AGRICULTURE in the United States provides jobs and other benefits. Most important, however, agriculture provides food, clothing, and shelter. Without a productive agriculture, the nation and its people would not enjoy the same quality of life.

Objectives:
1. Define quality of life.
2. Discuss modern agriculture’s role in basic human nutrition.
3. List agricultural products used to provide food.
4. Identify agricultural products used to provide clothing.
5. Identify agricultural products used to provide human shelter.

Key Terms:
carbohydrates milk proteins
fats minerals quality of life
forestry My Pyramid Plan vitamins
meat nutrient wool

Quality of Life

Quality of life is the general standard of living of a group of people. The term often relates to the people in a region or country. Quality of life includes the amount of money available and the ability to obtain goods and services. Housing, nutrition, health care, education, environmental health, happiness, and other indicators may be a part of quality of life.
Quality of life is associated with the availability of food, clothing, and housing. Agriculture has a major role in quality of life. An abundance of wholesome food products available at a reasonable cost contributes to a high quality of life. The same is said for clothing and housing.

Role of Agriculture in Human Nutrition

Agriculture provides most of the food humans consume. This food furnishes nutrients that nourish the human body. A balance of food is needed to assure that the body is receiving the proper nutrients. The food also needs to be wholesome and free of disease, pollution, and other substances or organisms that cause illness.

NUTRIENTS AND NUTRITION

A nutrient is a substance that promotes growth and well-being. Without proper nutrients, a person may become ill, fail to grow properly, or die. The obtaining of proper nutrients is known as nutrition. The foods consumed by an individual provide nutrients.

The major nutrients needed by the human body and examples of food sources that provide them follow.

♦ Proteins—Proteins are the nutrients needed for growth and repair of tissues in the body. They are especially important with babies, children, and teenagers, though all adults need some protein. Sources of protein include milk, lean meat, fish, and beans, peas, nuts, and other seeds.

♦ Carbohydrates—Carbohydrates are the nutrients that provide energy for the body to move and carry out its functions. Carbohydrates are not as concentrated as fats. Carbohydrates are often divided into three categories: sugars, starches, and fiber. Sources of carbohydrates include potatoes, pasta, and bread.

♦ Fats—Fats are nutrients that contain high amounts of energy. They provide energy for the body to move and carry out life functions. (Fats are also known as lipids.) Sources of fats include meat, fish, and lard and vegetable oils. Most nutritionists recommend lower levels of fat intake to prevent health problems, such as obesity and clogged arteries.

♦ Minerals—Minerals are inorganic elements, such as calcium, phosphorus, and magnesium. Eating a variety of foods will likely provide sufficient minerals, though some people...
take mineral supplements. Milk, fruit, leafy vegetables, and meat are among the sources of minerals.

- **Vitamins**—Vitamins are inorganic substances needed in small amounts to perform specific functions in the body. Several kinds of vitamins are needed, such as A, B, C, D, E, and K. Sources of vitamins include fruits and vegetables.

- **Water**—Water is needed by the human body to regulate body temperature and promote processes in the body. Each person should consume the recommended amount of water each day. Nearly all agricultural products contain some water, but they are not the major source of water for the human body.

Individuals should refer to a nutrition guide for the amounts of nutrients they should consume.

**NUTRIENT PLAN**

The U.S. Department of Agriculture has developed a plan to guide food consumption to assure that individuals receive the proper nutrients in their diets. My Pyramid Plan is a graphic approach available via the Internet that helps individuals choose the kinds and amounts of foods to consume. The plan is based on age, gender, and level of activity. Emphasis is on fewer calories and more essential nutrients.

**CONSUMPTION OF SELECTED PRODUCTS**

The U.S. Department of Agriculture compiles information on the consumption of food products. The food intake of people varies by region, income, and age. Table 1 presents the average per person consumption of selected food products in the United States. Some people...
consume more, and others less. Variations are due to age, preferences, and other factors. Your personal food consumption pattern may not agree with that of all people nationwide.

