

History of Agriculture



Interest Approach

- Ask the students who farms in their family. Have them identify previous generations of farmers in their families. Shift the discussion to relatives who work in agriculture but do not farm. Again ask whether previous generations were employed in agriculture. Ask how the students think agricultural work has changed over time.

Student Learning Objectives. Instruction in this lesson should result in students achieving the following objectives:

- ❑ 1. Identify important agricultural developments that occurred in early American history.
- ❑ 2. Explain the major technological developments that have occurred in agriculture.
- ❑ 3. Explain historical events and trends that have led to the development of today's agriculture industry.

Terms. The following terms are presented in this lesson (shown in bold italics):

- ☐ biotechnology
- ☐ domestication
- ☐ General Agreement on Tariffs and Trade
- ☐ genetic engineering
- ☐ Hatch Act
- ☐ Homestead Act
- ☐ invention

Terms cont.

- ❑ Morrill Land-Grant College Act
- ❑ North American Free Trade Agreement
- ❑ Smith-Hughes Vocational Education Act
- ❑ Smith-Lever Agricultural Extension Act
- ❑ technology
- ❑ United States Department of Agriculture

Objective 1: Identify important agricultural developments that occurred in early American history.

□ Anticipated Problem: What important early developments in agriculture helped influence life today?

I. Agriculture in the United States has been heavily influenced by Native Americans and European colonists.

A. Native Americans inhabited much of North America before the arrival of Europeans. Around 7000 B.C., Native Americans began simple farming. These early Americans developed sophisticated agricultural practices. Evidence exists that 5,000 years ago, Mesoamericans had domesticated maize from a grass plant called teosinte. By A.D. 1000, maize was being grown throughout much of North America in large plots. Native Americans cleared fields for the production of maize, beans, squash, and other crops. They also relied on hunting and gathering to meet their food, clothing, and shelter needs. At least 1,000 years ago, Hawaiians practiced aquaculture, or fish farming.





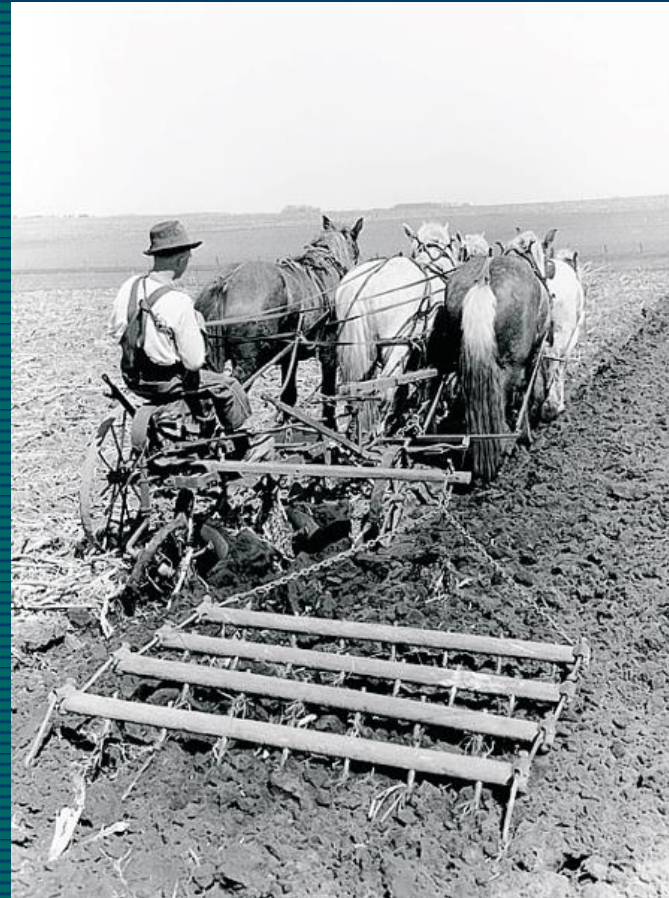
B. Colonists from Europe came to America to settle. Along the Eastern seaboard, they found fields cleared of forests for agricultural purposes. Native Americans practiced a form of agriculture in which they would farm a field until yields dropped. Then, they would move on to another area, allowing the soils to recover fertility. To the Europeans, the land appeared abandoned. Also, diseases, such as measles and smallpox, had decimated Native American populations before European settlers arrived. This left lands somewhat unoccupied and allowed the Europeans to gain a foothold. Initially, they struggled to survive, often because the crops brought from Europe did poorly. Their survival often depended on adopting the agricultural practices employed by the Native Americans. Europeans called maize corn, a term for cereal grains. Colonists brought domesticated livestock to early settlements in Virginia and Massachusetts. **Domestication** is the taming, confinement, and breeding of animals and plants for human use.

