

GEOG 247 Cultural Geography

# AGRICULTURE

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## Agriculture

**What is it?**  
**Why and where did it begin?**

a.k.a. **Farming**: The practice of cultivating crops and the raising of animals in a controlled setting.

- **Plant domestication** may have occurred in tropical **South/Southeast Asia** over 14,000 yrs. ago.
- **Animal domestication most likely began earlier than plant cultivation**, but some argue that animal domestication began as recently as 8,000 yrs. ago, well after crop agriculture.

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## Agriculture

- ❖ **Agriculture** is the **deliberate modification** of Earth's surface (through cultivation of plants and rearing of animals) to **obtain sustenance or economic gain**.
- Uses **methodologies developed by people** in response to physical geographic stimuli (as climate, landforms, water availability) and social tenets (as customs and religious beliefs)
- ❖ **Agriculture is a learned trait, therefore it is cultural.**

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## Agricultural Revolutions

**First Agricultural Revolution**

- **Domestication of plants and animals dating back over 14,000 years**; seed crops allowed people to select/control plants (Fertile Crescent of SW Asia – Mesopotamia)

**Second Agricultural Revolution**

- **Coincided with the industrial revolution of the 1800s**; **gave the world mechanization** (improved methods of cultivation, harvesting and storage); crop yields improved; economies of scale realized.

**Third Agricultural Revolution**

- **Currently in progress**; called the **Green Revolution**; noted for **scientific methodologies** to create higher yields and increase resistance to debilitating conditions; genetically modified organisms (GMOs); specialized fertilizers; antibiotics, precision irrigation.

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## TERMS

- ❖ **Domestication**:  
The **transformation** of a plant or animal species **from a wild state to a condition of dependency on human management**, usually with a distinct physical change from its wild forbears, for the main purpose of producing food for people, but also for other human conveniences.
- **In addition**, the domestication process is used to produce **feed** for animals, **fiber** for clothing and manufacturing, and alternative **fuel** supplies as ethanol and other biomasses.

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## More Terms

- **Cultivate**: to care for; nurture
- **Crop**: any plant cultivated (cared for) by people.
- **Agricultural hearth**: source area for the domestication of plants and animals
- **Subsistence agriculture**: production of food for one's own or family's use.
- **Commercial agriculture**: production of food for sale or barter to others.
- **Horticulture**: the science, skill, or occupation of cultivating plants (esp. flowers, fruit, and vegetables), in gardens or greenhouses.
- **Floriculture**: growing flowers and ornamental shrubs as a crop.
- **Aquaculture**: the farming of ocean and freshwater fish, plants and animals for human consumption

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## Modern Agriculture

Depends heavily on engineering, technology and the biological and physical sciences.

- **Agricultural engineering** is used to determine the need for irrigation and the drainage, conservation and channeling of water.
  - **Agricultural chemistry** deals with such issues as the use of fertilizers, insecticides and fungicides, soil structure, analysis of agricultural products and the nutritional needs of farm animals.
- **Expensive, complicated equipment** does the work of numerous laborers.
  - **Remote sensing and satellite technology** are used to analyze crop growth and development, soil moisture, insect infestations, field contouring and planting tracts.

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## Economic Geog Refresher

- ✓ **Primary economic activities:** Economic activities that involve the extraction of economically valuable products from the earth, including **agriculture, ranching, fishing, hunting and gathering, forestry, mining, and quarrying.**
- ✓ **Secondary economic activities:** Activities (such as manufacturing) that take a primary product and **change it into something else** such processed foods, leather products and biomass.
- ✓ **Tertiary economic activities:** Those service industries that **connect producers to consumers** and facilitate commerce and trade or help people meet their needs, as food sellers, distributors and merchants.

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## At the Center of it All: FOOD

Agriculture (food production) is the core of human being. It plays a pivotal role between people, the environment and economic well-being.

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## Diet vs. Cuisine

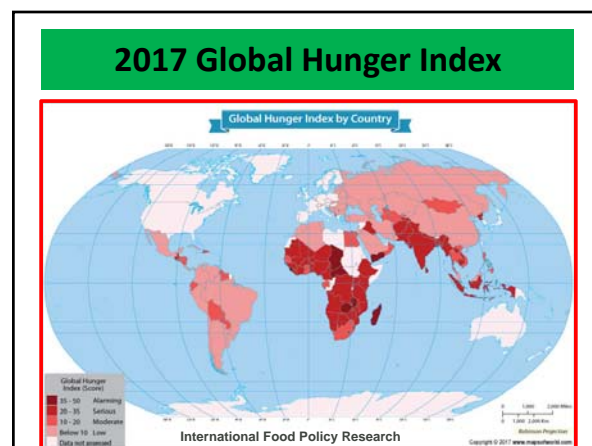
**Diet:** The combination of food products (plant/animal) ingested for nutritional gain.

**Cuisine:** The style of cooking or preparing food.

## Cultural Heritage Diet Pyramids

This program studies traditional diets and associated daily physical activities of culture groups.

