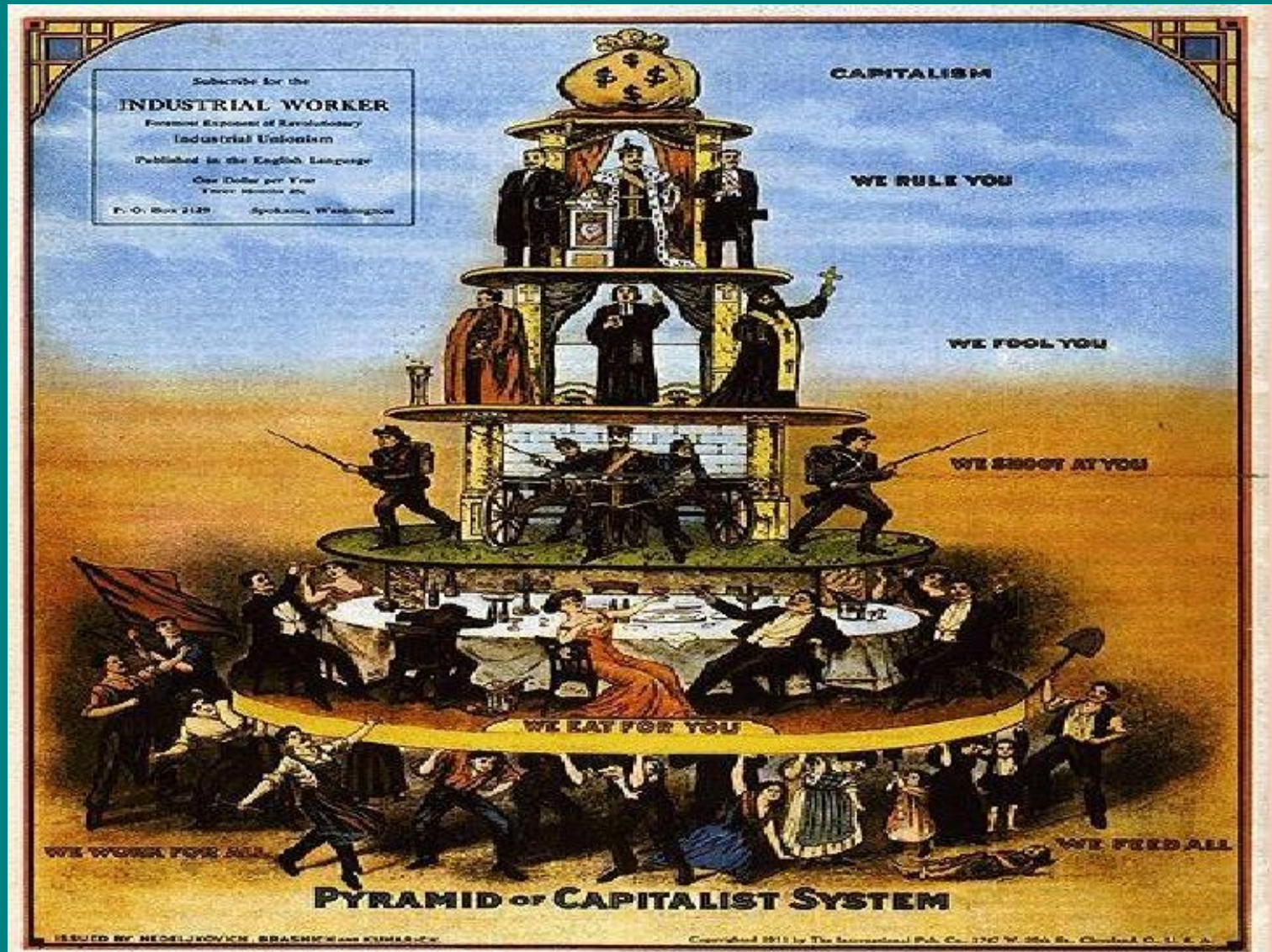


Capitalism, Food, and Social Movements: The Political Economy of Food Systems Transformation

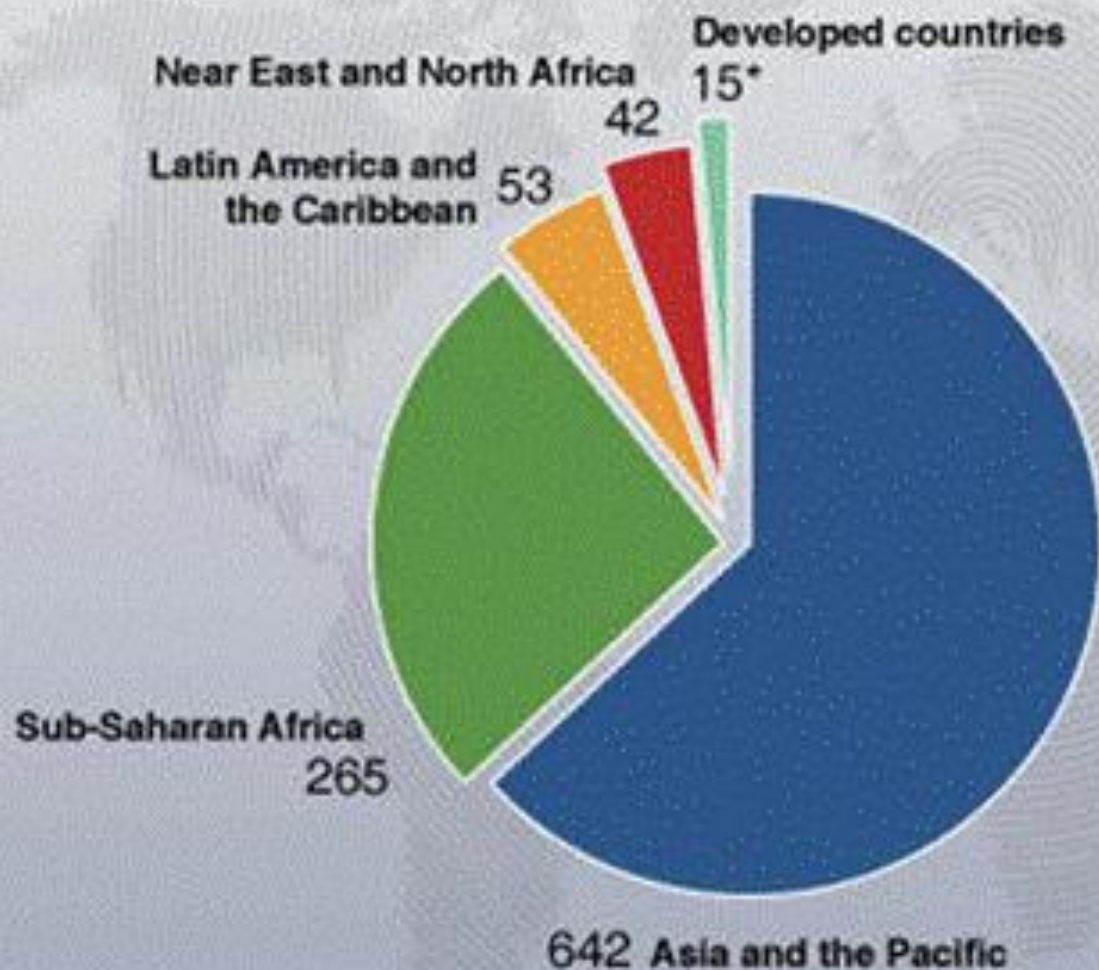




Food First
A People's Think Tank
working to end the injustices
that cause hunger
Since 1975



