

Unit 5

The Transformation of the Rural Sector and Global Nutrition

Rural Geography

The following information corresponds to Chapters 20 & 30 in your textbook. Fill in the blanks to complete the definition or sentence. Note: All of the following information in addition to your reading is important, not just the blanks you fill in.

Agribusiness

- Def'n: large-scale, mechanized industrial agriculture; act as corporations.
- Commodity or food chains are usually composed of the following levels/steps:



- The poultry, turkey, pork,... industries have transformed from single farmers to vertically integrated companies. They are involved in the manufacturing & service sectors as much as they are involved in farming (e.g. banks, equipment, sales, selective breeding, etc...)
- One of the more remarkable recent trends is the expansion of the production of "organic" agriculture – crops produced without the use of synthetic or industrially produced pesticides & fertilizers. There has been a growing resistance in Europe to importing American crops grown through genetic engineering.
- Communal agriculture (e.g. China) – consists of collective farms (results in the significant displacement of rural people) have mixed results; farming reprivatization is currently under way in China.

Environmental Impacts



- Agriculture affects the landscape perhaps more than any other human activity (impossible to measure). Ex)
- Expansion of livestock herding into semi-arid regions in Sub-Saharan Africa (can lead to desertification)
- Clearing of forests for cattle grazing in Central & South America (more land needed for feed grains as well – major cause of world hunger)
- Introduction of chemical fertilizers and pesticides in the U.S. (led to rise in demand for organic crops)
- Terracing of hillsides in S.E. Asia (prevents soil from washing downhill, more land area)

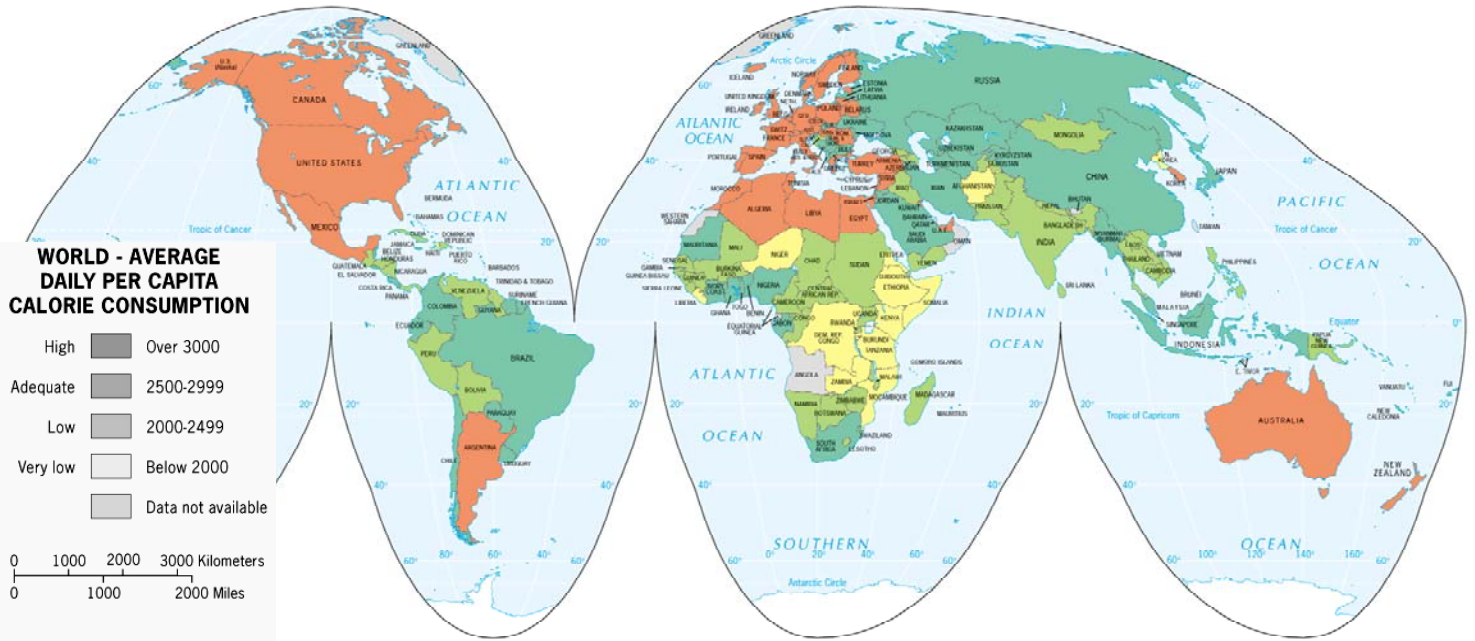


Green Revolution (revisited)

- It has not just been the production of higher yielding seeds (e.g. IR36 = rice) – it is also the development of chemical fertilizers, insecticides, irrigation, machinery, and hybridization (e.g. more disease-resistant).
- Conditions for the Green Revolution to be a success within a region include – surplus money, political stability, independent (not subsistence) farmers, transportation and infrastructure, a market economy (as opposed to a command (communist) economy), cultural acceptance, and education,... Countries like China, India, and Mexico have benefited perhaps more than other regions (e.g. Sub-Saharan Africa).
- Conditions that limit success include – a decline in soil quality, pollution (water), increased costs of fuel & fertilizer, lack of equality (women unable to receive credit), crushing debt (individual & national), climatic factors (erosion, desertification), loss of biodiversity (fewer choices),...

Global Disparities in Nutrition

- ~ 1/6 of the world is malnourished (around 33,000 people starve to death each day!)
- Causes of malnourishment & starvation:
 1. Failure of distribution systems,
 2. Inability of people to pay food costs,
 3. Traditional cultures that favor males over females;
- A balanced diet requires more than just adequate daily caloric intake (World Bank-2,500, UN-2,360), it also consists of dietary *balance* (many people lack enough protein in their diets, this is commonly referred to as “hidden hunger”) – protein deficiency in the first three years can cause permanent damage; both to mental capacity & physical growth (e.g. the brain grows to 80% its adult size in the first three years!)



Possible Risks Toward a Food Crisis	Avoiding a Food Crisis
1. Population change - >70 mil. per year	1. Formulate population policies – not just for regions with high birth rates, the “graying” populations of Europe also have problems
2. Climate change – wide fluctuations (global warming, storms, ...)	2. Sustain the Green Revolution – opposition to GM (genetically modified) products is growing
3. Water supply – water tables are falling	3. Expand farmlands – some propose that land under cultivation could be doubled
4. Energy costs – energy & fertilizer (chemical) costs rise together	4. Stimulate local production – a large percentage of farm produce comes from tiny plots & small gardens
5. Lack of alternative sources – fish stocks are declining rapidly	5. Encourage & support land reform (farmers who own their land cultivate it more carefully)
6. Colonial systems (neocolonialism) – many developing states have maintained cash-crops	6. Improve food distribution systems – developing countries need help in improving their infrastructure
7. Loss of farmland – rich (loss of farmland due to suburbanization) and poor countries (due to rapid urbanization – e.g. Egypt)	7. Develop alternative food sources (e.g. aquaculture – raising of fish & shellfish in ponds)
	8. Strengthen controls over ocean fishing (e.g. may be only 20,000 Atlantic tuna left!)
8. Changing food preferences – meat products are increasing in demand (it requires 12X as much grain to feed cattle than to provide equal nourishment to a single person)	9. Reduce meat consumption – puts tremendous strain economies & ecologies in the periphery
	10. Promote social change - women & children are the most malnourished worldwide