Oldways Preservation Trust and Harvard School of Public Health  
<http://oldwayspt.org/>



## World Hunger

The world produces enough food for all its people, yet economics and politics cause food shortages. It is estimated that 800 mil. people are malnourished.

**Prevalence of undernourishment in the population of the country**  
Source: UNFAO, 2015

**Percentage of children under 5 who are stunted, 2010-2016 (UNICEF).**  
Undernutrition contributes to nearly half of all deaths in children under 5 and is widespread in Asia and Africa.

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## Five Themes related to the Cultural Geography of Farming

1. **LANDSCAPE:** Farming varies around the world in relation to cultural and environmental factors.
2. **ECOLOGY:** Elements of the physical environment (climate, water, soil, topography) set broad limits on agricultural products and practices.
3. **INTERACTION:** Farmers make choices that modify the environment, including selecting products for profit.
4. **REGIONS:** Climate patterns influence the crops planted in an area, and local soil conditions influence the crops planted on a farm. The effect of global climate change must be included in this mix.
5. **DIFFUSION:** Through colonization, world wars, and corporations, agricultural methods have spread worldwide.

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## Cultural Geography of Farming

- Farmers choose from a variety of agricultural products and practices, based on their perception of the value of each alternative.
- These values are partly economic and partly cultural.
- How farmers deal with their physical environment varies according to dietary preferences, availability of technology, and other cultural traditions.
- At a global scale, farmers increasingly pursue the most profitable agriculture (aspects of agglomeration and comparative advantage come into play) along with dealing with multi-national corporations.

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## Types of Agriculture

Around the world different forms of agriculture predominate based on: 1. physical conditions; 2. crop productivity and use; 3. human preferences and need; and 4. cultural tradition.

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▪ Swidden / shifting cultivation</li> <li>▪ Paddy rice farming</li> <li>▪ Peasant grain, root, livestock farming</li> <li>▪ Plantation agriculture</li> <li>▪ Market gardening</li> </ul> | <ul style="list-style-type: none"> <li>▪ Livestock feeding</li> <li>▪ Grain farming</li> <li>▪ Dairying</li> <li>▪ Nomadic herding</li> <li>▪ Livestock ranching</li> <li>▪ Urban agriculture</li> <li>▪ Aquaculture/mariculture</li> </ul> |
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## Food Supply and Population

Before the advent of agriculture, hunting, gathering, and fishing were the most common means of subsistence throughout the world.

- The size of hunting and gathering clans varied according to climate and resource availability.
- Hunting and gathering communities in areas of abundance could support larger populations that were concentrated in smaller areas.

➤ How did hunter/gatherer peoples increase their food supplies?

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## Tools - A Cultural Adaption

- The first tools used in hunting were simple **clubs** - tree limbs that were thick and heavy at one end.
- Later bones and stones with sharp edges and the development of **spears** made hunting more effective.
- **Traps** allowed hunters to roam a larger area and reduce the "wait time" for prey.
- The **control of fire** offered new opportunities.

- Humans also harvested shell fish, trapped fish (by cutting off small patches from the open sea), and invented tools to catch fish, including harpoons, hooks, and baskets.

➤ **Using tools and fire, human communities altered their environments, which helped to establish more reliable food supplies.**

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## Agric Practices and Production

- The drive toward **economic efficiency** has meant that the average size of farms (acres in production) in developed nations has been growing, regardless of the kind of agricultural good produced.
  - ❖ The mechanized, highly productive American farm contrasts with the less productive and largely subsistence farm found in much of the world.
- Less than 2% of the US workforce is involved in agricultural production yet production is at an all-time high.
  - This sharp contrast in agricultural practices constitutes one of the most fundamental differences between the more developed and less developed countries of the world.

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## Images of Agricultural Practice

## Hunters and Gatherers: Constantly Searching for Food

- ❖ In order to survive people need food and water.
  - Earliest humans had to search their surroundings for their daily needs - gathering, hunting and fishing for food.
  - Hunters and gatherers lived in small groups.
    - Men hunted or fished.
    - Women collected nuts, berries, and roots.
- The group traveled often (wanderers/nomads) establishing new home bases/camps in areas where food, water and shelter was adequate.
  - Direction and frequency of movement depended on the migration of game and the seasonal plant growth.
    - ✓ leading to awareness of natural cycles and planning
  - Abundance in place reduced the need to wander.

**Did this lead to an "ah-ha" moment?**

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## Contemporary Hunting and Gathering

- ❖ Current estimates put c.250,000 people (out of 7 billion) still surviving by hunting and gathering.
  - Contemporary hunting and gathering societies are isolated groups living on the periphery of world settlement, but they provide insight into human customs that prevailed in prehistoric times, before the invention of agriculture.

## Early Agricultural Regions

**What accounts for this distribution?**

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## Areas of Naturally Fertile Soil

**Most fertile areas have high food production ratios and higher populations. Compare this map to the maps of world hunger, undernourishment and population density. Can a correlation be made?**