More than 1.02 billion hungry people



*Millions of people

1st and 2nd contradictions of capital

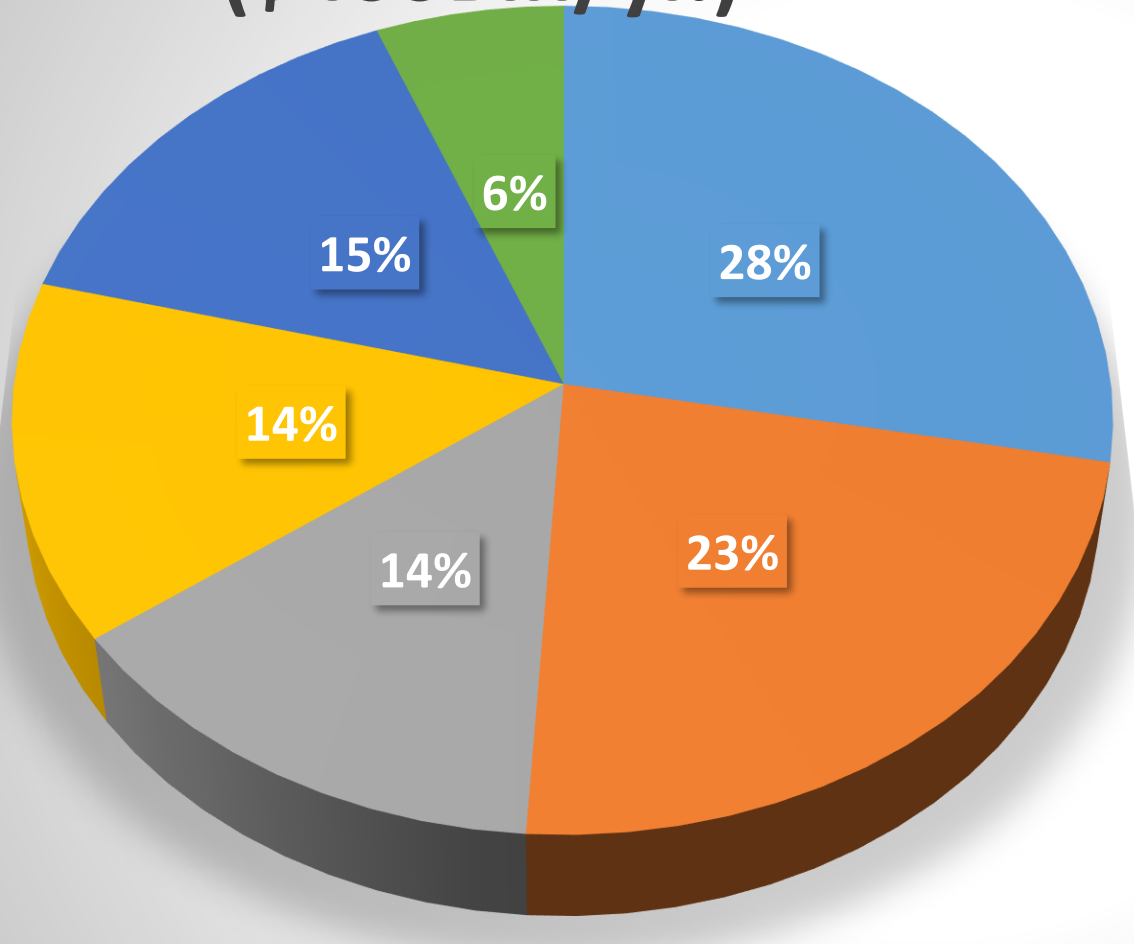
- Labor
 - Crisis of accumulation
 - Overproduction
 - Underemployment
 - Extractivism
 - Primitive accumulation
 - Speculation
- Ecology
 - Metabolic Rift
 - Overshoot
 - Pollution
 - Global Warming
 - Diminishing resources

“All progress in capitalist agriculture is progress not only in the art of robbing the worker but of robbing the soil...the sources of all wealth.”

Industrial Food System “Externalities”

- Soil loss: 75 billion tons/year
 - soil-based ecosystem services US\$6.3 and \$10.6 trillion annually
- Water loss (fossil): US: 25 cubic km³/year; Punjab: 1 ft/438,000 square km²/yr (109 km³ over last decade)
- Loss of 90% of the world’s agrobiodiversity
- Eutrophic “Dead zones” (largely from “meatification”)
 - Gulf of Mexico 8,776 sq. mi.; Baltic Sea (60,000 sq.km.
- Aging of farm population & feminization of micro farm worldwide; loss of the “middle” size family farm

Global Food Waste (\$400Bln/yr.)



■ Asia

■ South/SE Asia

■ North America/Oceania

■ Europe

■ Africa

■ Latin America

Place-based vs Global?

Small vs big, local vs global, organic vs chemical, community vs corporations, people vs profit, authentic vs productive, traditional vs modern, idealistic vs scientific, expensive vs cheap,



The “Golden Fact”

