

Trends in Agriculture—Part Two

MANY CHANGES have occurred in agriculture. How we get our food, clothing, and housing is much different today from the way it was a century ago. This E-unit will discuss historical events and trends that had major effects on the development of our modern agricultural industry.



(Courtesy, Agricultural Research Service, USDA)

Objective:



Explain historical events and trends that have led to the development of today's agricultural industry.

Key Terms:



agriculture infrastructure
free enterprise
research

Development of Today's Agriculture

Agriculture in the United States is a product of several factors acting together. First, the nation had fertile soil and other resources that made a productive agriculture possible. Second, the economic system of the United States supported private enterprise and risk taking, making it possible for people with motivation to be successful. Third, a strong work ethic helped colonists overcome adversities and harness available natural resources. But, there was more: several historical events contributed to the emergence of American agriculture.

EDUCATION SYSTEM

Early leaders of the United States saw the need for education, including agricultural education. Colonists realized that they could learn from Native Americans. For example, the first

Jamestown settlers learned much from the teachings of Squanto in the early 1600s. New climates, soils, crops, and pests confronted settlers. Answers were needed so that the colonists could take advantage of the rich resources that were available.

Towns and villages established small schools to teach reading, writing, arithmetic, and other basic subjects. As the nation developed, schools became larger, and more years of education were added. Most education was a function of the state and local levels until passage of the Morrill Act in 1862. This act provided for the use of grants of land to establish colleges to teach agriculture, military, and related subjects in the states. Since grants of land were involved, schools created by the Morrill Act are often called land-grant colleges. Teaching agriculture became a priority nationwide with the Morrill Act.

The early 1900s saw two additional laws. In 1914, the Smith-Lever Act was passed to provide for a system of extension associated with the land-grant colleges. In 1917, the Smith-Hughes Act was passed to provide for the inclusion of instruction in agriculture in the nation's public schools. This act created opportunities for many rural youth, and now urban youth as well, to learn about agriculture in high school. The National FFA Organization emerged in the late 1920s as part of the efforts in agricultural education.

RESEARCH SYSTEM

Research is the process of seeking answers to questions. The goal is to expand knowledge and solve problems. Fortunately, early settlers were interested in research and developments that made agriculture more efficient. Societies for the promotion of agriculture were formed shortly after the United States became independent in the late 1700s. Government leaders also saw the need for agricultural research. Thomas Jefferson is well known for his interests. Ely Whitney, Cyrus McCormick, John Deere, and others are well known for their research and development work.

Not long after the Morrill Act was enacted in 1862, individuals began to realize that what was known about agriculture was not always accurate and that better practices were needed. The Hatch Act was passed in 1887 to provide for a system of experiment stations in conjunction with the land-grant colleges. The focus of the research was on plant and animal production, though areas related to family and home were included. This meant that every state with a land-grant college could set up an agricultural research system.

Progress from research encouraged private citizens and businesses to carry out research. Many developments in recent years have been through such efforts.

GOVERNMENT POLICIES

Some individuals would say that the U.S. government was established in a manner that gave favored status to agriculture. Early government leaders were much involved with agriculture because they were landowners and farmers. They realized the need for policies that promoted agriculture, including farming and the export of crops such as cotton and tobacco.

The economic system established in the United States was capitalism, or free enterprise. **Free enterprise** is an economic system that allows individuals to organize and operate businesses with a minimum of government regulations. Individuals can own property and can operate businesses to make a profit. Individuals are also free to choose to produce what they want and to buy and sell at prices agreed upon by buyers and sellers.

MASS PRODUCTION

Factories were established that could mass produce large amounts of products. The practices used in nonagricultural endeavors were also used in agriculture. Today, food processing plants use automation and systems that allow large volumes of food to be quickly processed. Modern milk, vegetable, and meat facilities use assembly-line methods. These methods also reduce hand-labor requirements and make possible the production of quality food and other products at a low cost.

ACCEPTANCE OF SCIENCE-BASED AND TECHNOLOGY-BASED APPROACHES

Early efforts in education provided an informed population. The people were receptive to science-based information. They saw the value of improved practices in agriculture. They turned away from unfounded practices related to superstitions and sought research-tested methods. By doing so, people realized that they could be more productive and give less manual-labor effort in their work.

New technologies gradually emerged. People used the technologies on a small scale at first and then on a larger scale. New machines, crops, and other improvements allowed productivity to increase.

AGRICULTURE INFRASTRUCTURE

Modern American agriculture is based on transporting, grading, processing, storing, and carrying out other functions needed to get food and clothing to people. **Agriculture infrastructure** is the foundation that makes agricultural commerce possible. It includes railroads, highways, trucks, grain elevators, processing facilities, and many other public and private works. Feeds, seeds, fertilizers, equipment, pesticides, and fuel or power must be available to agricultural



FIGURE 1. A grain elevator with railroad access demonstrates some parts of marketing infrastructure. (Courtesy, U.S. Department of Agriculture)

producers as needed. Without these, modern production agriculture cannot occur. Harvested products need appropriate infrastructure to move them from the farm, through all the marketing processes, to the consumer.

Summary:



Major historical factors have contributed to the prominence of American agriculture. No doubt, education is an important factor. A research system, combined with education, provides new technologies for agriculture and prepares people to use the technologies. Government policies have promoted agricultural development, particularly free enterprise. Mass production used in factories is also useful in processing agricultural products. The willingness of people to give up superstitions and accept science-based practices and technology-based approaches has helped move agriculture forward. Agriculture infrastructure is important in promoting plant and animal production and moving the products to consumers.

Checking Your Knowledge:



1. Name three laws that promoted education in agriculture.
2. What is research?
3. What is free enterprise?
4. What is agriculture infrastructure? Why is it important?

Expanding Your Knowledge:



Use print media and/or the Internet to read and learn more about historical events and trends that had major effects on the development of our modern agricultural industry. Prepare a brief report.

Web Links:



U.S. Department of Agriculture

<http://www.usda.gov>

Illinois Department of Agriculture

<http://www.agr.state.il.us>