

THE DAILY HERALD

SPECIAL EDITION

DECEMBER 14

Study Forecasts Future Food Shortage

A new study published in the *Journal of World Agriculture* raises concerns that in the future there will not be enough food for the world's growing population. The study was carried out by an international group of scientists with

support from the Earth Food Bank. According to the study, the population of the world is increasing by about 80 million people each year.

To feed the growing population, crop yields will need to increase significantly. The

researchers listed many factors that limit food production but singled out two for special consideration. First, the amount of freshwater available for farming is projected to limit food production. Second, higher temperatures

around the world are already causing large losses in grain yields among the world's major producers. The study concluded by recommending that the Earth Food Bank sponsor a program dedicated to setting priorities and establishing policies that will enable all of the world's people to be fed.

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MARCH 17

Earth Food Bank to Hold Meeting on Food Production

In response to a recent international study on population and food production, the secretary general of the Earth Food Bank has announced that it will sponsor a series of two-weeklong conferences next summer to address world hunger.

Attendees at each conference will discuss a different aspect of the problem and make recommendations for meeting the world's food needs.

According to the study, the four major aspects of the problem are

- reducing carbon emis-

sions that contribute to increasing Earth's temperature,

- stabilizing population growth,
- making better use of our water resources, and
- increasing the crop yields on farms.

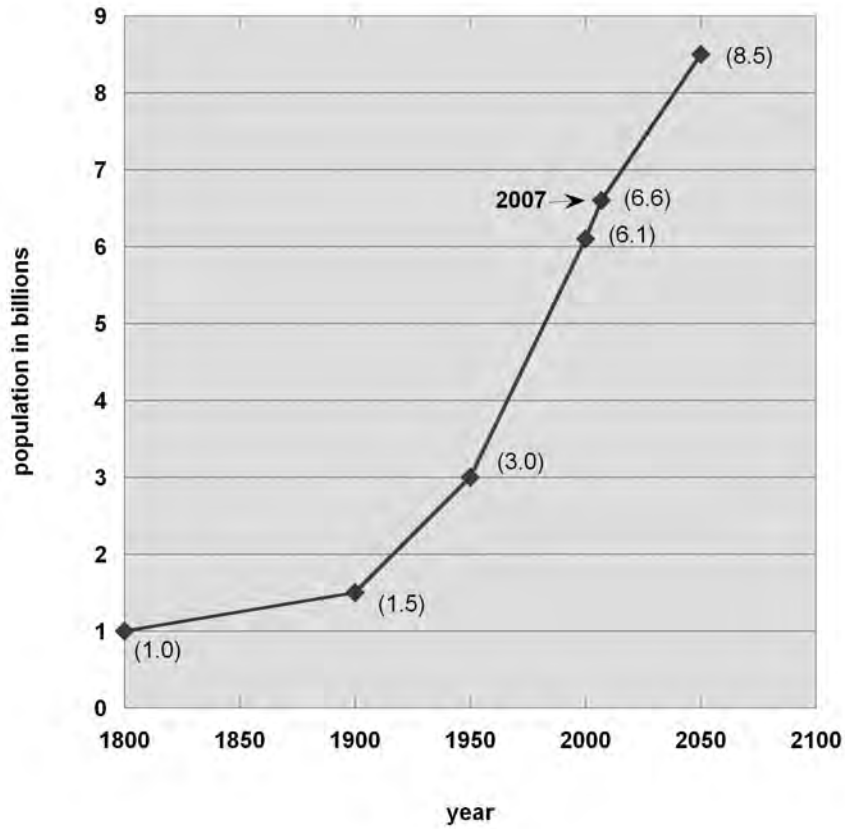
An international group of experts will attend each conference. The experts will submit a report to the secretary general that describes their recommendations. Scientists from Humanity Against Hunger will organize the conference on increasing crop yields. These scientists have experience applying modern agricultural practices in developing countries.