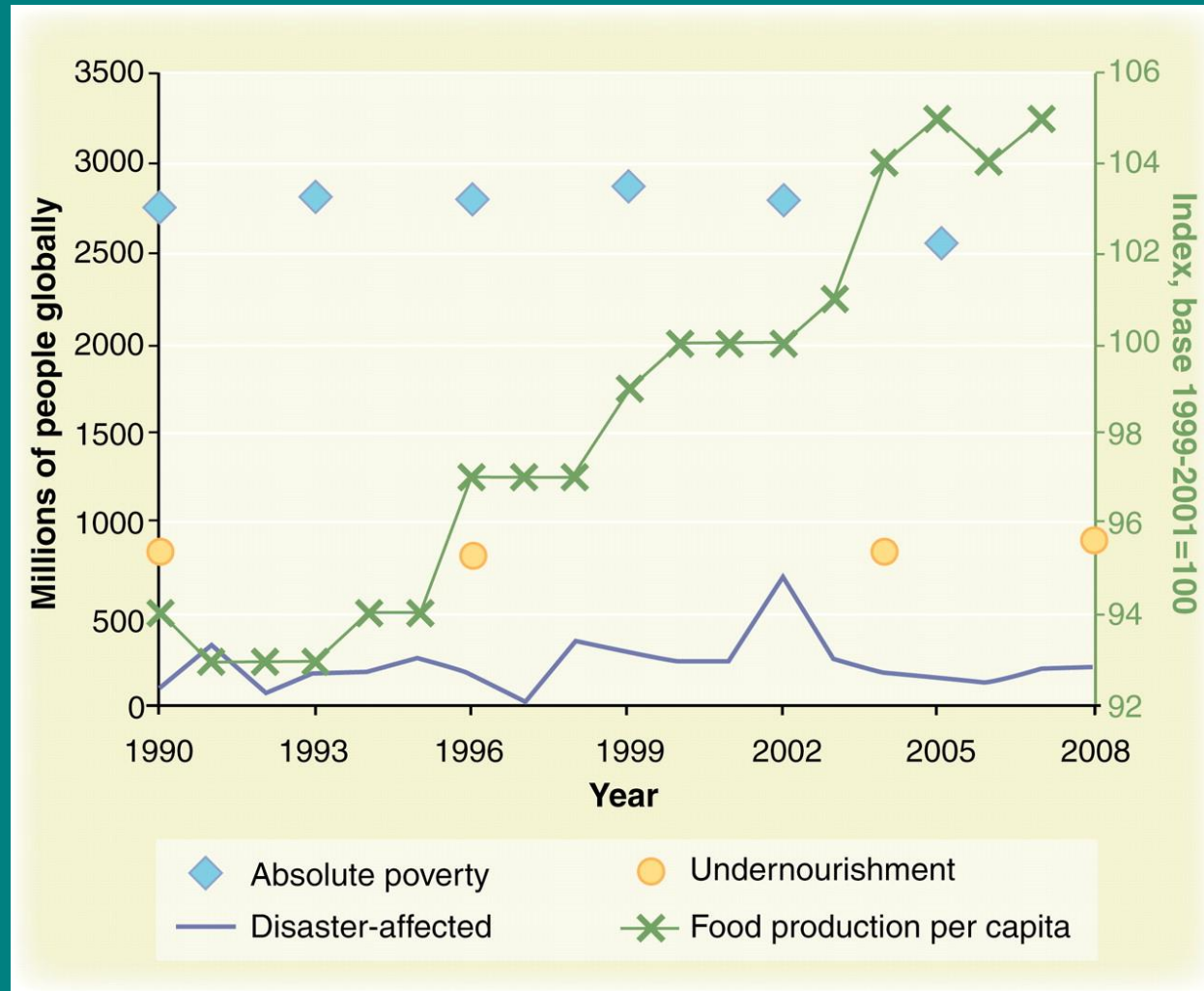


In the year **2050**,
the world **population**
will require

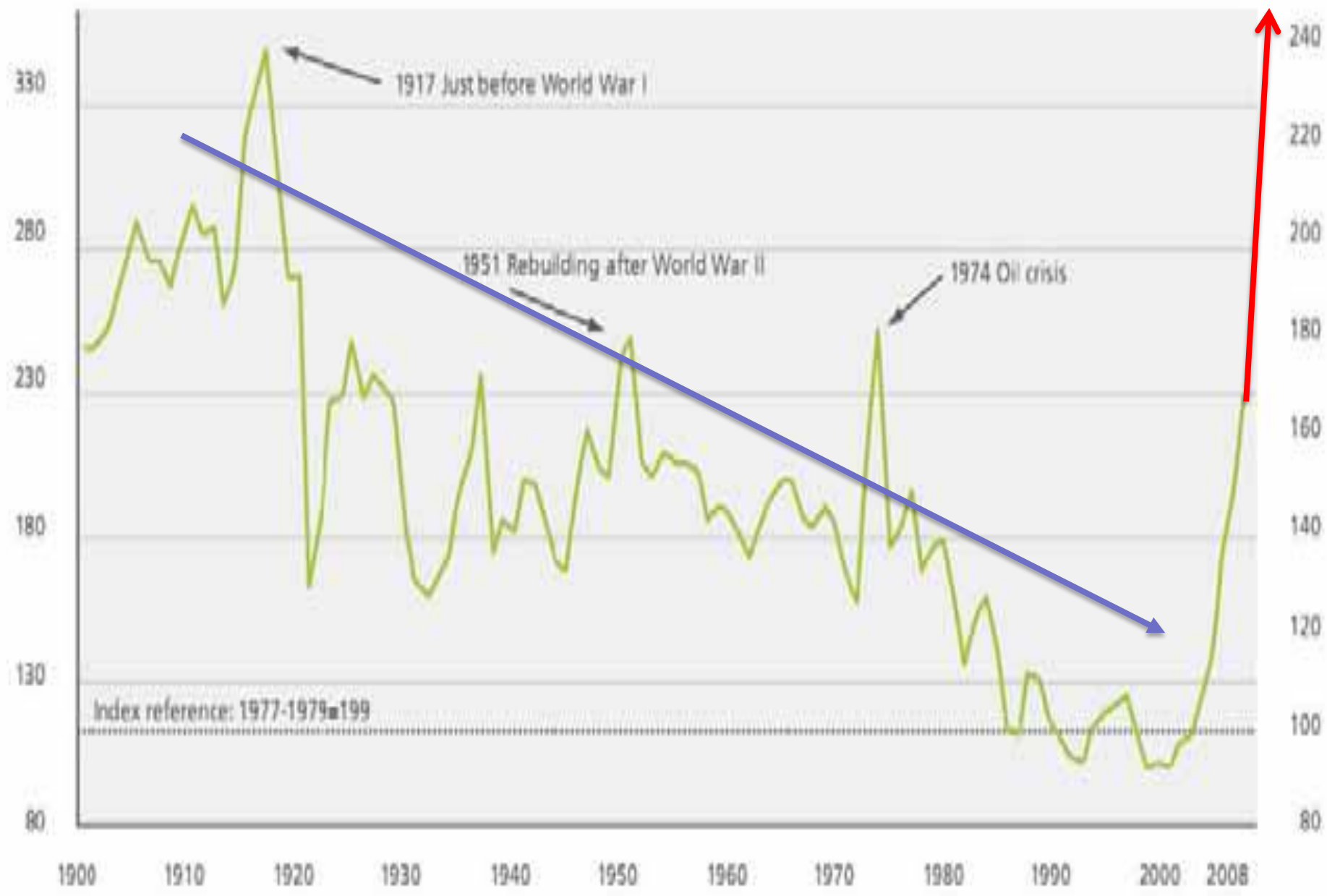
► **100%**
more **food**,¹ and

► **70%**
of this food must come from
efficiency-improving **technology**²

“The undernourished population has increased by 9% globally despite a 12% rise in global food production per capita since 1990.”



