

Sustainable Food Systems: Local to Global Connections

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Opening Questions

- Is/Will there be enough food to feed everyone a nutritionally adequate diet?
- Are GMOs & globalization (trade liberalization) problem or solution?
- Can small-scale, biodiverse, local agriculture meet aggregate food & nutrition needs?
- How can human rights approach help?

Conventional Agriculture

- Improved varieties raise productivity without x-species gene transfers
- High input costs & pollution encourage reduction in water & other inputs
- Returns to investment calculated for single crops
- Nutrient “dilution” means lower protein, vitamin & mineral contents unless specially bred for nutrition

Agro-ecological Approaches

Organic, IPM

- Biodiverse, not mono-crop, with soil conservation/regeneration limits chemical control of fertility & pests, conserves water (IAASTD)
- Management-intensive with higher labor inputs
- Calculate returns with “full cost” and benefits accounting to multiple species & ecosystem services
- Traditional crop varieties in heathy soils favor wider & more complex flavor and nutritional profiles

Polarized claims

GMOs

Pro

Con

Greater productivity
Lower chemical loads
Nutrition benefits
Greater crop diversity

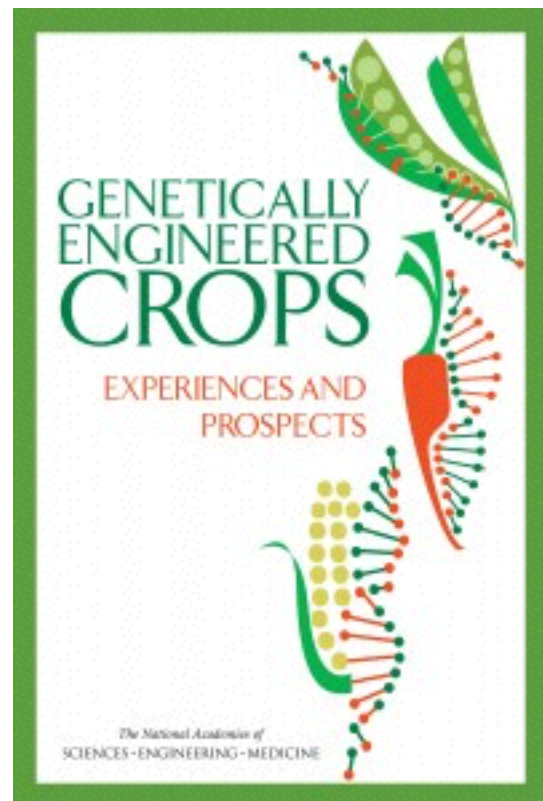
No yield increase
Higher chemical inputs
Nutrition costs
Lower biodiversity

Safely regulated
IPR=economic opp.
Science opp.

Unsafely under-regulated
IPR=immoral theft, corporate
Science over-reach

No excess risks

Environmental & health risks



"Doubts About the Promised Bounty of Genetically Modified Crops"
NYTimes 29 Oct 16

Main causes of hunger

- Production shortfalls (weather (climate disasters), politics (conflict! land-grabs), environmental & biodiversity declines), high input costs
- Rising demand (higher meat consumption; demand for biofuels)
- Livelihood failures (low incomes/higher food prices)
- Cheaper but less nutritious foods



Genetically engineered

- Distinguish “genetically modified” (gene-transfer from foreign species via *Agrobacterium* , *chemicals*, ballistics) from genetically engineered via CRISPR (genetic scissors edit, rearrange, silence genes without gene transfer)
 - Different regulatory apparatus
 - Different labeling
 - GRAS & “substantial equivalence” ??

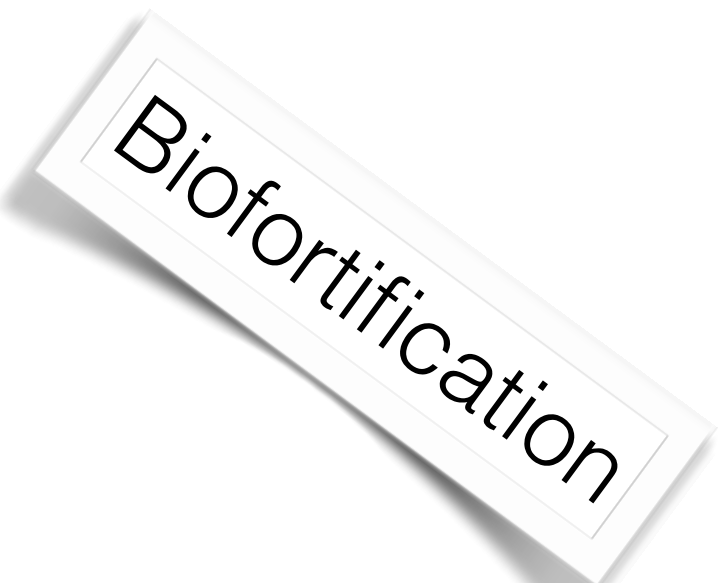
Impacts on Sustainable Food Systems/Security

- Food shortage/availability
- Food access/poverty
- Food deprivation/malnutrition
- Stable and sustainable food security for communities, nations

Micronutrients

- Supplements (public health) vs. food fortification (industry) vs food-based dietary diversification vs. biofortification (agriculture/crop breeding)
 - Orange-fleshed sweet potato
 - Iron and zinc enriched beans
 - Other HarvestPlus initiatives

Golden Rice (controversy)



Human rights perspectives

- Civil political rights (to land, water, resources)
- Economic-social-cultural rights (to adequate food, health & hygiene, decent standard of living)
- Women's & children's rights (to survival, resources)
- Indigenous & people's rights (to inclusion, control over their resources)
- Environmental (Earth) rights? IPR?

Take-aways

- No single solution to world food challenges
- Find ways to use the best of multiple approaches
- Use globalization (institutions) and new agricultural technologies in ways that can advantage small farmers
- Implement human-rights analysis in policy planning

Human Rights & SDGs: Connecting Efforts to End Hunger & Promote Sustainable Food Security

Ellen Messer
4 November 2016

Overview

- Background: Needs-based vs. Rights-based Development approaches
- Constructing & evaluating indicators: Legislative (framework), Political (process, implementation), Outcomes (who's hungry? malnourished? are numbers increasing or decreasing, & why?)
- Case studies of political change: Brazil, India, US
- Conclusions: human rights violations as root causes of hunger, and human rights empowerment & achievements as chief tools of sustainable food security going forwards



Human Rights and Justice

RIGHT TO FOOD

A fundamental human right affirmed by the UN and recognized in numerous regional treaties and national constitutions



By Shivraj Singh Negi



Political Culture & Anti-Poverty Policy

Right to Food

The Fight to Eradicate Hunger
and the Human Right to Food
in Brazil

The First Year of the Zero Hunger
Program of LULA's Government



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Brazil's Domestic Legislation, Policies, &
Programs

BRAZILIAN GOVERNMENT
BRASIL

Action Aid-Brazil

USA: right to food? food-security?

Summary & Conclusions

Legal
Political-Economic
Sociocultural

Framework
Implementation
Outcomes