

Agriculture Practices: Plant Sources

by Sophia



WHAT'S COVERED

In this lesson, we will discuss the topic of agricultural practices. We will define what agriculture is and how it has evolved to become what it is today. We will understand the Green Revolution and the technological advances that impacted food production. Lastly, we will discuss plant and meat sources of food. Specifically, this lesson will cover the following:

1. What Is Agriculture?

Agriculture is the activity of growing crops and raising animals for food and supplies.



Thousands of years ago, humans lived as hunter-gatherers and traveled seasonally. This meant that they would collect whatever plant-based foods they could find and eat whatever animals they could kill. This period in human history forced populations to be low because food was sometimes difficult to find.



Eventually, the practice of growing crops and raising animals—the practice of agriculture—took hold and transformed human society. Humans transitioned to having settlements instead of traveling seasonally, thus allowing human populations to grow.



2. Green Revolution and Food Production

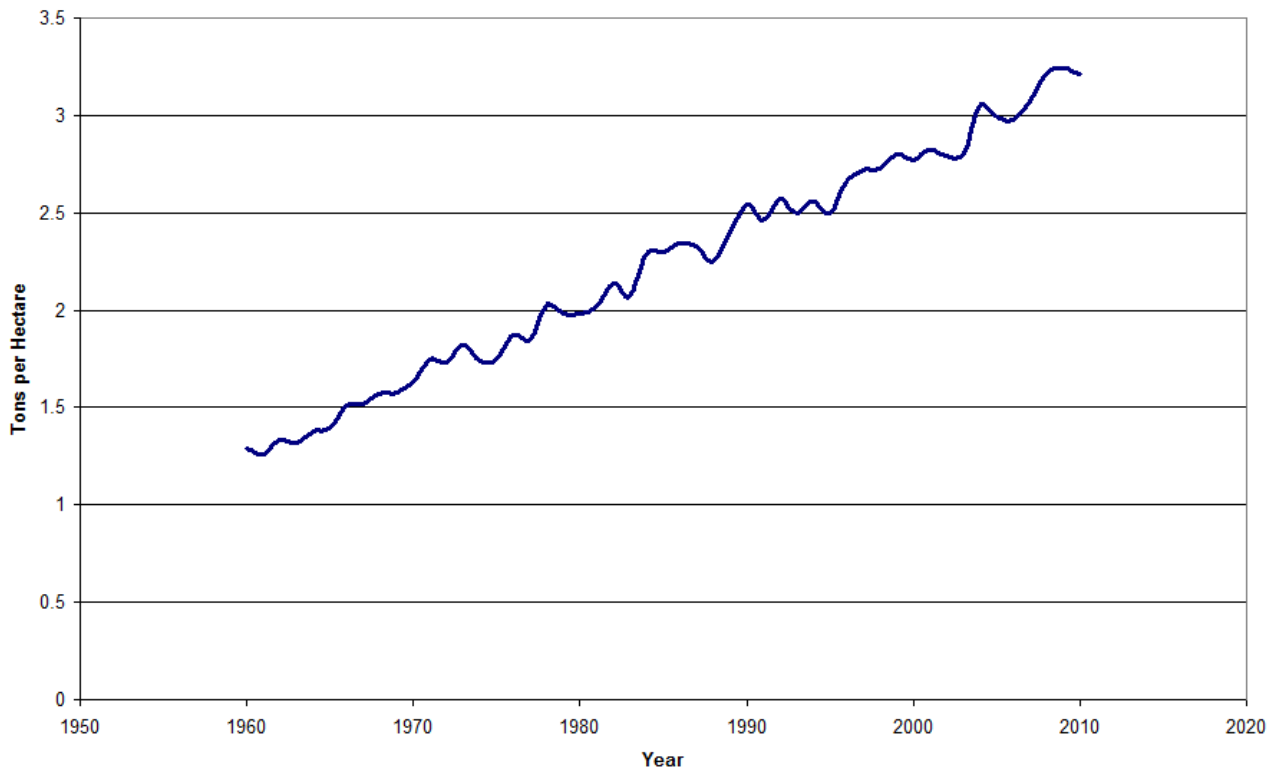
Agriculture then continued for thousands of years, steadily evolving until an explosion of technological advancement in the mid-1900s changed agriculture forever. This was called the Green Revolution. It allowed humans to transition from resource-based agriculture to demand-based agriculture, meaning economics drove food production, as opposed to food production being limited by available resources.

The following three primary advances allowed food production to skyrocket:

1. Improved breeding methods of crops that increased plant survival and yield
2. Mechanization of farming tools and machines that improved the efficiency of farmers and cut down on human labor requirements
3. Chemical fertilizers that allowed plants to get the nutrients they needed to grow

The impacts of the Green Revolution are apparent when we look at the increase in grain production from 1950 to 1990. In the graph below, note that grain production almost tripled worldwide in only 40 years.

World-Wide Grain Yield



Food production is dependent on the following four primary factors:

- Arable land, which is land suitable for crop growth
- Temperature, because certain crops and animals can only survive in certain temperature ranges
- Precipitation, because certain crops and animals can only survive with certain amounts of rainfall
- Nutrient availability, or the amount of usable nutrients in the soil for plants to consume

These combined factors determine the kinds of crops that can be grown and how well they will grow.

3. Plant Sources

Let's focus on plant sources of food for a moment. Corn, rice, and wheat are by far the dominant crops grown all over the world. These three crops provide over half of all human calorie needs on the planet.

There are two main categories of plant crops grown.

Subsistence crops are food products needed for human survival.

➞ **EXAMPLE** Rice and corn are subsistence crops.

Cash crops are nonfood products or crops that are not meant to meet our primary nutritional needs.

➞ **EXAMPLE** Coffee (a food product not for primary nutrition) and latex (a nonfood product grown for industrial use and economic gain) are cash crops.



TERMS TO KNOW

Subsistence Crops

Food products needed for survival.

Cash Crops

Nonfood products or crops that are not meant to meet our primary nutritional needs.

4. Meat Sources

Our sources of meat are animals that have been domesticated for human use. Only about a dozen large animals have been domesticated for eating. Two prime examples are chickens and sheep. The practice of aquaculture—or farming fish—is also an important part of agriculture.

There are a few important facts to know about human meat consumption:

- The developed world consumes 76% of meat compared to only the 24% consumed by the developing world, even though the developing world makes up the majority of the world's population.
- 90% of the grain grown in the United States is used for animal feed. It takes 16 pounds of grain to grow one pound of meat.
- U.S. citizens eat an average of 264.5 pounds of meat per person every year, while their Indian

counterparts eat only 9.7 pounds.



SUMMARY

In this lesson, we learned about **agriculture**, which is the practice of growing crops and raising animals for food and supplies. Humans transitioned from being hunter gatherers to being farmers thousands of years ago. Agriculture has allowed human populations to grow. In the mid-1900s, the **Green Revolution** skyrocketed food production worldwide. We learned that there are four key factors that influence food production: arable land available, temperature, precipitation, and available nutrients in the soil. **Meat sources** of food are consumed primarily by the developed world. **Plant sources** of food are made up of two types: subsistence crops and cash crops, which are the key terms for today. Subsistence crops are food products needed for survival, while cash crops are nonfood products.

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TERMS TO KNOW

Cash Crops

Nonfood products or crops that are not meant to meet our primary nutritional needs.

Subsistence Crops

Food products needed for survival.