C B Barrett Science 2010;327:825-828

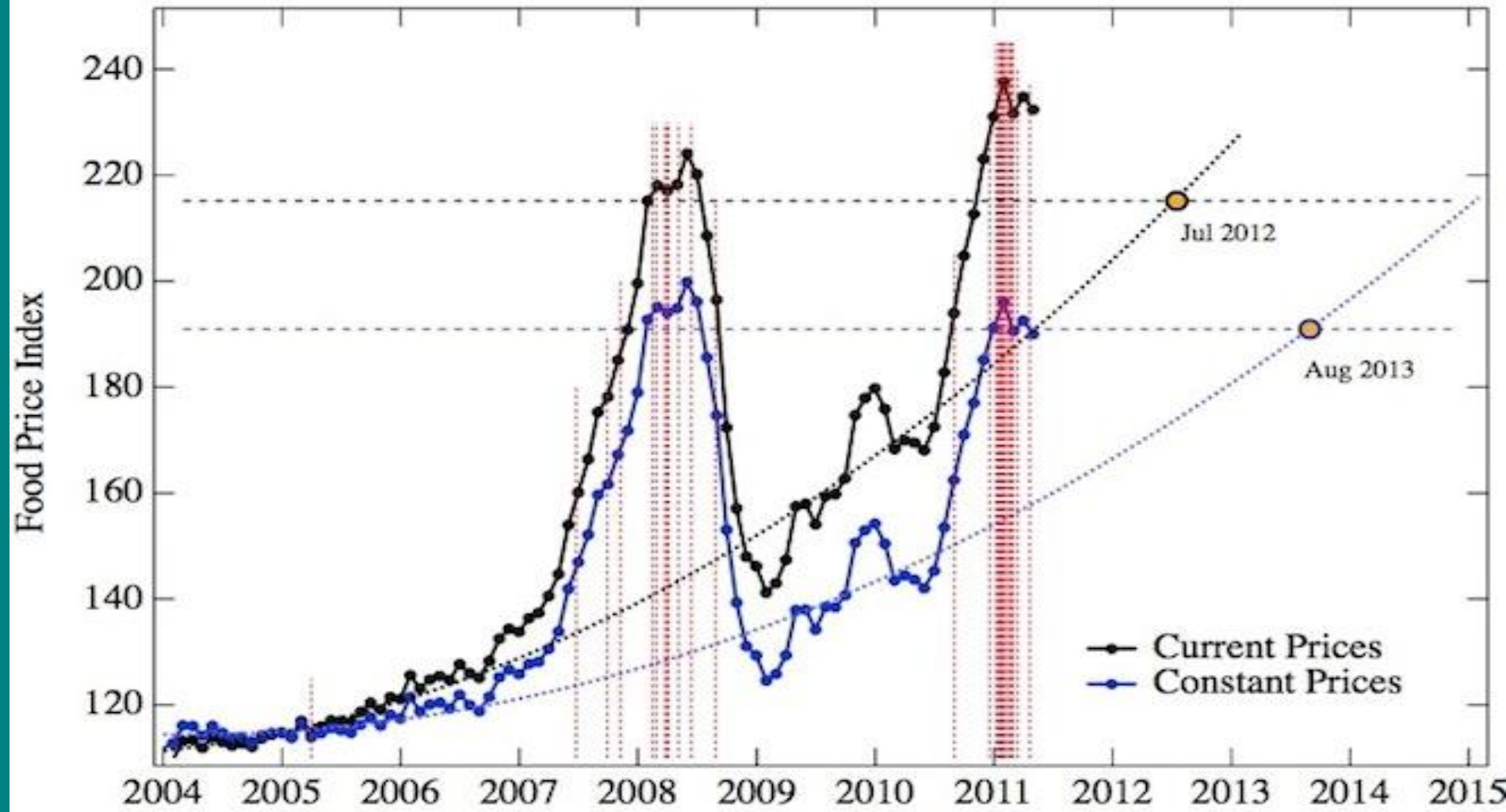




Record Harvests Record Profits **Record Hunger**

Bumper harvests: 2007-08 +5%; highest corn crop in history
1.2 billion people hungry

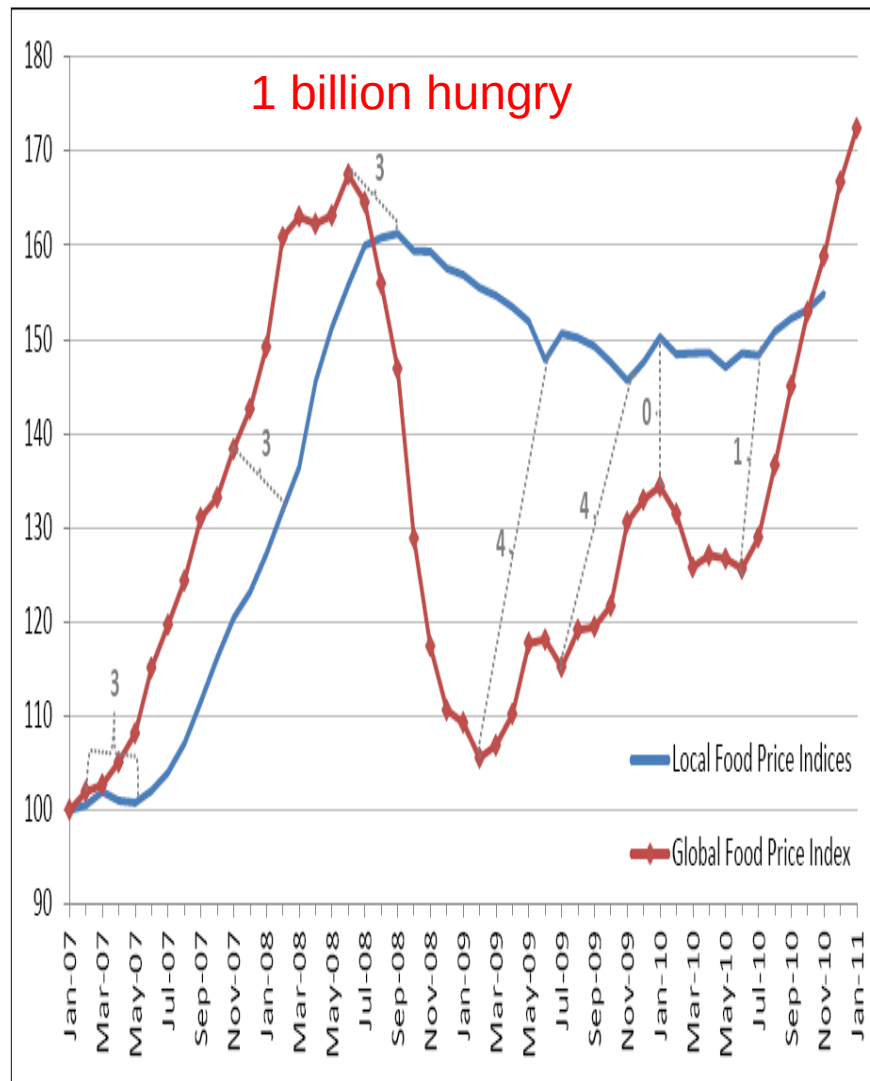
**Bumper profits last quarter: ADM 20%; Monsanto 45%,
Cargill 86%; General Foods 61%**



FAO Price Index at current prices (black curve) and corrected for inflation (blue curve) between January 2004 and May 2011. Red dashed lines signify the beginning dates of food riots and unrest in North Africa and the Middle East. Black and blue horizontal lines represent the current-price and inflation-adjusted food price thresholds for riots. *“The Food Crises and Political Instability in North Africa and the Middle East.”* By Marco Lagi, Karla Z. Bertrand and Yaneer Bar-Yam. *arXiv*, Aug. 11, 2011.