Objective 2: Explain the major technological developments that have occurred in agriculture.

- Anticipated Problem: What have been the major technological developments in agriculture?

II. Throughout history many important technological developments have taken place in agriculture. These developments have drastically changed the agriculture industry.

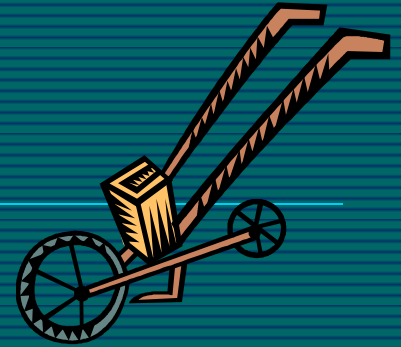
A. In the mid-1700s, about 90 percent of Americans were farmers. Today, roughly 2 percent of the American population is engaged in production agriculture. The shift was made possible with new technology. **Technology** is the use of inventions in working and living. An **invention** is a new device or product or a new way of doing work.



B. Many important technological advancements in American agriculture occurred between 1607 and 1901.

1. 1607—The Indians showed the Plymouth colonists how to grow crops such as corn, pumpkins, squash, and beans.
2. 1700s—Charles Townshend developed the first crop rotation systems.
3. 1701—Jethro Tull developed a planting machine.
4. 1793—Eli Whitney invented the cotton gin.
5. 1800s—Gregor Mendel, a botanist, discovered the basic principles of heredity.





6. 1834—Cyrus McCormick invented the reaper.
7. 1837—John Deere designed a one-piece wrought-iron plow in Grand Detour, Illinois.
8. 1850—Joseph Glidden developed barbed wire for use by cattle ranchers.
9. 1862—The Morrill Act created land-grant colleges. The USDA was established.
10. 1869—The transcontinental railroad was completed.
11. 1901—The first successful gasoline-engine tractor was built.

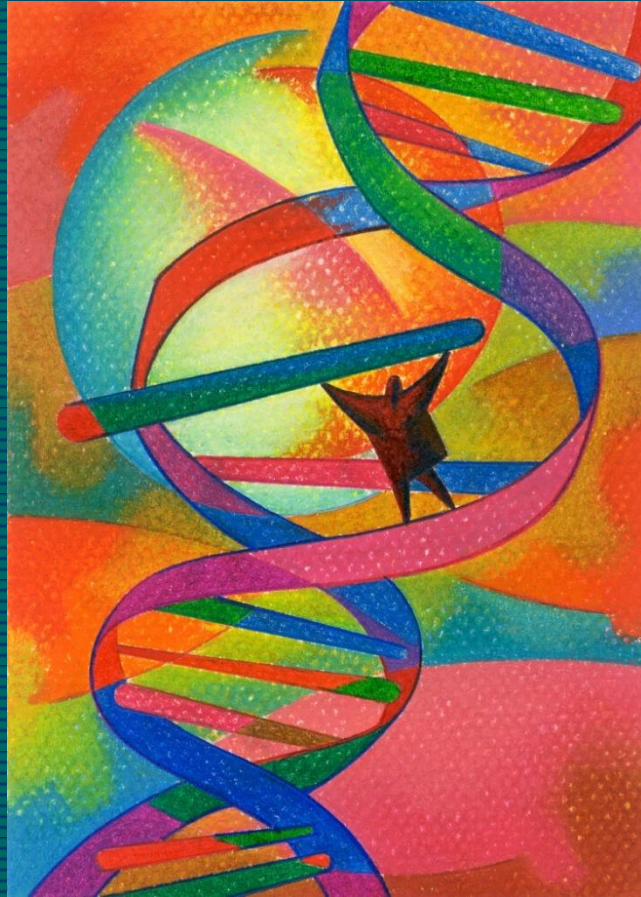
C. Additional advancements continued to be made in the twentieth century.