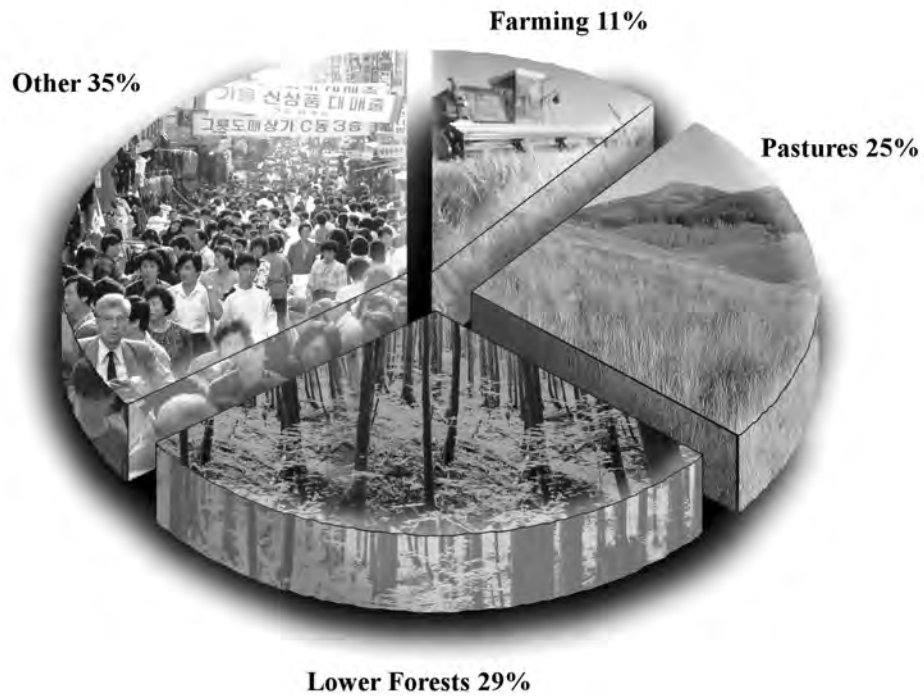
Master 5.2, Population and Land Use Graphs

Name _____
Date _____

World Population Growth



World Land Use



Master 5.3, Needs of the Future

Name _____

Date _____

Part A: How much farmland is used to feed each person today?

Step 1. Use the *World Population Growth* graph on Master 5.2, *Population and Land Use Graphs* to estimate Earth's population right now: _____ billion people.

Step 2. The 11 percent of land devoted to farming corresponds to 33 billion acres of farmland.

Step 3. Divide the 33 billion acres of farmland by the population (from Step 1) to get the number of acres of farmland per person:

$$33 \text{ billion acres farmland} \div \text{_____ billion people} = \text{_____ acres per person}$$

Part B: How many acres of farmland per person will be available in 2050?

Step 1. Use the *World Population Growth* graph on Master 5.2, *Population and Land Use Graphs* to estimate Earth's population in the year 2050: _____ billion people.

Step 2. Divide the 33 billion acres of farmland by the population (from Step 1) to get the number of acres of farmland per person:

$$33 \text{ billion acres farmland} \div \text{_____ billion people} = \text{_____ acres per person}$$

Part C. Assuming that crop yields stay the same, how much extra land will be needed for farming in 2050?

Step 1. Calculate the estimated population increase factor from now to 2050:

$$\text{population in 2050 (from Part B)} \div \text{population now (from Part A)} = \text{_____}$$

Step 2. Multiply the 33 billion acres of farmland times the population increase factor (from Step 1):

$$33 \text{ billion acres farmland} \times \text{population increase factor} = \text{_____ billion acres farmland needed in 2050}$$

Step 3. To find out how much extra farmland will be needed in 2050, subtract the 33 billion acres (today's farmland) from the number of acres needed in 2050 (from Step 2):

$$\text{_____ billion acres needed in 2050} - 33 \text{ billion acres} = \text{_____ billion extra acres of farmland needed}$$