Figure 7. Local Food Prices and Global Food Price Index, Jan. 2007-Jan. 2011

(local food prices in unweighted average index values; Jan. 2007=100 for both metrics)



Source: FAO (2010a and 2010f) and authors' calculations

Note: The grey lines connect corresponding local and global food price ascents and descents, with the grey number representing the estimated global-to-local price transmission time number of months

MON 69.88 ↓ 0.37 (0.52%)

as of Mar 29, 2:01 PM EDT quotes delayed

Day range 69.03 - 70.43
52wk range 44.61 - 76.69

Volume 1.60M
Mkt Cap 37.703B

P/E Ratio 34.3
EPS N/A

NYSE:M

139

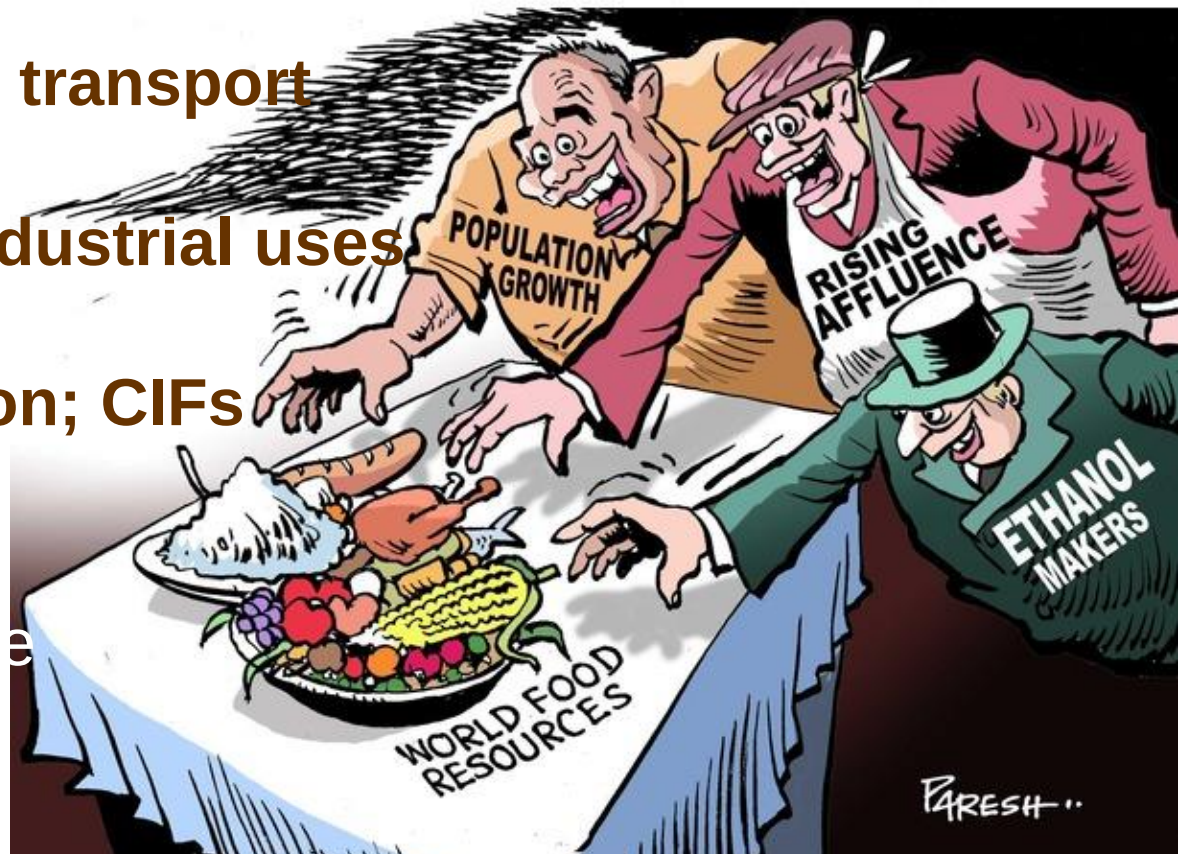
1 billion hungry



18M
9M

Proximate causes

- Climate; droughts
- Rising meat consumption India, China, Brazil
- 5% fall in cereal production 2005-06
- Low grain reserves
- Higher oil prices: 2X transport
3X fertilizer costs
- ½ world grain for industrial uses
- Weak dollar
- Financial Speculation; CIFs



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

The Corporate Food Regime

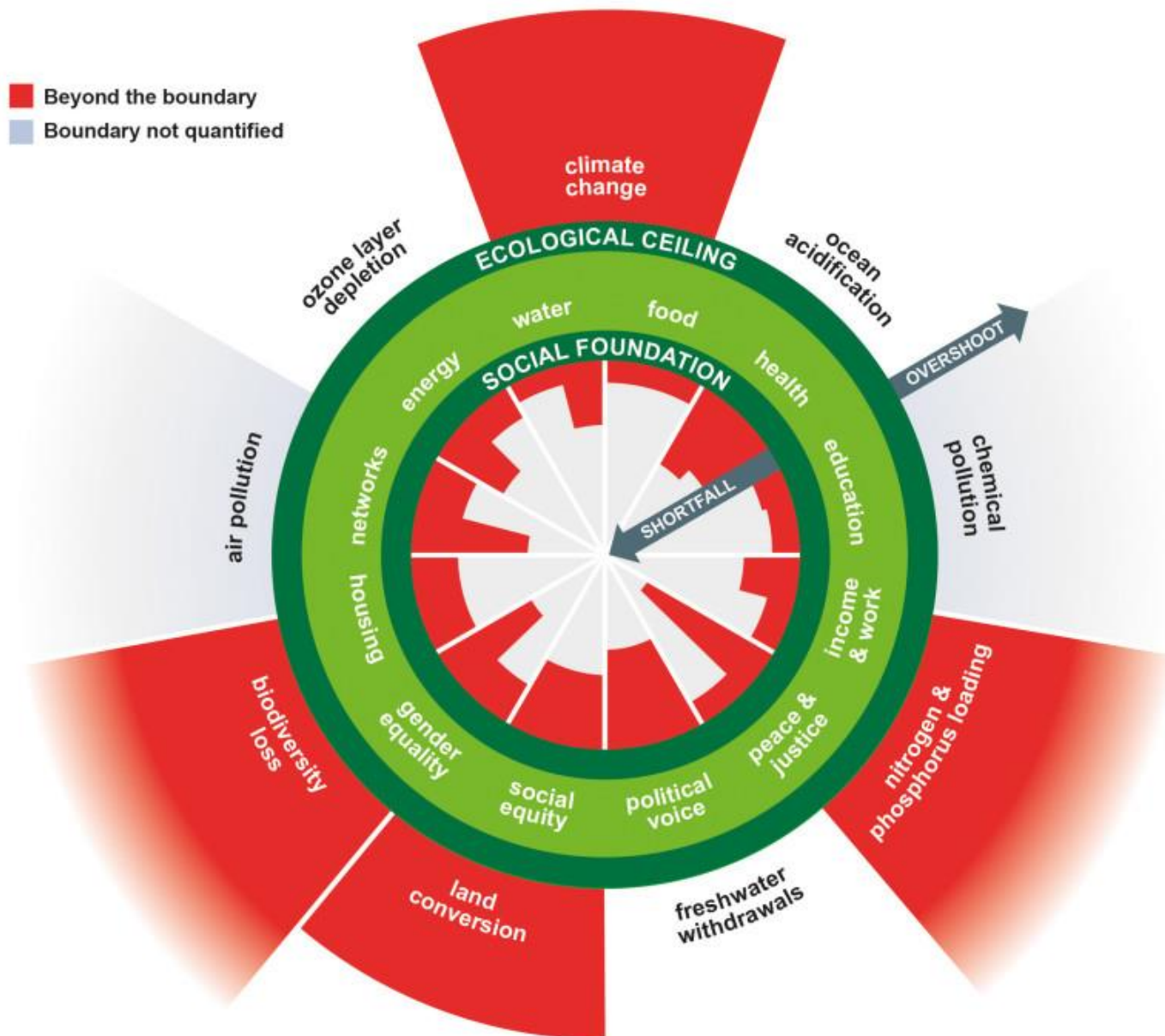
- Colonial Food Regime
- Keynesian Food Regime
- Green Revolution 1960-80s
- Structural Adjustment Policies 80s-90s
 - removal tariff barriers
 - dismantling of marketing boards
 - non-food export crops
 - Dismantling of grain reserves
- Free Trade “mania” 1990s-present
 - WTO, FTAs (NAFTA, CAFTA)
 - Subsidies, Surplus, Dumping