1. Improved varieties of corn were developed through hybridization. These varieties were more vigorous growing and more resistant to pests and diseases.

2. Chemical pesticides (to control insects, diseases, and weeds) and chemical fertilizers increased yields.

3. Computers were developed and began to be widely used in agriculture.





4. Global Positioning System satellites and Geographic Information Systems enabled site-specific farming.

5. Discoveries in biotechnology improved production.

Biotechnology is any technological application that uses biological systems, living organisms, or derivatives of these systems or organisms to make or modify products or processes for specific use.

Genetic engineering is one aspect of biotechnology. Some benefits of genetically engineered or modified organisms have improved disease and insect resistance, longer shelf lives, added nutritional value, and herbicide tolerance.

Objective 3: Explain historical events and trends that have led to the development of today's agriculture industry.

- ❑ Anticipated Problem: What historical events have lead to the development of today's agriculture industry?

III. History helps us understand our future. Events that occurred in the past have an impact on the agricultural practices of today.

A. A new nation emerged with the passing of the Declaration of Independence. Ninety percent of all people farmed at that time.



1. George Washington and Thomas Jefferson were farmers who readily adopted new practices and also served as presidents of the United States.



Washington



Jefferson

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- B. By the mid-1800s, government leaders began to establish programs to encourage agriculture. The first laws of agriculture began to form agricultural policy.
1. Congress set up a special committee on agriculture in 1825. With strong support from several groups, the U.S. Patent Office began agricultural research in 1852.
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2. In 1862, President Abraham Lincoln called on lawmakers to pass agricultural legislation. Three major acts were passed.



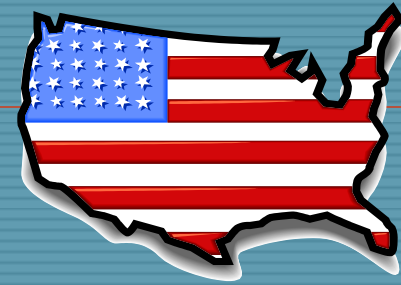
- a. The first act set up an agency that later became the **United States Department of Agriculture** (USDA). By 1889 the department was elevated to the cabinet status it enjoys today.
 - b. The second important piece of legislation was the **Homestead Act**, which made 160 acres of public domain land available to every American citizen who was the head of a family or over 21 years of age. c. The third law was the **Morrill Land-Grant College Act**, which established an agricultural and mechanical college in each state. The Morrill Act provided for a grant of 30,000 acres of land for each representative and senator a state had in Congress. The land was to be used as an endowment for the support of a college of agriculture and mechanics.
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- C. The **Hatch Act**, passed in 1887, appropriated money for experiment stations in connection with the various agricultural colleges. These stations conduct investigations, undertake experiments in all fields of agriculture, and publish the findings of the experiments.
 - D. The **Smith-Lever Agricultural Extension Act** of 1914 was passed to establish a link between the state land-grant colleges and farmers. The Cooperative Extension Service grew from this.
 - E. The **Smith-Hughes Vocational Education Act** of 1917 provided federal aid to schools, particularly for vocational agricultural education.
 - F. The American Farm Bureau Federation was formed, with the goal of education for its members and commercial and political activities on behalf of agriculture.
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G. After World War II, important international measures were undertaken by the United States and its allies to liberalize trade and payment.

1. The first was the **General Agreement on Tariffs and Trade** (GATT). It was originally passed in 1947 and readopted in 1994. GATT includes the following provisions:
 - a. It obligates each country to accord nondiscriminatory, most-favored-nation treatment to all other contracting parties with respect to tariffs.
 - b. It prohibits the use of quantitative restrictions on imports and exports.
 - c. It provides special provisions to promote trade of developing nations.

2. The **North American Free Trade Agreement** (NAFTA) was enacted on January 1, 1994. It is a comprehensive trade agreement that improves virtually all aspects of doing business within North America. Its goal was to open trade between the United States, Canada, and Mexico. NAFTA eliminates tariffs completely and removes many of the non-tariff barriers, such as import licenses, that have helped to exclude U.S. goods from the other two markets, especially Mexico.



REVIEW

- ❑ What important early developments in agriculture helped influence life today?
- ❑ What have been the major technological developments in agriculture?
- ❑ What historical events have lead to the development of today's agriculture industry?

