

## Agri Revolutions V2 (double check)

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Wiki article: the Three Agricultural Revolutions

**The First Agricultural Revolution:** was when human beings first domesticated plants and animals and no longer relied entirely on hunting and gathering. By growing plants and raising animals, human beings created larger and more stable sources of food, so more people could survive. Areas still remained in stage one of the demographic transition with the first agricultural revolution. The First Agricultural Revolution came about 10,000 years ago in Melanesia and around 2,500 BC in Sub-Saharan Africa. It goes along with the first cities and the first urban revolution. The First Agricultural Revolution changed the small, mobile groups of hunter-gatherers that were common into sedentary societies based in built-up villages and towns. These societies modified their natural environment by means of specialized cultivation and storage technologies (e.g. irrigation) that created surplus production. These changes were the beginnings of high population densities, complex labor diversification, trading economies, centralized administrations and political structures, ideologies and systems of knowledge like writing.

Common methods of farming include:

1. Shifting cultivation is an agricultural system in which plots of land are cultivated temporarily, and then abandoned. It is practiced in much of the world's Humid Low-Latitude climate regions, West Africa, Central South America, and Southeast Asia.
  1. One specific kind of shifting cultivation is slash-and-burn agriculture (also called milpa agriculture and patch agriculture). It consisted of the controlled use of fire in places. Trees are cut down and all existing vegetation is burned off. In slash-and-burn, farmers use tools (machetes and knives) to slash down trees and tall vegetation, and then burn the vegetation on the ground. A layer of ash from the fire settles on the ground and contributes to the soil's fertility.
  2. Shifting cultivation conserves both forest and soil: its harvests are substantial given the environmental limitations, and it requires a lot of organization. Shifting cultivation uses substantially little energy and has been a sustained method of farming for thousands of groups.
2. Subsistence farming self-sufficiency farming in which farmers grow only enough food to feed their families.
  1. Subsistence land use is giving way to more intensive farming and cash (or luxury) cropping. For example, wet rice is dominant in large population concentrations of Asia.
  2. Includes shifting cultivation, Pastoral Nomadism (primarily in dry lands of Africa and Asia)

**The Second Agricultural Revolution:** In the seventeenth century, a second agricultural revolution took place which increased efficiency of production as well as distribution which allowed more people to move to the cities as the industrial revolution got under way. The eighteenth century's European colonies became sources of raw agricultural and mineral products for the industrializing nations. Farming in the twentieth century has become highly technological in more developed countries. Such technologies included: GIS, GPS, and remote sensing.

All of the following either changed or improved during this revolution:

- \* Farm size increased and field rotation was instituted.
- \* Soil preparation, fertilization, crop care, and harvesting improved
- \* New technologies were introduced. This occurred with Industrial Revolution
  - o The seed drill enabled farmers to avoid wasting seeds and to easily plant in rows, making it simpler to distinguish weeds from crops.
  - o Later, the internal combustible engine made possible the mechanization of machinery and the invention of tractors, combines, and a multitude of large farm equipment.
- \* Advances in livestock breeding helped farmers develop new breeds that were strong milk producers or good for beef
  - o Artificial feed was introduced to help improve livestock

Increased agricultural output made it possible to feed much larger urban populations (second urban revolution), enabling the growth of a secondary (industrial) economy.

Johann Heinrich von Thünen's (1783-1850) model (Von Thunen Model), which is often described as the first

effort to analyze the spatial character of economic activity, represents the second agricultural revolution first hand.

The Third Agricultural Revolution (aka Green Revolution): The third agricultural revolution, beginning approximately 250 years after the start of the second, was a period in time when new agricultural practices were created to help farmers all over the world. It was an international effort that was planned to eliminate hunger by improving crop performances. This plan provided new practices that allowed farmers to produce more of the same product within the same amount of land. This meant that the farmers could get more out of their land than they used to. This rapid diffusion of more productive agriculture techniques occurred throughout the 1970s and the 1980s. This agricultural revolution has three distinctive features:

1. The removal of the lines distinguishing agriculture as primary, secondary, and tertiary activities.
  1. Farmers and agriculturists now engage one or more, including the primary activity of crop production, some sort of secondary activity such as manufacturing or processing the crops, and tertiary activities such as marketing and advertising their products through co-ops and other marketing organizations.
2. The second distinctive feature of this agricultural revolution is more intensive mechanization
  1. Mechanization began replacing animal and human labor in the United States during the late nineteenth century. This helped increase farming yields.
3. Biotechnology is the third
  1. Began with chemical farming — the substitution of inorganic fertilizers and manufactured products for manure and humus to increase soil fertility. The development of genetically engineered crops (GE) or genetically modified organisms (GMOs) is its principal orientation.
    1. Chemicals were also used to control pests, and a wide variety of herbicides, pesticides, and fungicides have been produced in a never-ending effort to enhance the yields.

Today, most famines result from political instability rather than failure in production. India became self-sufficient in grain production by the 1980s, and Asia saw a 2/3 increase in rice production between 1970 and 1995. The geographical impact of the Green revolution is highly variable; as in Africa where it has had only a limited impact since agriculture is based on different crops and there is lower soil fertility. An entire field of biotechnology has sprung from the Third Agricultural Revolution and the development of genetically modified organisms, which is principally, genetically engineered crops.

#### Helpful Links:

<http://www.bbc.co.uk/dna/h2g2/A2054675>

[http://en.wikipedia.org/wiki/Neolithic\\_Revolution](http://en.wikipedia.org/wiki/Neolithic_Revolution)

<http://www.answers.com/topic/agricultural-revolution>

[http://en.wikipedia.org/wiki/Green\\_Revolution](http://en.wikipedia.org/wiki/Green_Revolution)