Results?

- Global South 1970-2001: \$1 Bln surplus—\$11 Bln deficit
- Industrial Agriculture: 20-40% GHG; 80% water
- Loss of 75% crop diversity
- Immigration: 1.3 million Mexican smallholders bankrupt
- One in seven are food insecure/hungry
- Diet-related disease=\$150 billion a year in US health costs
- 88 million acres grabbed worldwide
- Financialization of land (\$30-40 billion)
- Increasing frequency of severe weather events
- Increased vulnerability to environmental /economic shock

Loss of the Public Sphere

Overshoot and Shortfall



“The way the world grows its food will have to change radically to better serve the poor and hungry if the world is to cope with growing population and climate change while avoiding social breakdown and environmental collapse.”

FAO, GEF, UNDP, UNEP, UNESCO, World Bank and WHO

IAASTD

International Assessment of Agricultural Science and Technology for Development

Fix the “broken” food system?



VOTE WITH YOUR FORK



*Join the
Local
Movement*

LEARN HOW NOW

 HealthyHolicLiving.com



The best food you
can eat may be in your
own backyard. If you...



The Next Food Regime?

- Labor

- 2.5 billion smallholders produce 70% of the world's food on 25% of the ag. land

VERSUS

- 50,000 industrial mega farms using precision agriculture, big data, and genetically engineered, biofortified crops and CAFOs

- Ecology

- Agroecology
- Decentralized, regionally based food systems

VERSUS

- Climate Smart, Sustainable Intensification, Land sparing agriculture
- Oligopoly-controlled, centralized seed-grain-oilseed-livestock complex

The Corporate Food Regime

- A food regime is a “rule-governed structure of production and consumption of food on a world scale” (Friedman 1993).
- The corporate food regime, based on fossil fuels; dominated by global monopolies; characterized, *inter alia*, by the “supermarket revolution,” global animal protein chains, and GMOs (McMichael 2009).
- Monopolies, World Bank/IMF, World Food Program, USAID, and big philanthropy.

Food Regime Management

- *Liberalization period* characterized by unregulated markets and breathtaking capital expansion, followed by devastating busts.
- *Reformist period* in which markets, supply, and consumption are regulated in an effort to re-stabilize the regime.
- While these phases may appear politically distinct, they are actually two sides of the same system.

(Polanyi 1944)

Politics, Production Models & Approaches				
	Corporate Food Regime		Food Movements	
POLITICS	NEOLIBERAL	REFORMIST	PROGRESSIVE	RADICAL
Discourse Main Institutions	Food Enterprise International Finance Corporation (World Bank); IMF, WTO: USDA; Global Food Security Bill; Green Revolution; Millennium Challenge; Heritage Foundation; Chicago Global Council, Bill and Melinda Gates Foundation;	Food Security International Bank for Reconstruction and Development (World Bank); FAO; U.N. Commission on Sustainable Development; International Federation of Agricultural Producers; mainstream Fair Trade; Slow Food; some Food Policy Councils; most food banks and food aid programs.	Food Justice Alternative Fair Trade & many Slow Foods chapters, many organizations in the Community Food Security Movement; CSAs; many Food Policy Councils & Youth food and justice movements; many farmworker & labor organizations	Food Sovereignty Via Campesina, International Planning Committee on Food Sovereignty; Global March for Women; many Food Justice and rights-based movements , UN Committee on Food Security CSO Committee , many farmer organizations w/in federations (PELUM, ROPPA, ESAFF,) African, US, EU Food Sovereignty Alliances
Orientation	Corporate	Development	Empowerment	Entitlement
MODEL	Overproduction; Corporate concentration; Unregulated markets and monopolies; Monocultures (including organic); GMOs; Agrofuels; mass global consumption of industrial food; phasing out of peasant & family agriculture and local retail.	Mainstreaming/ certification of niche markets (e.g. organic, fair, local, sustainable); maintaining northern agricultural subsidies; “sustainable” roundtables for agrofuels, soy, forest product, etc; market-led land reform	Agroecologically-produced local food; investment in underserved communities; new business models and community benefit packages for production, processing & retail; better wages for ag. workers; solidarity economies; land access; regulated markets & supply	Democratization of food system; Dismantle corporate agri-foods monopoly power; parity; redistributive land reform; community rights to water & seed; Regionally-based food systems; sustainable livelihoods; ; protection from dumping/ overproduction; Revival of agroecologically-managed peasant agriculture to distribute wealth and cool the planet
Approach to the Food Crisis	Increased industrial production; unregulated corporate monopolies; land grabs; expansion of GMOs; public-private partnerships; Liberal markets; Int’l. sourced food aid;	Same as Neo-liberal but w/increased middle peasant production & some locally-sourced food aid; more agricultural aid, but tied to GMOs & “bio-fortified/climate-resistant” crops.	Right to food; Better safety nets; sustainably-produced, locally-sourced food; agroecologically-based agricultural development; guiding document:	Human right to food sovereignty; Locally sourced, sustainably produced, culturally appropriate, democratically controlled focus on UN/FAO negotiations
Guiding document	WB 2009 Dev. Report	WB 2009 Dev. Report	IAASTD	Peoples’ comprehensive framework for action; UN Right to Food series; IAASTD; Food Movements Unite

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.

