

Nature of the Agriculture/Horticulture Industry

Interest Approach

Have the students create their own definition of agriculture. Ask for volunteers to share their definitions with the rest of the class. Compile the best parts of each definition to build a definition that the entire class can accept.

Have students conduct a survey throughout the school. Have them ask three individuals what is the first thing they think of when agriculture is mentioned. Chances are that most people think of farming. Use the survey results as a basis for a discussion on how far-reaching agriculture is. Use the discussion as a starting point in helping the class understand that agriculture is far more than farming.

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

- 1. Define agriculture and explain the agriculture industry.**
- 2. Describe the various components of the agriculture industry.**

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

- agribusiness
- agricultural chemistry
- agricultural engineering
- agriculture
- agriculture industry
- aquaculture
- farming
- floriculture
- food science
- forestry
- horticulture

Terms cont.

- inputs
- intensive farming
- landscape horticulture
- natural resources
- nutrient management
- olericulture
- organic farming
- ornamental horticulture
- pomology
- soil conservation
- stewardship
- subsistence farming

Objective 1: Define agriculture and explain agriculture industry.

- Anticipated Problem:
What is agriculture?

I. **Agriculture** is the science of growing crops and raising animals to meet the food, fiber, fuel, and other needs of humans. It includes many areas, such as soil conservation, pest management, and mechanics.



A. The ***agriculture industry*** comprises all the activities needed to provide people with food, clothing, and shelter. It includes farm and nonfarm operations.



Agriculture Industry cont.

- 1. **Farming** is the use of land and other resources to grow crops and raise animals. Methods of farming are diverse. **Subsistence farming**, common in many parts of the world, is farming on a small area of land, producing enough for the needs of the family. In contrast to subsistence farming, **intensive farming**, or industrial agriculture, conducted on a commercial scale, involves large areas and/or large numbers of animals. Intensive farming also involves large quantities of farm inputs, such as pesticides and fertilizers, and a high level of mechanization. An intensive farming operation generally aims to maximize financial gain from grain, produce, or livestock through the sheer size of the business.

Agriculture Industry cont.

- 2. **Agribusiness** is all the nonfarm work in the agriculture industry. Roughly 10 times the number of people who work in farming are employed in agribusiness. The two main areas of agribusiness are supplies and services and marketing and processing.
 - a. The supplies and services area includes **inputs**, which are items used in growing crops or raising animals. It also includes some items used with lawns, flowers, trees, etc.
 - b. The marketing and processing area involves the activities that transform agricultural products into forms people want.

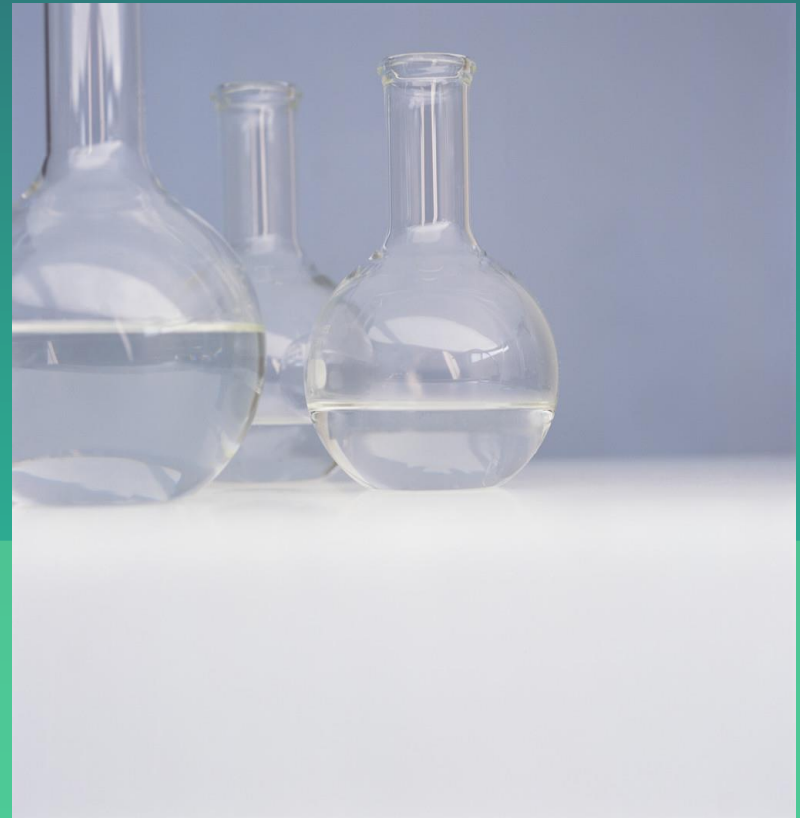
Objective 2: Describe the various components of the agriculture industry.

- Anticipated Problem: What are the various components of the agriculture industry?

II. Agriculture has become more diverse over the years. The industry that once focused mainly on the production of food for humans and feed for animals has grown to be very complex. There are many areas of specialization in the agriculture field.

Components of the Agriculture Industry cont.

- A. Chemicals have revolutionized agriculture.
Agricultural chemistry is an area of agriculture that includes chemical fertilizers, chemical pesticides, soil analysis, analysis of agricultural products, and determination of the nutritional needs of plants and animals.



