The International Economy

Unit: International Agriculture
Problem Area: Understanding International Agriculture
Lesson: The International Economy

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

1. Describe the three economic classifications of countries, and identify countries in each category.
2. Describe population estimates worldwide and within major countries, and explain the Malthusian theory.
3. Identify the agricultural products that are produced by the largest countries.
4. Explain worldwide trends in agricultural production and food consumption.

**Resources.** The following resources may be useful in teaching this lesson:

Corresponding E-unit(s). Danville, IL: CAERT, Inc. www.mycaert.com
Equipment, Tools, Supplies, and Facilities.

✓ Overhead or PowerPoint projector
✓ Visual(s) from accompanying master(s)
✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
✓ Materials listed on duplicated items
✓ Computers with printers and Internet access
✓ Classroom resource and reference materials

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

- demographics
- demography
- developed country
- developing country
- Food and Agriculture Organization of the United Nations
- least developed countries
- Malthusian theory
- population
- sovereign

Interest Approach. Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Gather information that states a comparison of the price of food in several countries. Ask the students to list 10 possible reasons for the differences. Lead the discussion to the first objective.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

Objective 1: Describe the three economic classifications of countries, and identify countries in each category.

Anticipated Problem: What are the three economic classifications of countries? What are some of the countries in those categories?

1. There are 203 sovereign states in the world. Sovereign means the state or country has the exclusive right to control a government. Of the 203 states, 10 are not

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recognized by the general international community. The countries of the world are often classified based on their level of industrialization. The three classes are developed, developing, and least developed.

A. A **developed country** is a country that has achieved a high level of industrialization.
   1. Developed countries are sometimes referred to as:
      a. Advanced countries
      b. First world countries
      c. Industrialized countries
   2. Developed countries include Andorra, Australia, Austria, Belgium, Bermuda, Canada, Denmark, the Faroe Islands, Finland, France, Germany, Greece, the Holy See, Iceland, Ireland, Israel, Italy, Japan, Liechtenstein, Luxembourg, Malta, Monaco, the Netherlands, New Zealand, Norway, Portugal, San Marino, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

B. A **developing country** is a country that has not reached the Western-style standards of democratic governments, free market economies, industrialization, social programs, and human rights guarantees for its citizens.
   1. Some developing countries with more advanced economies than other developing nations are referred to as newly industrialized countries.
   2. A developing country is often referred to as a third world country. A third world country is an underdeveloped country that may lack industrialization, may have impoverished people, or may have small per-capita incomes.
   3. Some developing countries are India, China, Brazil, and Mexico.

C. **Least developed countries** are those countries that—according to the United Nations—exhibit the lowest indicators of socioeconomic development along with the lowest human development index ratings of all countries.
   1. These countries are sometimes called fourth world countries.
   2. Many of the least developed countries are in central Africa.

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**Divide the class into three groups. Have one group discuss and describe central Africa. Have another group discuss Mexico. The third group should discuss Sweden. Allow research to be conducted online. Tell the students that you want to know how these places are different and/or similar to the United States.**
Objective 2: Describe population estimates worldwide and within major countries, and explain the Malthusian theory.

Anticipated Problem: What are current population estimates? What is the Malthusian theory?

II. Population is the number of people in a given area. Changes in the population of an area occur over time as an area develops. Demography is the study of the human population. It is studied by people called social scientists. Demographics are the data collected about the human population.

A. The human population has grown tremendously over the past century.
   1. In 1804, the total human population reached 1 billion.
   2. In 1927, roughly 2 billion people populated Earth.
   3. By 1950, the population was 2.5 billion.
   4. Within a span of 37 years after 1950, the population doubled to 5 billion.
   5. In 1999, the world population passed 6 billion.
   6. By 2013, there will likely be 7 billion people living on Earth.
   7. The projection for 2050 is 8.9 billion people.
   8. Most current and future population growth is occurring in developing countries.
   9. Unfortunately, about 3 billion people live in poverty and one-fifth of the world’s population is severely malnourished.

B. The 2000 U.S. Census counted more than 281 million Americans.
   1. It has been calculated that the U.S. population is growing by approximately 2.5 million people annually.
   2. Using the Census Bureau’s medium projections, the U.S. population will grow to 394 million by 2050.

C. Global population growth has steadily declined since 1962 to 1963. Developed countries have shown the greatest decline. However, population growth remains high in the following areas:
   1. The Middle East
   2. South Asia
   3. Southeast Asia
   4. Latin America
   5. Sub-Saharan Africa, which has the highest population growth rates

D. Thomas Malthus (1766 to 1834) was a political economist. In 1798, he wrote An Essay on the Principle of Population. In it, he presented what is called the Malthusian theory—his observation that plants and animals produce far more offspring than can survive. He also believed that humans were capable of overproducing, which would lead to famine. Some of his conclusions follow:
   1. Food is necessary for human existence.
2. Human population, if not checked, tends to grow faster than the power of the earth to produce subsistence.
3. The effects of these two unequal powers must be kept equal.
4. Misery is the mechanism that balances human requirements and available resources.
5. Nature’s requirement that the imbalance between demand and supply be resolved forms the “strongest obstacle in the way of any very great improvement of society,” and thus makes “the perfectibility of man and society” a theoretical and practical impossibility.
6. The “principle of population” (i.e., the inevitability of misery due to the power of population to overwhelm resources) provides the mainspring behind the advance of human civilization by creating incentives for progress.

Lead a class discussion on human population growth and population projections. Then divide the class in half to debate the Malthusian theory. Assign sides, and explain that the students need to defend their assigned position.

**Objective 3:** Identify the agricultural products that are produced by the largest countries.

**Anticipated Problem:** What agricultural products are produced by the largest countries?

**III.** The Food and Agriculture Organization of the United Nations (FAO) provides data on the world production of major crops. The *Food and Agriculture Organization of the United Nations* (FAO) is an agency within the United Nations that heads international efforts to defeat hunger. It serves developed, developing, and least developed countries as a neutral forum where all nations meet as equals to negotiate agreements and to debate policy. Statistics from the FAO show that the top food-producing countries are also some of the largest countries. For example, the United States, China, the Russian Federation, India, and Brazil produce large quantities of food.

A. Worldwide, the United States accounted for 38 percent of the world’s corn production. It was followed by China (21 percent), Europe (8 percent), and Brazil (7 percent).

B. According to FAO, China was the leading producer of wheat, followed by India, the United States, and the Russian Federation.

C. The top oat-producing countries are the Russian Federation (22 percent), Canada (14 percent), the United States (7 percent), Poland (6 percent), Australia (5 percent), and Germany (4 percent).

D. The top barley-producing countries are the Russian Federation (12 percent), Canada (9 percent), Germany (9 percent), France (8 percent), and the Ukraine (7 percent). The United States accounts for 3 percent of the world’s barley production.
E. The top rye-producing countries are Poland (23 percent), the Russian Federation (19 percent), Germany (19 percent), the Ukraine (9 percent), and Belarus (8 percent). The United States accounts for 1 percent of the world’s rye production.

F. The leading countries in sorghum production are the United States (17 percent), India (14 percent), Nigeria (14 percent), Mexico (11 percent), Argentina (5 percent), Sudan (5 percent), and China (5 percent).

G. According to the FAO, Asia produces more than 90 percent of the world’s rice. The largest producers of rice are China, India, and Indonesia. The United States produces 1.5 percent of the world’s rice crop.

H. The top soybean-producing countries are the United States (40 percent), Brazil (24 percent), and Argentina (18 percent).

I. China is by far the largest producer of peanuts. It is followed by India. The United States, Argentina, and Vietnam trail. The vast majority of peanuts grown in China and India are for domestic consumption.

J. Canola ranks as the world’s fifth oilseed crop in terms of production. Only soybeans, sunflowers, peanuts, and cottonseed rank higher. Canada produces 15 percent of the world’s canola. The European Economic Community accounts for nearly 17 percent of the world’s canola, while the United States produces less than 1 percent.

K. The Russian Federation leads the world in sunflower production. It is followed by the Ukraine, Argentina, and India.

L. The potato is the world’s most widely grown tuber crop. It ranks as the fourth-largest food crop worldwide after rice, wheat, and corn. The world’s leading producers of potatoes are China, the Russian Federation, India, the United States, the Ukraine, and Germany.

M. India is the leading producer of cotton followed by China, the United States, Pakistan, Uzbekistan, and Brazil. These six countries account for about three-fourths of world cotton production.

N. Three-fourths of the world’s sugar is made from sugarcane in tropical zones located in the southern hemisphere. The top sugarcane-producing countries in order are Brazil, China, India, Pakistan, and Mexico.