Food Waste

- 30-50%/year worldwide from farm to fork
- 10% GHG of industrialized countries
- In US: 10% energy, 50% land, 80% fresh water
- 7% fields go unharvested, \$140 million crop loss
- 60% fish catch is wasted before getting to port
- North America: \$165 billion in resources/yr
- Supermarkets stock 50-100% more food on their shelves than they can sell
- 15% of our food waste could feed 25 million people/yr

Climate-smart agriculture

increase productivity + resilience;
reduce GHG emissions

Sustainable intensification

produce more food on less
land without increasing
pollution

Land sparing

conserve biodiversity by
avoiding agricultural
expansion into natural
habitats

The Golden Assumptions

- **We must double food production**
- **Chemical-intensive monocultures are more productive than ecological-intensive polycultures**
 - Only synthetic fertilizers, pesticides, herbicides and genetically-engineered seeds can produce enough food to feed the world.
- **Agriculture necessarily destroys biodiversity**
 - Limiting the destruction to intensively-farmed, chemical monocultures will avoid expansion onto new land, conserve biodiversity & avoid GHGs
- **Inefficient application of chemical inputs (not rates of application)**
 - Are the cause of agricultural pollution and GHGs. The gains to efficiency (through precision agriculture) will bring higher profit margins to farmers and they will not need to expand operations onto new lands.

“Meatification”

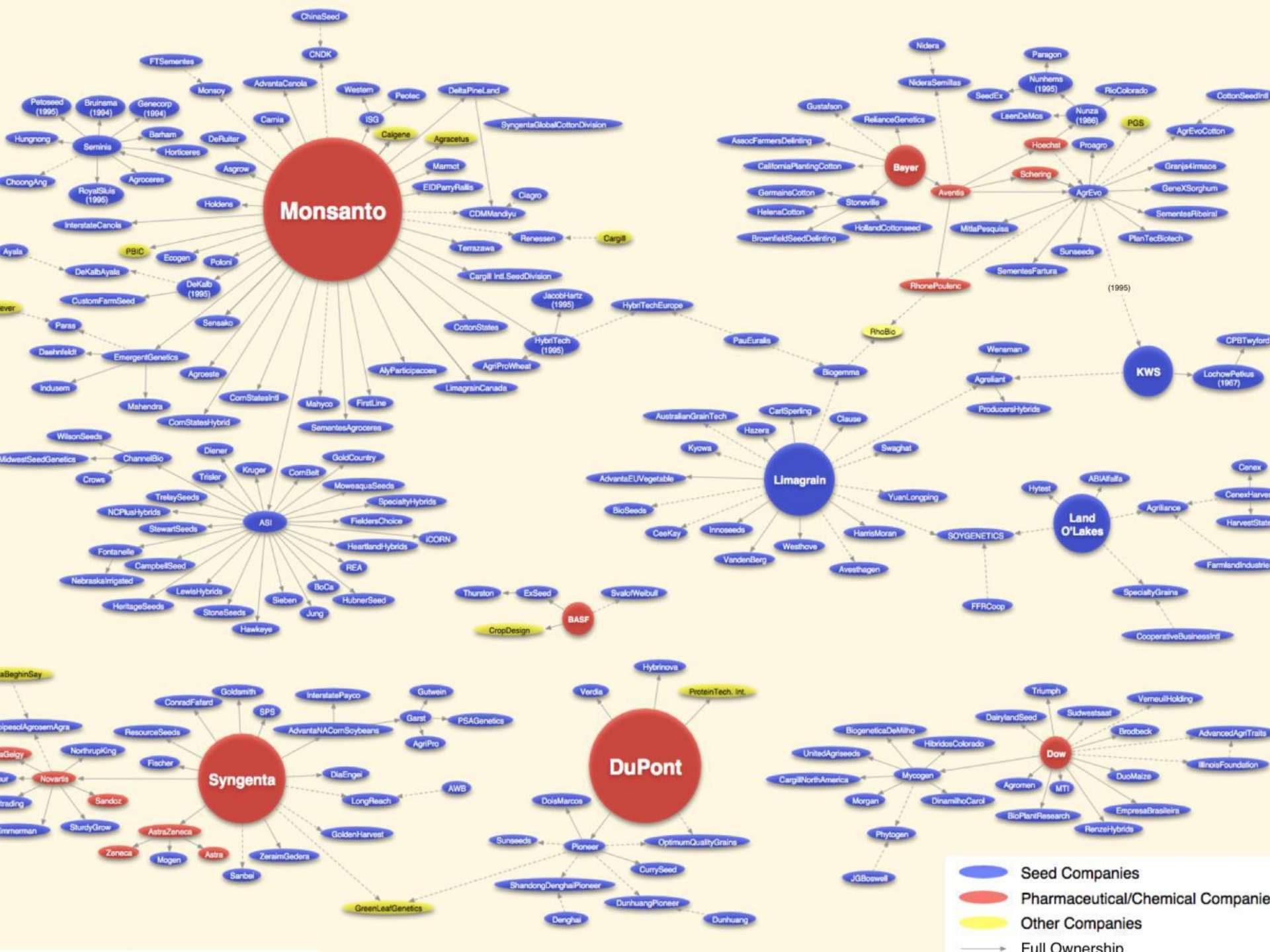
- 40% of industrial ag. production feed & fuel
- 30% agricultural land
- Seventy billion farm animals slaughtered/yr .
(7 billion 60 years ago)
- By 2050, 120 billion animals/yr. will be slaughtered, a fifteen-fold increase in less than a century.”

**Climate Smart Agriculture for
Climate Stupid Consumption**



Proprietary Seed Market (2008)

COMPANY	SALES (MILLIONS USD)	PERCENTAGE MKT
Monsanto	6,367	22.4
Dupont/Pioneer	3,976	14.0
Syngenta (Switzerland)	2,400	8.4
Bayer CropScience (Germany)	1,462	5.1
Limagrain (France)	1,254	4.4
Land O'Lakes	1,185	4.2



Rolling Back Seed Monopolies

- **1) The Department of Justice should investigate anticompetitive conduct in the industry.**
- **2) Change patent law and establish Plant Variety Protection Act as sole protection.** By establishing the PVPA as the sole means of intellectual property protection over plants, farmers could regain the right to save seed and the right to choice, as plant breeders would have better access to plant genetics that are currently off limits to innovation because of patents.
- **3) Change the Bayh-Dole Act (Patent and Trademark Law Amendments Act)** to prohibit mandates for seed patenting and exclusive licenses relating to technologies and innovations developed through publicly funded research.
- **4) Rebuild public plant breeding and public cultivar development programs.**
- **5) Remove the restriction on research from licensing agreements** Patent owners should not have the power to prevent performance and safety testing of their products.
- **6) Enact farmer contract reforms and establish a federal “Farmer Protection Act.”** Restoring fully the federal rights of farmers to negotiate fair contracts, and including explicitly the right of farmers to negotiate collectively,