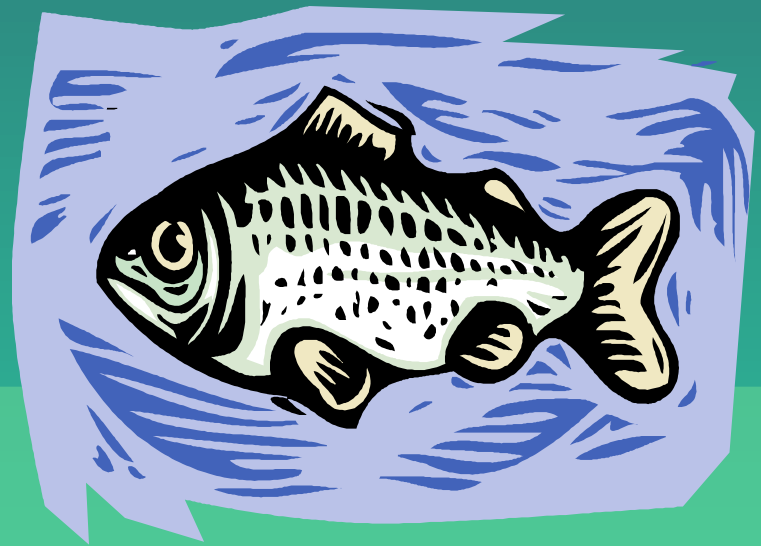
Components of the Agriculture Industry cont.

- B. Agricultural engineering and mechanics have greatly increased farm efficiency and productivity. **Agricultural engineering** is the design of agricultural machinery, equipment, and structures. Tractors and other farm equipment, equipment used in processing, handling, and storage of agricultural products, and instruments, such as GPS equipment, have advanced agricultural practices.



Components of the Agriculture Industry cont.

- C. ***Aquaculture*** is the cultivation of fish and other aquatic organisms. It includes the production of plants, such as watercress and water chestnuts.



Components of the Agriculture Industry cont.

- D. *Food science* is a discipline within agriculture that deals with technical aspects of food from harvest to consumption. Some areas of food science are food chemistry, food engineering, food microbiology, food packaging, food preservation, and food processing. The packing, processing, and marketing of agricultural products have become more advanced. Food preservation methods, including quick-freezing and dehydration, have increased the markets for farm products.



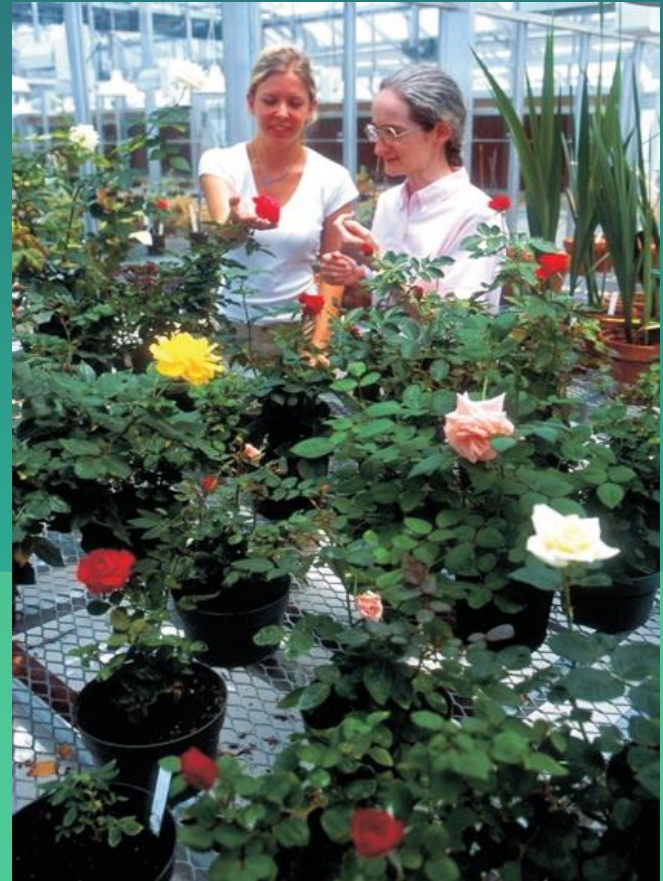
Components of the Agriculture Industry cont.

- E. **Forestry** is the art, science, and practice of studying and managing forests. Some aspects of forestry include producing timber as a raw material for wood products and using forests as wildlife habitat, for recreation, and to maintain the quality of natural water.



Components of the Agriculture Industry cont.

- F. ***Horticulture*** is the cultivation of garden plants. Three main areas of horticulture are ornamental horticulture, olericulture, and pomology.



Main areas of horticulture:

- 1. *Ornamental horticulture* is the art and science of growing plants for their beauty. Ornamental horticulture consists of two main areas, floriculture and landscape horticulture.
 - a. *Floriculture* is the production, transportation, and use of cut flowers and foliage and of greenhouse crops.
 - b. *Landscape horticulture* is the production and use of plants to make the outdoor environment more appealing.



Main areas of horticulture cont.

- 2. **Olericulture** is the growing, harvesting, storing, processing, and marketing of vegetables.
- 3. **Pomology** is the growing, harvesting, storing, processing, and marketing of fruits and nuts.



Components of the Agriculture Industry cont.

- G. Organic farming is on the rise to meet consumer demands. **Organic farming** is a production system that avoids the use of synthetically compounded fertilizers, pesticides, growth regulators, and livestock feed additives.



Components of the Agriculture Industry cont.

- H. ***Natural resources*** are all the things found in nature, including living organisms, minerals, soil, water, and air. Natural resources are closely tied to the environment. Natural resources may be subdivided into eight groups. They are wildlife, atmosphere, soil, water, minerals fossil fuels, sunlight, and people.



Components of the Agriculture Industry cont.

- I. Soil conservation and nutrient management techniques have expanded, resulting in less damage to the environment. **Soil conservation** consists of management practices that protect the soil. **Nutrient management** pertains to the amount, form, placement, and timing of applications of nutrients for plants. Both these practices are associated with stewardship. **Stewardship** is the responsibility to manage natural resources in ways that ensure their sustainability for current and future generations.



REVIEW

- What is agriculture?
- What are the various components of the agriculture industry?