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World Food Supply



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Anticipated Problems:

1. Describe the three economic categories into which countries are classified.
2. List important benefits of agriculture in the United States.
3. Analyze the impact of agriculture on the local, state, national, and world economies.
4. Explain the role of government in the world's food supply.
5. Explain the role of technology in the world's food supply.

Terms



- Agricultural technology
- arable land
- centrally controlled economy
- commerce
- crop yield
- developed country
- developing country
- distribution
- free-market economy
- improved crops
- Malthusian Theory
- mechanization
- processing
- undeveloped country

• • **Into what categories are countries classified?**

- The world food supply is influenced by the level of development a country has achieved.

• • Into what categories are countries classified?

- A ***developed country*** is a country where the economy is dependent on the use and continued advancement of technology.
 - Has a strong manufacturing economy
 - Has a strong service economy. (An economy based on nonmanufacturing activities)
 - The United States, Japan, Sweden, France, Germany, and Great Britain

• • Into what categories are countries classified?

- A ***developing country*** is a country in the process of building a manufacturing base that depends heavily on natural resources.
 - Strong in the areas of forestry and agriculture
 - Mexico, China, Brazil, India, and Turkey



• • Into what categories are countries classified?

- An ***undeveloped country*** has a strong dependence on its agriculture sector, with little development of a manufacturing sector.
 - Majority of the population involved in subsistence farming
 - Farmers produce only enough food for their families.
 - Niger, Haiti, Mali, Afghanistan, and Yemen

• • Development is Influenced by Many Factors

- Soil and Climate
- Education
- Mechanization
- Commerce
- Improved crops



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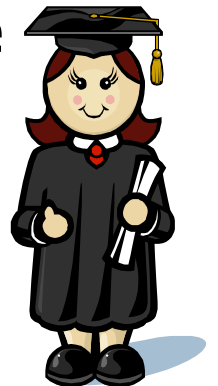
Soil and Climate

- Developed nations:
 - Soils and climates that support the production of food and fiber
- Underdeveloped nations:
 - Poor soil or poor climate, or both



Education

- Developed nations:
 - Higher levels of education
 - Well-developed systems of agricultural education and agriscience
- Undeveloped and developing nations:
 - Lower levels of education
 - Very little education in agriculture and agriscience



Mechanization

- ***Mechanization*** is the use of machinery to do work.
 - Developed nations use tractors, power equipment, and low levels of labor.
 - Undeveloped and developing nations use hand labor or animal power and little mechanization.



Commerce

- ***Commerce*** is trade between two parties.
 - Developed nations have systems for buying and selling food and fiber.
 - Undeveloped and developing nations may have poor transportation, few storage facilities, and no way to buy and sell goods easily.



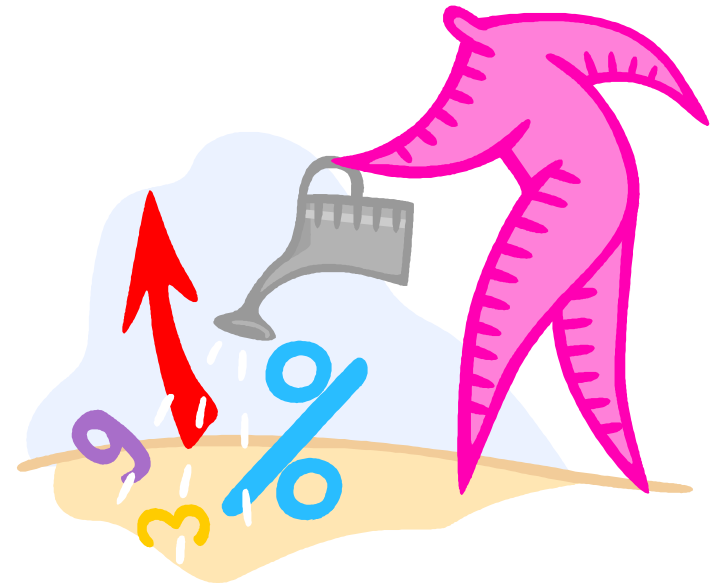
Improved Crops



- ***Improved crops*** are crops that have been enhanced to improve their productivity or resistance to pests.
 - Developed nations use crops that have been carefully selected to produce high yields.
 - Undeveloped and developing nations may have few improved crops.

Benefits of Agriculture

- The agriculture industry provides many benefits to the citizens of the United States. Five important benefits:
 - Basic Human Needs
 - Strong and stable economy
 - Job creation
 - Products to trade
 - Supports other industries



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Basic Human Needs

- Basic Human Needs: food, shelter, clothing
 - When these needs are met people are happier feel better about their country and themselves.



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Good Agricultural Industry

- A good agriculture industry leads to a strong and stable country.



• • • **Job Creation**

- Jobs are created by the agriculture industry.
 - About 21 million people are employed in the agriculture industry.
 - This is 20 percent of the American workforce.

Trade

- The agriculture industry provides the United States with products to trade with other countries.
- This allows our country to keep our foreign trade in balance.



• • • **Supports Other Industries**

- The agriculture industry supports other industries.
 - Agricultural products and services are used in making nonagricultural products.
 - This creates jobs in other sectors of the economy.

• • **Influences on the Local, State, National, and World Economies**

- Civilization was made possible with the development of agriculture.
 - Cultures have advanced
 - Economies around the world have grown because of agricultural progress.
 - Agriculture has been an integral part of local, state, and national economic growth in the United States.



Farming in the United States

- Farming was an important aspect of Native American cultures and trade between peoples. The arrival of European settlers increased the level of farming.
 - Farmers provided food for the people.
 - American farmers have been very successful in producing food
 - Occasionally an overproduction depressed prices

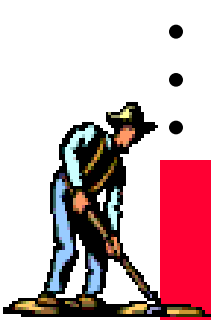
Economic Development

- Plentiful food supplies provided by farmers freed workers to devote their energy to mills, factories, and shops that were essential to America's industrialization.
 - By 1860 the nation's 2 million farms produced farm products that made up 82% of the country's exports.



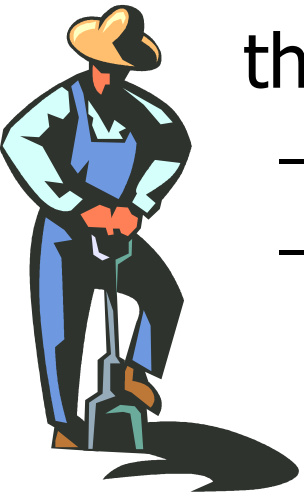
The Growing Agriculture Business

- The agricultural industry has grown to become bigger and more efficient.
 - Consolidation helps the operations improve efficiency
 - American agriculture has become progressively more of an agribusiness (big, corporate farm enterprises)
 - Agribusiness includes a variety of farm businesses and structures, from small, one-family corporations to huge conglomerates or multinational firms that own large tracts of land or that produce goods and materials.



Agribusiness Means Fewer Farms

- The large farms are highly mechanized and require fewer farm hands.
 - 1940: about 6 million farms, averaging 165 acres.
 - By late 1990s: about 2.2 million farms, 470 acres.
- Farm employment declined dramatically during this time.
 - 1900: 50% of the labor force in the US was farmers
 - Early 2000: only 2% worked on farms



Agribusiness and the World

- Agriculture remains a major industry in most nations.
 - According to the Food and Agriculture Organization (FAO) of the United Nations, 42 percent of the world's laborers are employed in agriculture.
 - Agriculture is the largest employer.



Agribusiness and the World

- In developing countries
 - 70- 75% of the poor and hungry live in rural areas and depend, directly or indirectly, on agriculture for their livelihood.
 - Those with the highest occurrence of hunger are also the most dependent on agriculture for their livelihood.

Agribusiness and the World

- The U.K.'s Economic and Social Research Council states that Europe is not only the world's largest exporter of agricultural products but also the world's largest importer.
- Africa and Asia and the former Soviet Union are net importers of agricultural products.

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Agribusiness and GDP

- The U.S. Central Intelligence Agency has broken down the gross domestic product (GDP) of countries in the world by three sectors:
 - Agriculture
 - Industry
 - Services

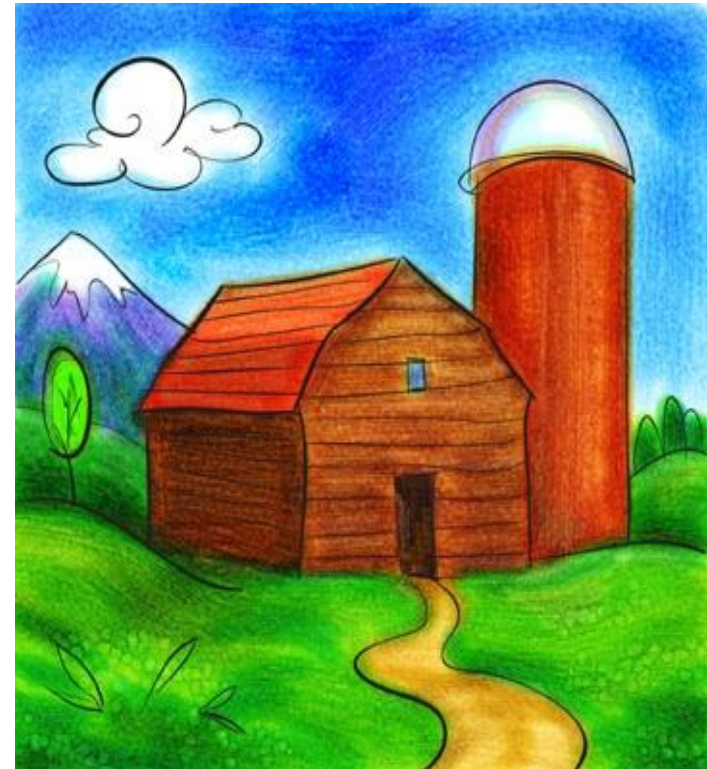
Agribusiness and GDP

- The percentages of GDP in the United States:
 - Agriculture, 0.9%
 - Industry, 20.4%
 - Services, 78.6%
- The percentages of GDP in Laos:
 - Agriculture, 43.4%
 - Industry 30.6%
 - Services 26%



Agribusiness and GDP

- The FAO has identified the top agricultural products in the world as measured in metric tons.



Agribusiness and the top crops

- Rankings for the top eleven crop types are:
 - Cereals
 - Vegetables and melons
 - Roots and tubers
 - Milk
 - Fruit
 - Meat
 - Oil crops
 - Fish
 - Eggs
 - Pulses
 - vegetable fiber



Agribusiness and the top crops

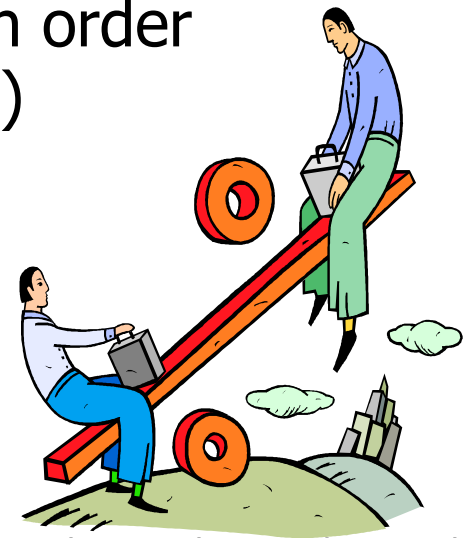
- When ranked by individual crops:
 - Sugar cane leads the way
 - Followed by maize
 - Wheat
 - Rice
 - Potatoes
 - Sugar beets
 - Soybeans
 - Oil palm fruit
 - Barley
 - Tomatoes

• •:Government and The World Food Supply

- A primary responsibility of any government is to ensure its population has an adequate supply of food.
 - Food is a basic human need.
 - Government must fill this need before concerning itself with other matters.

Government and The World Food Supply

- Governments usually supply food using one of two economic systems:
 - A ***free-market economy*** is an economic system based on supply and demand. (United States)
 - A ***centrally controlled economy*** is an economic system in which supply is controlled in order to meet demand. (communist nations)



• :Government and The World Food Supply

- Agriculture forms the foundation for all economic systems. To form a firm foundation, government must focus on three objectives in agriculture.
 - Crop yield
 - New food sources
 - New technologies

First Objective in Agriculture

- ***Crop yield*** is the amount of an agricultural commodity produced per unit of input.

Increased crop yield = more food available



Second Objective in Agriculture

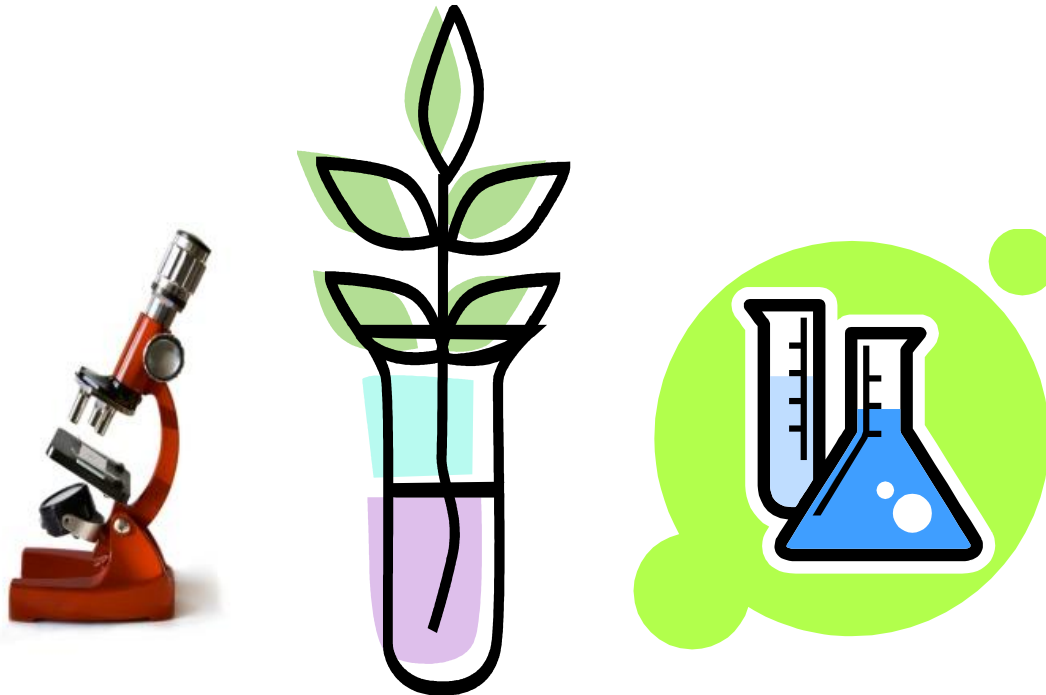
- Identification of plants and animals as new food sources.

New sources = more food available



Third Objective in Agriculture

- Discover new technologies.
 - Governments fund research into new technologies that bring about greater productivity.



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Processing and Distribution

- After a product is grown, it must go through two steps before it reaches the population.
 - Processing
 - Distribution



Processing and Distribution

- ***Processing*** is the changing of a raw material into a useful product.
 - An economy must have a system for turning a wheat crop into bread.
 - Without processing facilities, a wheat crop will not benefit most of the population.



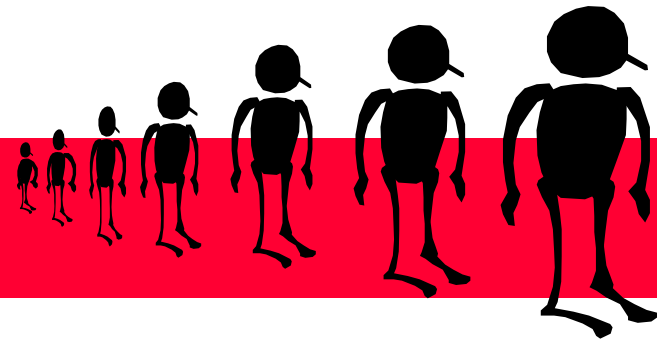
Processing and Distribution

- ***Distribution*** is all the activities associated with the transport of an agricultural product to a place where it can be used.
 - Much of the corn grown in Illinois would be useless if it could not be distributed elsewhere.

Technology and Food Supply

- The world's food supply is dependent on the amount of land available for production and the agricultural technology available to producers.
 - ***Agricultural technology*** is the use of inventions in providing food and fiber.
 - Since available land is declining, an adequate food supply for a growing population must be attained through technology.

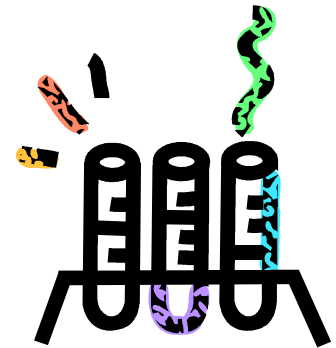
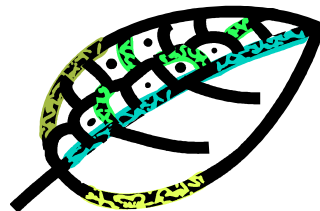
Malthusian Theory



- The ***Malthusian Theory*** states that the world's population will grow faster than agriculture's ability to keep up with its needs.
 - Proposed in 1789 by John Malthus, a British economist
 - Overlooked the role of technology
 - Believed that the world's population would exceed its supply of arable land.
 - ***Arable land*** is acreage that can be cultivated and farmed.

Two Main Areas of Technology

- New crop technology involves the application of science to increase crop productivity.
 - Development of new plant species that grow under conditions in which most others would fail. (drought-resistant plants)
 - Food scientists and plant science experts work together in identifying these plants and their uses in food products.



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Two Main Areas of Technology

- New food technology involves the development of new methods for processing and preserving foods.
 - Advancements in new food technology have made food items available to people who could not previously benefit from them.

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Review

1. What is the difference between a developed country and a developing country?
2. Name the five important benefits of agriculture.
3. Explain how agribusiness translates into fewer farms.
4. Name the two economic systems that Governments use to supply food
5. After a product is grown, what are the two steps it must go through to reach the population?