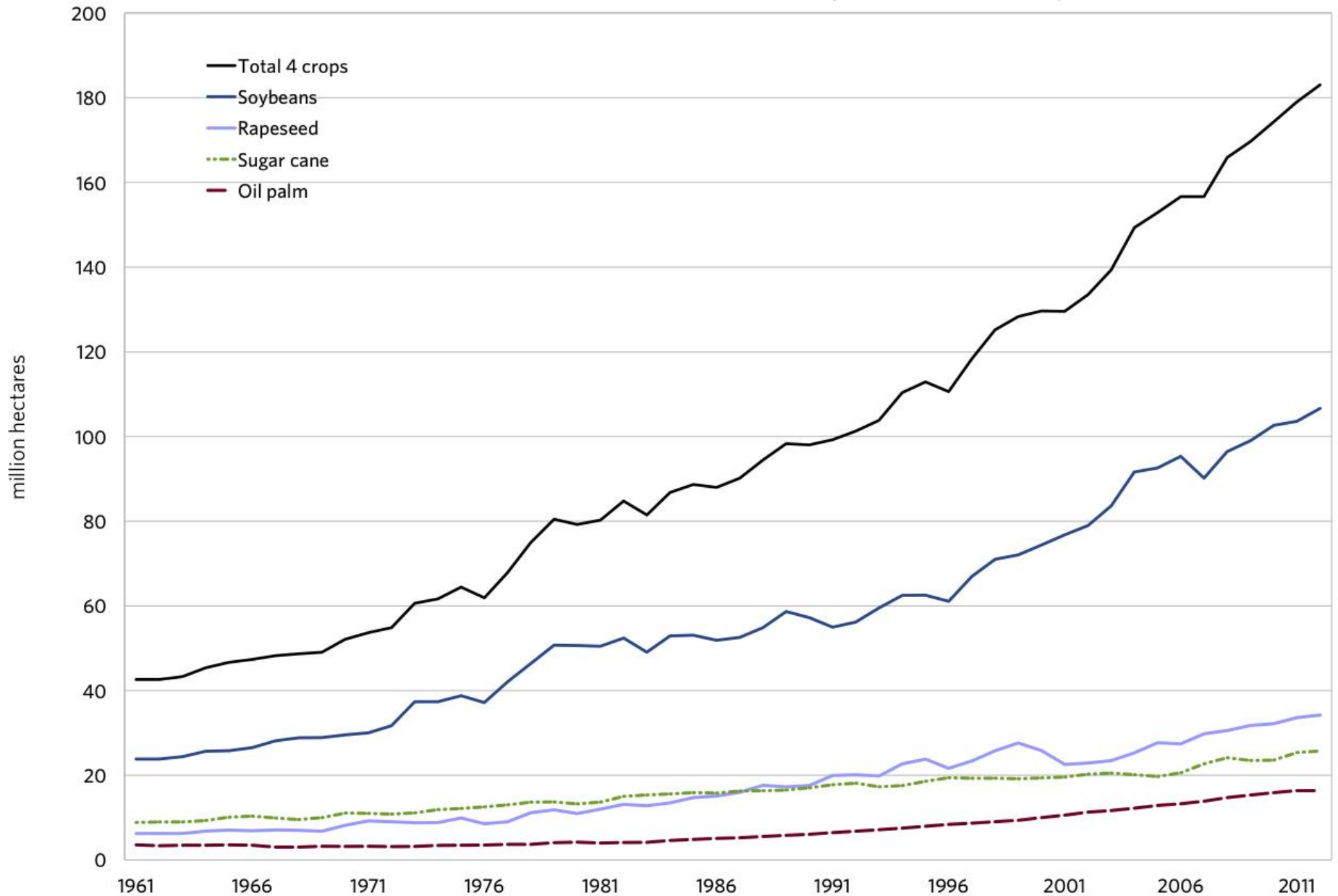
“Out of Hand” 2008 NFFFC

Farmers' Rights : The Basis for Seed Sovereignty

- The customary rights of farmers to save, use, exchange and sell farm-saved seed and propagating material, their rights to be recognized, rewarded and supported for their contribution to the global pool of genetic resources as well as to the development of commercial varieties of plants, and to participate in decision making on issues related to crop genetic resources.*

The global encroachment of industrial crops:

140 million hectares since 1960 (2x size of Texas)



Food, Land & Seed 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.

**Redistributive Food
Democracy**



UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT
UNITED NATIONS ENVIRONMENT PROGRAMME



UNEP-UNCTAD Capacity Building Task Force on
Trade, Environment and Development (CBTF)

Organic Agriculture and Food Security in Africa

“Organic agriculture can increase agricultural productivity and can raise incomes with low-cost, locally available and appropriate technologies, without causing environmental damage.”

Can Sustainable Agriculture Feed the World?

University of Michigan

- 293 examples comparing alternative and conventional agriculture
- 91 studies
- Low estimates: organic agriculture could provide 2,641 (as opposed to 2,786 kilocalories/person/day after losses).
- Realistic estimate: organic agriculture could increase global food production by 50% to 4,381 kilocalories/person/day).
- Easily support a population peak of 10-11 billion people by 2100.
- No additional land required to obtain enough N to replace the current use of synthetic N fertilizers.

Among 2.1 million principal farm operators in 2012:

- 92% non-Hispanic white, 8% minority
- 86% men, 14% women
- 78% in current operation 10 years or more, 22% in operation less than 10 years
- 75% had 2012 agricultural sales and government payments of less than \$50,000; 25% had sales and payments of \$50,000 or more
- 48% called farming their primary occupation, 52% had a different primary occupation
- 6% under 35 years old, 61% 35 to 64 years, and 33% 65 years and older

Source: USDA NASS, 2012 Census of Agriculture, Preliminary Report.





1996 Rome Declaration

The Whole World



1996 World Population =
5.8 billion

Total number hungry = 840 million
Total proportion hungry = 1 in 7



World leaders decide to cut the
absolute number of hungry by half
by 2015

840 million → 420 million

2000 Millennium Declaration

Developing World Only



1990
Developing World Population
= 4 billion

Population increases



World leaders make 3 major changes:

- 1) change the goal from *half the absolute number* to *half the proportion of hungry*
- 2) change from halving the proportion of hungry people *in the world* to halving the proportion of hungry people *in developing countries only*
- 3) *move the baseline* from 1996 to 1990 hunger levels



2015
Developing World Population
= 5.91 billion

2015 Results

In 1990, there were 816 million hungry
or
1 in 5 in the developing world



Half the proportion by 2015 = 1 in 10



1/10 of 5.91 billion
= 591 million

That's **171 million
more hungry**
than the 1996 Rome Declaration
commitment

AGROECOLOGY

“The application of ecological concepts and principles to the design and management of sustainable agroecosystems,”

- **Beyond “alternative practices” to low external input, complex agricultural systems w/ecological interactions and synergisms between biological components for soil fertility, productivity and crop protection (Altieri 1995).**
- **Local communities innovate, evaluate, and adapt themselves through farmer-to-farmer research and grassroots extension approaches.**
- **Technologies emphasize diversity, synergy, recycling and integration,**
- **Social processes value community involvement**
- **Human resource development as the cornerstone for resource-poor farmers (Gliessman 1998).**

Regressive Growth of Industrial Agriculture

- We are fast losing middle sized farms
- Big farms are getting bigger
- The vast majority of farms in the world today are small and getting smaller
- Small farms are currently squeezed onto less than a quarter of the world's farmland
- Small farms overall more productive than big farms
- Most small farmers are women