O. Worldwide, the Russian Federation is the leader in sugar beet production. It is followed by France, the United States, the Ukraine, Germany, and Turkey.

P. In 2005, the top cattle-producing countries in order were the United States, Brazil, Argentina, and Australia.

Q. In 2005, the top chicken-producing countries were the United States, Brazil, Mexico, and India.

R. China is by far the top hen and egg producing country, followed by the United States, India, and Japan.

S. The top hog-producing countries are the United States, Germany, Spain, and Brazil.
T. The world leaders in fresh cow’s milk production are the United States, India, the Russian Federation, and Germany.


tThe world leaders in fresh cow’s milk production are the United States, India, the Russian Federation, and Germany. Lead a discussion on the top producing countries in terms of agricultural commodities. Ask why certain countries might be leaders in the production of certain commodities.

Objective 4: Explain worldwide trends in agricultural production and food consumption.

Anticipated Problem: What are worldwide trends in agricultural production and food consumption?

IV. The FAO provides information on trends in agricultural production and food consumption. It reports that world agricultural production and crop yields have declined recently. The reasons are attributed to a reduced demand for agricultural products rather than shortages of land or water. A contributing factor is a steady decline in the world population growth since the 1960s. Today, many countries have fairly high levels of food consumption per person. However, a high portion of the world’s population remains in poverty and lacks the income to support a good diet.

A. It is expected that the growth in world demand for agricultural products will fall from an average 2.2 percent per year during the past 30 years to an average 1.5 percent per year for the next 30 years. The reduction in demand (from 3.7 percent to 2 percent per year) is expected in developing countries, partly as a result of China having passed the phase of rapid growth in its demand for food.

B. Global food shortages are doubtful. Nevertheless, serious problems that exist at national and local levels could worsen if adequate attention is not received.

C. The annual growth rate of world demand for cereals has declined from 2.5 percent per year in the 1970s and 1.9 percent per year in the 1980s to only 1 percent per year in the 1990s.
   1. The decline is basically due to slower population growth and shifts in human diets and animal feeds.
   2. A 1.4 percent per year growth rate in the demand for cereals is expected until 2015.
   3. In developing countries on the whole, cereal production is not expected to keep pace with demand. The expected shortage may be met by increased surpluses from traditional grain exporters. The needs may also be filled by transition countries, which are projected to convert from being net importers to net exporters.

D. Oil crops have had the quickest increase of any type of crop.
   1. The consumption of oil crops per capita is expected to rise more rapidly than cereal crops.
2. Oil crops will account for 45 out of every 100 extra kilocalories added to average diets in developing countries between now and 2030.

E. An increase in income in developing countries has led to changing diets. Staples (e.g., cereals, roots, and tubers) have declined. However, the consumption of meat, dairy products, and oil crops has grown.
   1. In the years between 1964 to 1966 and 1997 to 1999, per capita meat consumption in developing countries rose by 150 percent. During that same period, milk and dairy product consumption rose 60 percent.
   2. It is predicted that by 2030 per capita consumption of livestock products could rise by another 44 percent. However, poultry consumption is projected to have the most rapid increase.

F. The demand for agricultural products in developing countries is predicted to grow faster than production, which will likely result in increasing trade deficits.
   1. The deficit of meat products will grow sharply from 1.2 million tons per year in 1997 to 1999 to 5.9 million tons per year in 2030.
   2. The deficit of milk and dairy products will rise less sharply, but still significantly, from 20 million tons per year in 1997 to 1999 to 39 million tons per year in 2030.

G. Production in the world fisheries has stayed in front of population growth during the past 30 years. Production increased from 65 million tons in 1970 to 125 million tons in 1999.
   1. By 2030, annual fish consumption is likely to rise to 150 to 160 million tons.
   2. By 2000, three-fourths of ocean fish stocks were overfished. As a result, future growth in the marine catch can only be modest.
   3. Aquaculture enterprises have compensated for the reduction in marine harvests. Continued growth in aquaculture production is expected at rates of 5 to 7 percent per year up to 2015.

Lead a discussion on worldwide trends in agricultural production and food consumption. Assign the students different regions of the world or specific countries. Have them research the levels of agricultural production and food consumption. Provide time for them to deliver oral reports on their findings.

Review/Summary. At the conclusion of the lesson, review the learning objectives with the students. Summarize the material that has been covered during the class discussions, supervised study, and other learning experiences. Review the terms and definitions. Have the students explain the concepts associated with each objective. Use their responses as the basis for determining any areas that need additional review.

Application. Use the included visual masters and lab sheet to apply the information presented in the lesson.
**Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.

**Answers to Sample Test:**

**Part One: Matching**
1. h
2. f
3. i
4. g
5. a
6. c
7. d
8. b
9. e

**Part Two: Completion**
1. a
2. d
3. d
4. c
5. c

**Part Three: Short Answer**

Conclusions from the Malthusian theory include the following:
- Food is necessary for human existence.
- The human population, if not checked, tends to grow faster than the power of the earth to produce subsistence.
- The effects of these two unequal powers must be kept equal.
- Misery is the mechanism that balances human requirements and available resources.
- Nature’s requirement that the imbalance between demand and supply be resolved forms the “strongest obstacle in the way of any very great improvement of society,” and thus makes “the perfectibility of man and society” a theoretical and practical impossibility.
- The “principle of population” (i.e., the inevitability of misery due to the power of population to overwhelm resources) provides the mainspring behind the advance of human civilization by creating incentives for progress.
Part One: Matching

Instructions: Match the term with the correct definition.

a. Food and Agriculture Organization of the United Nations
b. demographics
c. population
d. demography
e. developed country
f. developing country
g. least developed country
h. Malthusian theory
i. sovereign

1. An idea that human population growth is faster than the power of the earth to produce subsistence
2. A country that has not reached the Western-style standards of democratic governments, free market economies, industrialization, social programs, and human rights guarantees for its citizens
3. A situation in which the state or country has the exclusive right to control a government
4. Countries that exhibit the lowest indicators of socioeconomic development along with the lowest human development index ratings
5. An agency within the United Nations that heads international efforts to defeat hunger
6. The number of people in a given area
7. The study of the human population
8. The data collected about the human population
9. A country that has achieved a high level of industrialization
Part Two: Multiple Choice

Instructions: Write the letter of the correct answer.

____ 1. Australia, Italy, and Sweden are considered _____ countries.
   a. developed
   b. developing
   c. least developed
   d. third world

____ 2. The projected human population by 2050 is _____.
   a. 394 million people
   b. 1 billion people
   c. 5 billion people
   d. 8.9 billion people

____ 3. _____ accounted for 38 percent of the world’s corn production.
   a. Brazil
   b. China
   c. France
   d. The United States

____ 4. _____ crops have had the quickest increase of any crop type.
   a. Cereal
   b. Forage
   c. Oil
   d. Root and tuber

____ 5. The world agricultural production and crop yields have declined recently because _____.
   a. significant amounts of land have become urban areas
   b. the per person consumption has dropped dramatically
   c. there has been a decline in the world population growth
   d. there is an acute shortage of water for agricultural use

Part Three: Short Answer

Instructions: Answer the following.

What are some conclusions from the Malthusian theory?
CLASSIFICATIONS OF COUNTRIES

♦ Least developed country—lacks industrialization, may have impoverished people, or may have small per capita incomes (e.g., Bangladesh, Haiti, and Sudan)

♦ Developing country—country that has not reached the Western-style standards of democratic governments, free market economies, industrialization, social programs, and human rights guarantees for its citizens (e.g., China, India, and Mexico)

♦ Developed country—describes industrialized nations (e.g., the United States, Great Britain, and Japan)
Discuss the photos on the following Web site:

http://www.fao.org/about/photography/en/
AN ESSAY ON THE PRINCIPLE OF POPULATION

Share and discuss excerpts from Thomas Malthus’s *An Essay on the Principle of Population* by clicking on the desired sections of the publication at the following Web site:

http://www.econlib.org/library/Malthus/malPlong.html
World Agricultural Production

Objectives

1. Identify countries according to the three classes.
2. Identify the top five leading producers of listed commodities.

Materials

♦ writing utensil
♦ notes from class, if permitted by your instructor

Procedure

1. Name 20 developed countries.

2. Name 20 developing counties.

3. Name 20 least developed countries.
4. Identify the top five leading producers for the following commodities:

- Barley
- Canola
- Cattle
- Chicken
- Corn
- Cotton
- Fresh cow’s milk
- Hen eggs
- Hogs
- Oats
- Peanuts
- Potatoes
- Poultry
- Rice
- Rye
- Sorghum
- Soybeans
- Sugar beet
- Sugarcane
- Sunflower
- Wheat