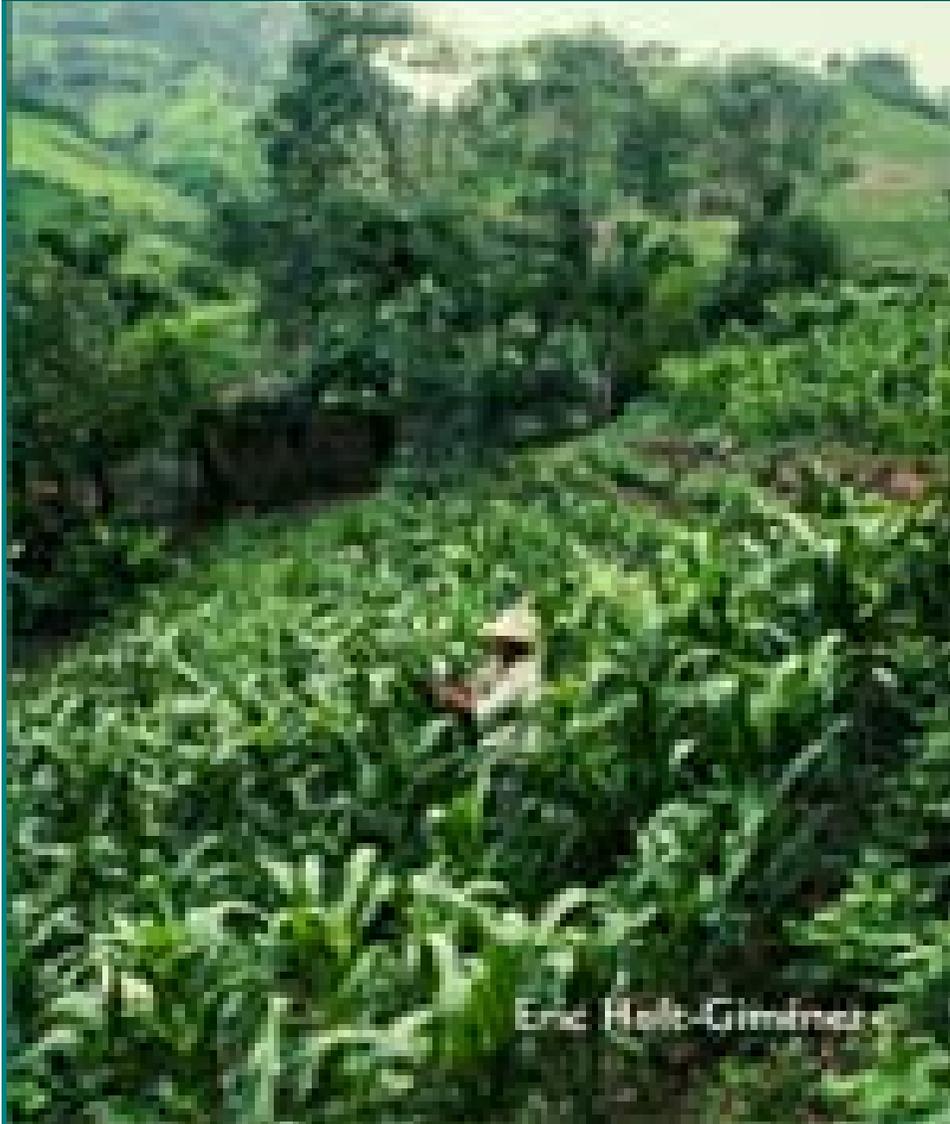
- **Hyper-extraction of agrarian surplus to industry**
- **Inflation of land, food, input prices**
- **New products (seeds, processing, etc)**
- **New int'l. trade mechanisms & standards**
- **Global Free Market in Agrofuels**
- **Consolidation of food-fuel monopolies**
- **Depopulate the countryside**

Agrarian Disaster Capitalism

- 3 billion people are poor
- 7 in 10 depend on agriculture to survive
- Smallholders 3/5^{ths} humanity: 1/2 world's food

- New Green Revolution for Africa
- Disaster-resistant patented seeds
- Agrofuels “Trojan Horse”

Small farms as a planetary ecological asset



- Key for the world's food security
- More productive and resource conserving than large-scale monocultures
- Resilient models of sustainability
- Sanctuary of GMO-free agrobiodiversity
- Cool the planet

Eric Holt-Giménez

Altieri 2008

Another Agrarian Transition is Possible

- Rebuild smallholder agriculture
 - Agriculture out of the WTO
 - Re-negotiate FTAs
 - Moratorium on agrofuels
- Rebuild national food systems
 - Re-regulation of Trade
 - Farmers movements
 - Agroecological approaches
 - Strategic grain reserves
 - Local seeds
 - Farmer-owned
- ICCARD, IAASTD



Food Sovereignty



People's right to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems.