

-- Agriculture & Rural Land-Use --

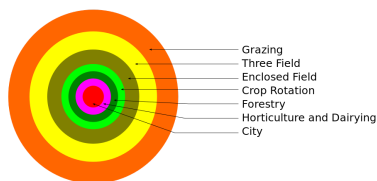


Vocab

Agrarian: in relation to rural affairs
Agribusiness: large-scale farming enterprise
Agricultural Landscape: land that is farmed on
Agriculture: practice of cultivating land & raising stock to produce food
Animal Domestication: taming of animals
Aquaculture: breeding aquatic animals and plants for food
Biotechnology: tech engineered to aid in biological processes and create products in the area of biology
Collective Farm: group of farms run by the government
Intensive Commercial Agriculture: efficient farming on small plots of land to maximize crop yield and profit (more effort, more yield)
Extensive Commercial Agriculture: farming using mostly manpower & natural fertilizers; smaller amounts of physical labor in relation to area being farmed (smaller effort, smaller yield)
Crop Rotation: growing different crops in the same field to avoid exhausting the soil of vital nutrients; reduces need for pesticide
Double Cropping: harvesting twice a year from same field
Environmental Modification: changes in environment due to human activity; desertification, pesticides, soil erosion
Desertification: turning of arable land into desert (big problem today in Africa & rural countries; not enough land to farm)
Extensive Subsistence Agriculture: crops are used for local/family on large areas of land with minimal input
Intensive Subsistence Agriculture: crops are used for local/family on large areas of land with maximal input for maximum yield
Shifting Cultivation: field are rotated; used for few years and left to rest for long periods of time to let is rejuvenate
Slash & Burn: cutting & burning of trees to enrich the soil (typically used in tropical forest regions w/ small populations)
Milpa: planting of multiple crops on a single field (Mesoamerica)
Nomadic Herding/Pastoralism: raising of livestock for food by moving them from field to field to find new land to graze on
Extractive Industry: activities involved in exploring & developing the non-regenerative resources on Earth
Intertillage: clearing fields using manual equipment
Planned Economy: centralized gov. controls production of goods
Plant Domestication: selective breeding of plants to modify it
Renewable Resources: easily replaced; solar, hydro, plants & animals
Nonrenewable Resources: not easily replaced; fossil fuels, coal
Specialization: skills in specific type of work
Staple Grains: can be used & stored all year long
Sustainable Yield: highest rate to indefinitely use a renewable resource w/o reducing current available supply
Mechanization: implementing technology into equipment
Chemical Farming: specialized chemicals that enhance yield
Tragedy of the Commons: people use up resources for their own good w/o regard for others, leading to a community-wide disaster
Transhumance: seasonal migration of livestock from lowland pastures to mountains

Commercial Agriculture
 Mixed Crop & Livestock
 Grain Farming
 Dairy Farming
 Commercial Gardening & Fruit
 Livestock Farming
 Mediterranean Farming

The Von Thunen Model



Revolutions

1st Agri. Revolution: 10,000 years ago; plant & animal domestication
2nd Agri. Revolution: tech, fertilizer, & adv. methods introduced
3rd Agri. Revolution: dev. of GMOs
Biorevolution: revolution of biotechnology to help in farming
Green Revolution: intro. of pesticides & higher yields (less effort, same amount of land, more food for cheaper; beneficial for environment, led to development of industry, & overall economic growth due to focus being shifted from satisfying hunger needs to secondary needs)

Land Use Patterns:

Long Lots: narrow parcels of land stretching from rivers, roads, or lines of transportation

Metes & Bounds: uses physical features and landmarks

Township & Range: used for dividing property for sale

Rectangular: divide lands into rectangular parcels

5 Sectors of the Economy

Primary Economic Activity: extraction of natural resources from the environment; agriculture, mining, lumbering

Secondary Economic Activity: related directly to processing raw minerals or materials; manufacturing sector

Tertiary Economic Activity: related to the servicing industry; education, banking, retailing, transportation

Quaternary Economic Activity: processing and sharing of information; information technology, media, research & development

Quinary Economic Activity: top-level decisions are made; researchers, government, healthcare, business officials

Critical Points in Agriculture

- Increased **usage of pesticides & herbicides, leads to contamination** of water, soil, & other vegetation; can also harm wildlife (birds, fish, & beneficial insects)
- **Ecosystems are also being degraded due to introduction of monocultures** into complex ecosystems; this weakens the environment as any one little thing like a single disease could wipe out the entire breed in one go; not stable or strong for surviving and adapting long term
- Bolivia agreed on a deal to be forgiven on hundreds of millions of dollars of debt in exchange for preserving over a million square miles of rainforest
- South America has the **largest problem of deforestation in order to make room for the agricultural and mining industries to bring in more money** to stimulate cash flow; Amazon forest is being cleared out at a rapid rate, presenting a serious eco. Problem
- Topsoil erosion is a huge problem as crops grow in the first few inches of soil; however, due to long term use, the nutrients in the soil dry up and they can take thousands of years to replenish
- **Kyoto Protocol (1997, signed by 80+ countries) called for the reduction of greenhouse gas emissions**, dropped by US in fear of restricted economy growth
- **GMOs** (genetically modified organisms) are crops that have been bred and had its' original DNA altered in order to produce the best and most "perfect" version of itself; **sweeter fruits, longer lasting, more resistant, contain higher level of nutrients**
- Pop is expected to grow by 2.2 billion by 2050 so food production needs to increase btw 25% -70%
- Monsanto (agrochemical & agricultural biotech corp.) is responsible for engineering GMOs and pesticides; they face allegations for serious environmental damage; yet controversy exists on the evidence to back this + counterevidence