### TABLE 1. Annual Per Person Consumption of Selected Food Products*

<table>
<thead>
<tr>
<th>Pounds**</th>
<th>Agricultural Products/Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>165</td>
<td>Red meats (pork, beef, veal, and lamb and mutton)</td>
</tr>
<tr>
<td>112</td>
<td>Poultry (chicken and turkey)</td>
</tr>
<tr>
<td>33***</td>
<td>Eggs</td>
</tr>
<tr>
<td>585****</td>
<td>Milk (cow’s milk)</td>
</tr>
<tr>
<td>272</td>
<td>Fruit, including grapes</td>
</tr>
<tr>
<td>469</td>
<td>Vegetables and potatoes</td>
</tr>
<tr>
<td>191</td>
<td>Rice, cereal, and flour products</td>
</tr>
<tr>
<td>9</td>
<td>Peanuts and tree nuts</td>
</tr>
<tr>
<td>28</td>
<td>Melons</td>
</tr>
</tbody>
</table>

*The data have been rounded to remove fractions.

**Average pounds consumed per person. Wild catch of fish and game are not included.

***Converts to approximately 255 chicken eggs per person.

****Converts to approximately 73 gallons of whole milk per person.


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### Products Used for Food

Products used for food are from two major sources: animals and plants. Of course, a few products that are not of animal or plant origin are used for food, but these are of small consequence overall in the United States. One example is mushrooms, which are fungi. In the United States, annual per person consumption of mushrooms is 3.6 pounds.

### ANIMAL PRODUCTS

Animal products comprise an important source of food. The demand for animal products creates large and important areas of animal agriculture production. Meat, milk, and eggs are the three most important groups of animal food products.

♦ **Meat—** **Meat** is the flesh of an animal used for food. Muscle tissue is most important and most desired as meat. Meat is from several species of animals. Some meat is classified as red meat, and other as white meat. Red meat is from cattle, sheep (lamb and mutton), and hogs. White meat is from chickens, turkeys, and other birds. Fish and shellfish are also white meat, though most of the time they are listed separately from chickens and tur-
keys. In recent years, improvements in pork quality have resulted in some interest in classifying it as white meat, but that hasn’t occurred on a widespread basis.

♦ **Milk**—Milk is the whitish liquid secreted by the mammary glands of female mammals. It is a food high in nutrients. Cow’s milk is by far the most widely consumed milk, though the milk of goats, sheep, and other species is sometimes used. The production of milk is known as dairy farming. Milk is pasteurized and otherwise processed to assure its quality. Milk is commonly available in fluid form but is also made into cheese, ice cream, yogurt, and other products.

♦ **Eggs**—The primary eggs used for human consumption are those of chickens. Goose, duck, pea fowl, and other eggs may be used. Most eggs are infertile, meaning that they are not developing embryos. Eggs are graded and marketed to assure uniformity and wholesomeness.

**PLANT PRODUCTS**

Worldwide, about 600 species of plants are used as sources of food. In the United States, far fewer are major sources of food. The parts of plants used for food include seeds, leaves, roots, fruits, flowers, stems, and sap or juice.

Wheat, corn, and rice are seeds and the major cereal grains used for food. Nuts, beans, coffee, and many other seeds are also used as food. Bread made from wheat serves as a major food for many people.

Leaves include those of cabbage, spinach, turnips, lettuce, and other leafy vegetable crops.

Roots include those of beets, carrots, radishes, turnips, and onions; some structures that grow on roots, such as potatoes, are also used as food. Sugar beets are a major source of sugar in the United States.

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**FIGURE 3.** Appropriately portioned and attractively packaged meat is available in modern supermarkets. (Courtesy, U.S. Department of Agriculture)

**FIGURE 4.** Strawberries are known for their nutrient contributions to the human diet. (Courtesy, Agricultural Research Service, USDA)
Many kinds of fruits are used for food. Citrus fruits include oranges, grapefruit, and lemons. Among other fruits used as food are apples, pears, blackberries, tomatoes, strawberries, cantaloupes, watermelons, cucumbers, and pumpkins.

Fewer flowers are used for food than most of the other plant parts. Broccoli, cauliflower, and artichoke are three examples of flowers used for food. Some ornamental plants are also used as garnish to add appeal and color to food, including the pansy and nasturtium.

Stems used for food include celery, asparagus, and rhubarb. Stem portions are sometimes included with the leafy foods, such as cabbage and spinach.

Juice used as food may be extracted from other food sources—for example, tomato juice and orange juice. The juice of some plants is used for food, such as sap from sugar cane that is used to make sugar and syrup and sap from maple trees that is used for syrup.

Products Used for Clothing

Products used for clothing, as with food, are from both animal and plant sources. Some species provide both food products and products for clothing, such as cottonseed oil and cotton fiber from the cotton plant.

