ETH zürich

Assessing food system outcomes in the United States

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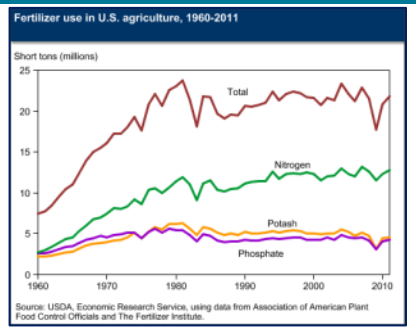
World Food System Center

Agricultural Structure

Environmental Outcomes

Increased reliance on inputs

Are subsidies and technologies masking increased vulnerability?



fertilizers

seeds, technology

- Water quality and quantity
- Ecosystem functioning and habitat
- Soil degradation

→ **High yields**

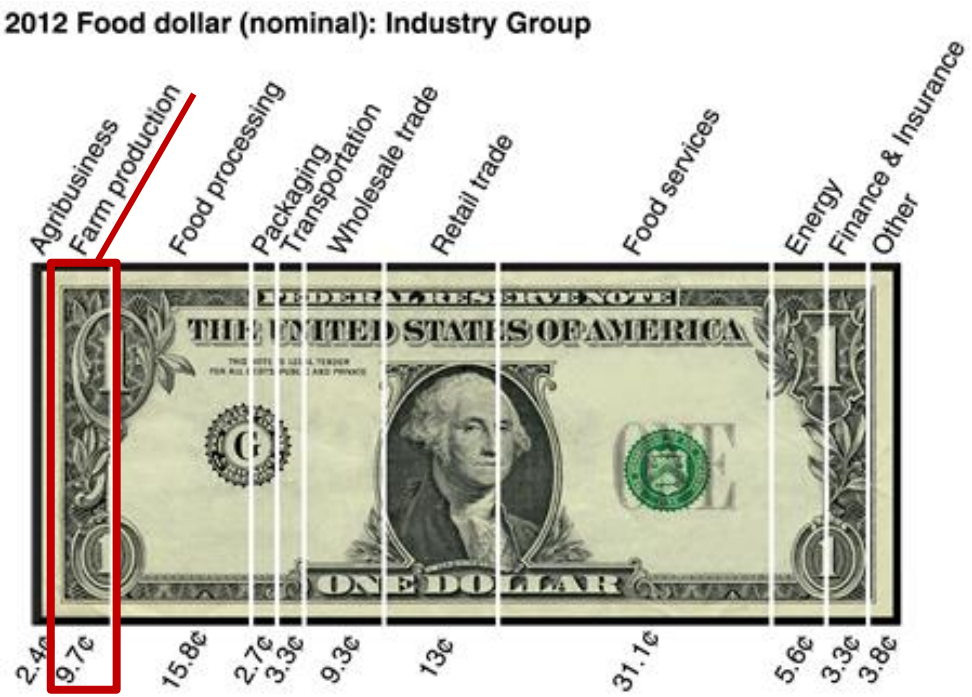
water

pesticides

California Water Blog, californiawaterblog.com
http://www.growerdirect.com/bedding-plants-from-seed
North Carolina State University: http://www.cals.ncsu.edu/course/ent010/tobacco_pests/tob_aphid.html

Social Wellbeing Outcomes

Where is income generated along the food chain? How is it distributed?



Note: "Other" includes two industry groups: Advertising plus Legal & Accounting.
Source: USDA, Economic Research Service, Food Dollar Series.

- One million farm operators
- Over three million farm laborers
- 92% of farm ownership is white, non-Hispanic
- 70% of farm laborers are foreign born, half are undocumented

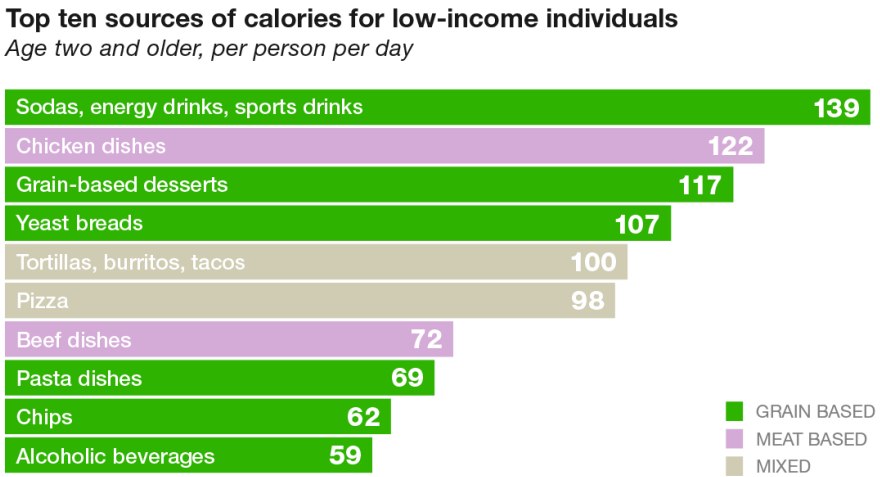
Photo courtesy of National Geographic: http://environment.nationalgeographic.com/environment/photos/sustainable-agriculture-general/#/farm-workers_6394_600x450.jpg

Food and Nutrition Security Outcomes

- **Nearly 20% of Americans are food INsecure**
- **55% of the population is overweight, 25% is obese**

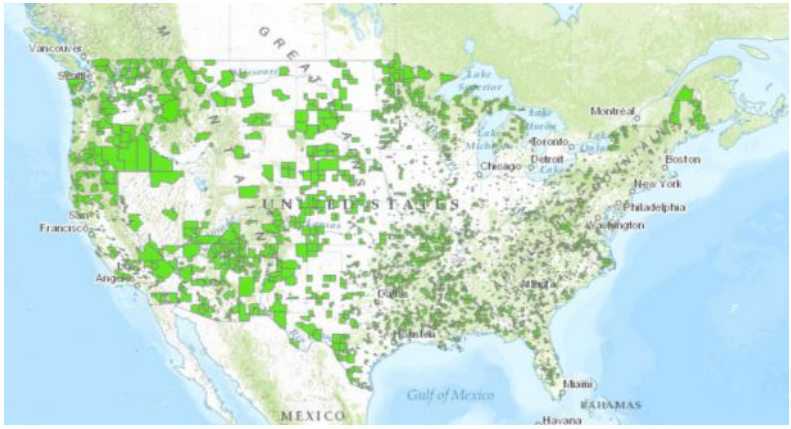
How does this occur?

1. **Availability**
   - Availability of sufficient food? YES
   - Availability of nutritious food? NOT ALWAYS
2. **Access**
   - Nutritious foods cost more
   - Do you have a car??
3. **Use**
   - Food preparation, storage
   - Cultural changes, time
4. **Stability**



http://www.nationalgeographic.com/foodfeatures/hunger/

Food deserts: Low income and low access



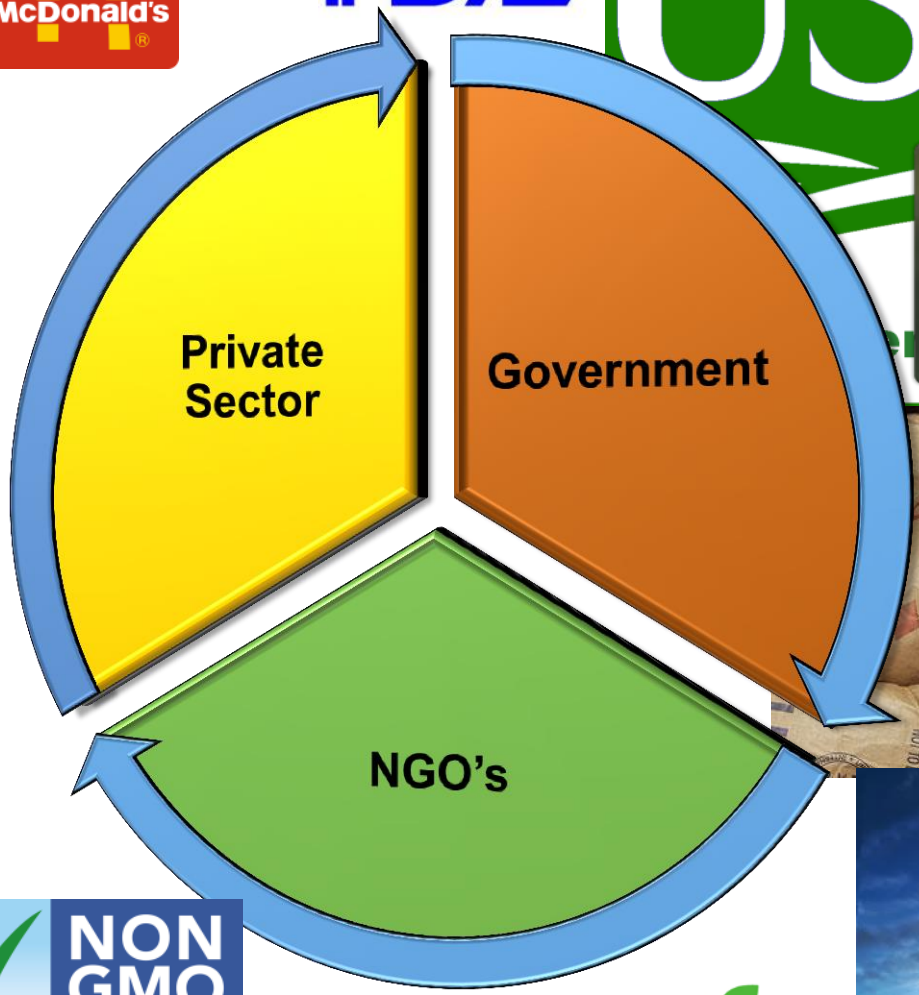
http://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas.aspx#.VBhS2vl_uSo

Food System Outcomes are Linked

Biofuels

Vegetable production

Stakeholders Within the US Food System



Cargill

McDonald's

FDA

USDA

ADM

pepsi

USDA ORGANIC

BUNGE

MONSANTO

Walmart

NON GMO Project VERIFIED

BPA Free

US Food & Nutrition Policy

- Green Revolution (1940's – 1960's)
- Food for Peace – PL480

Signed in 1954
"To promote the expansion and stability of American agriculture, to make maximum use of surplus to further foreign policy"

Government programs stimulate over production → Government bails out the farmers by purchasing the surplus → Surplus is **given** to food insecure countries

- US Agricultural Subsidies

Since 1954, the US has spent nearly $20 billion every year to distort the American food market to keep prices competitive for American farmers

WORLD TRADE ORGANIZATION

Multi-Sectorial Agricultural Policy

"It's like a Swiss Army knife."

- President Obama 2/7/14

The Best Democracy Money Can Buy

Factors that determine policy outcomes

- Lobbying
- Revolving Door
- Civil Movements

Solutions…

Organi
Do Not
No Ro
Zona Orgánica
Environmental Health
For PEP and VIGOR-
VITAMIN
DONUTS
Each Donut Fortified with a minimum of 25 units of Vitamin B1
Food & Nutrition Security
LET'S
Social Well-Being