ANIMAL PRODUCTS

Clothing products are obtained from a number of animals. A few examples are listed here:

♦ Wool and other hairlike products—Wool is the fiber material that covers the bodies of sheep, camels, and a few other species. It is the most widely used animal fiber in the United States. With sheep, the wool is removed by shearing once a year and processed
into woolen products. Mohair is the fiber covering Angora goats and is an important fiber for some uses. Cashmere and alpaca are variations of wool that have some use. Fur is the hairy coat of some species that is used while still attached to the hide.

- **Leather**—Leather is a product made by tanning the hides of some species, such as cattle. It is used for shoes, belts, protective clothing, and other purposes.

- **Silk**—Silk is the soft fiber produced by the silkworm. The fiber is made of the saliva of the silkworm moth as it constructs a cocoon. Silk is prized for making scarves, ties, and blouses and for blending with other fibers, such as wool.

- **Jewelry**—Pearls, bones, and other animal products are used as accessories with human clothing. A pearl is created by a small grain of sand inside an oyster. The oyster secretes a substance to cover the grain or lessen the discomfort from it. The substance hardens creating a pearl. Pearls may be cultured or natural.

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**PLANT PRODUCTS**

The most important plant product in clothing manufacture is cotton. This crop is grown in the southern states, where long, warm growing seasons are found. Today’s cotton producers use considerable high technology in cotton farming. The mature cotton bolls (fruit) contain both fiber and seeds. Ginning is used to remove the seeds. The fiber is sent to a spinning mill for manufacture into cloth, and the cloth is sent to a garment plant for manufacture into the desired clothing. The seeds are sent to an oil mill for manufacture into cottonseed oil and other products, including cottonseed meal, which is used in animal feed and sometimes as a fertilizer because of its high nutrient content.

Other plant fibers used in making clothing include jute, flax, hemp, sisal, and kenaf. Kenaf is the newest and currently being researched for its potential in making clothing and paper.

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**Products Used for Human Shelter**

Products used for human shelter are primarily produced by trees. **Forestry** is the large and specialized area that focuses on the production of trees for wood products. Sometimes the trees are in native forests. Increasingly, tree farms established with improved trees are used to produce wood products.
Common wood products include lumber, plywood, and composition board. Lumber is made by sawing tree logs into boards of specified dimensions. Lumber is widely used to frame and trim houses and apartments. It is also used in making furniture and other products found in a home. Pine, spruce, fir, and a few other species are used in home construction. These are evergreen trees, meaning that they stay green year-round and do not lose their leaves, as do oaks, gums, poplars, and others.

Plywood is a product made by gluing large, thin sheets of wood together so that the grain of the wood is at right angles. This gives considerable strength to the product. Plywood is used in constructing floors, forming walls, and creating the base for nailing or otherwise attaching the roofing material.

Composition board and similar products are made by chipping logs and poles into small pieces. The chips are pressed into large sheets and glued together. Some particleboard materials are used in place of plywood.

Many kinds of specialty wood products are also made. These include trim and materials used as stair railings and in cabinetry.

Summary:

Agriculture is much a part of helping assure that Americans have a high quality of life. Food, clothing, and shelter are readily available to most people. Without a productive agriculture, this would not be so.

Food provides the nutrients that humans need to live, grow, work, and otherwise be active. The kinds of foods individuals eat should be carefully selected to meet their nutrient needs. The U.S. Department of Agriculture has developed the My Pyramid Plan as a means of providing guidance to individuals based on their age, gender, and level of physical activity. Each individual can design his or her own plan on the My Pyramid Plan Web site.

Products of animal and plant origin are used for food, clothing, and housing. Of the many thousands of species of animals and plants on Earth, only a small number provide for these needs.

Remember, better food choices translate into a healthier you!
Checking Your Knowledge:

1. What is quality of life?
2. Why is food important to humans?
3. What is a nutrient? What are the major nutrients needed by humans?
4. What is the My Pyramid Plan? How is it useful?
5. What major animal and plant products are used for human food?
6. What major animal and plant products are used for clothing?
7. What agricultural products are used in providing housing?

Expanding Your Knowledge:

Use print media and/or the Internet to read and learn more about the major uses of animal and plant products in meeting human needs. Prepare a brief report.

Web Links:

United States Nutrition Site
http://www.nutrition.gov/

U.S. Department of Agriculture
http://www.usda.gov

Illinois Department of Agriculture
http://www.agr.state.il.us

American Farm Bureau
http://www.fb.org/

Illinois Farm Bureau
http://www.ilfg.org/

Agricultural Career Profiles
http://www.mycaert.com/career-profiles