



FOOD FOR 9 BILLION

The Challenge of Feeding the World

From Small Farm to Market

Teacher Notes

Before You Start

Grade Level:

Grade 9-10

Concepts Covered:

Market community, insurance, loans, market access

Time Frame:

50 minutes

Materials Needed:

Student handout *From Small Farm to Market*

Student computers with Internet access

Computer with Internet access and a projection system (for reviewing answers or viewing resources as a whole class)

Overview

Can small-scale farmers feed the world? Students will learn about an organization called One Acre Fund that brings struggling farmers together to establish a market community and offers them a unique investment package.

Objectives

- Students will describe the state of agriculture and hunger in three east African countries.
- Students will describe the details of a business model.
- Students will describe the impact of new communication technology on rural markets.
- Students will evaluate the strengths and weaknesses of the approach and discuss if the model can be applied more globally.

Prior Knowledge

None

Teaching Tips/ Activity Sequence

1. Activate students' prior knowledge about farming and how food gets to market. You might ask, "When you think of a farm, what comes to mind?" or, "How does the chocolate we eat reach us from where it grew?" Tailor the questions to your student population. Prompt students to think about the factors or conditions that would impede a farmer's ability to sell a crop. Ask students what they think a "market community" is and whether they think humanitarian aid or business investment is a better approach to helping farmers.
2. Give students the handouts and allow them to do the activity independently.
3. Gather the whole class for a final discussion. Review the details of the One Acre program and ask students whether or not they think the model could be applied in other parts of Africa or the world. Encourage students to think critically about the strengths and limitations of the One Acre approach.

Extensions

- Look at the map of current and potential arable land use in Africa at http://www.grida.no/graphicslib/detail/current-and-potential-arable-land-use-in-africa_a9fd.
- Other stories about farming and hunger are available at <http://foodfor9billion.org>.

Standards

National Curriculum Standards for Social Studies

- 3. People, Places, and Environments
- 5. Individuals, Groups, and Institutions
- 7. Production, Distribution, and Consumption
- 8. Science, Technology, and Society
- 9. Global Connections

National Geography Standards

- 2. Knows the location of places, geographic features, and patterns of the environment
- 18. Understands global development and environmental issues

Common Core State Standards for Literacy in History / Social Studies, Science and Technical Subjects 6-12

Reading Standards

- Key Ideas and Details RST1, RH1
- Integration of Knowledge and Ideas RST7

Writing Standards

- Text Types and Purposes WHST2
- Production and Distribution of Writing WHST4
- Range of Writing WHST10

Acknowledgements

Susan Dodge, M.S. Ed for Creative Curriculum, produced these teacher notes and resources in conjunction with the “Food for 9 Billion” project (<http://foodfor9billion.org>), with funding from the National Science Foundation (PGRP grant #1026555; <http://ricediversity.org>) and Cornell University.

From Small Farm to Market

In many parts of the world, people rely on small-scale farms for their livelihood. Let's travel to Africa to learn about a program that strives to support these small farmers and increase agricultural output in an effort to sufficiently feed the world's growing population.

Part 1: Where in the World?

Go to the World Food Statistics map at <http://cironline.org/reports/map-world-food-statistics-2971>. Find eastern Africa and the nations of Kenya, Rwanda and Burundi.

- Use data to describe the agricultural sector and state of hunger in each country.
The hunger index is serious, alarming or extremely alarming in each of the three countries. Kenya has some excellent agricultural land and successful farms that export cash crops, but three-fourths of the output is from subsistence farmers with low productivity. Poor water management, soil erosion, declining soil fertility, deforestation, drought and population pressure threatens food production. In Rwanda, four-fifths of the population is involved in agriculture. The country exports coffee and tea. In Burundi, even though 90 percent of the people farm, agriculture is constrained by weather (especially drought), pests, erosion and lack of technology and equipment.

Part 2: Understanding the Story

Watch the story, "Business fund puts African farmers on road to market," at <http://cironline.org/projects/food-for-9-billion>.

- What is the "shocking thing and amazing paradox" about hunger?
Most hungry people are farmers.
- Describe the components of the One Acre Fund's program for individual farmers
One Acre gives the smallest of farms the same services available to the biggest of businesses: credit, seed, insurance and access to markets. It's called the "market bundle." One Acre Fund also offers training: how to space plants, when to apply fertilizer and how much. The fund also gives loans for the seeds and fertilizer they need; these loans are insured against losses. Rain insurance and death insurance are also available.
- Why is insurance such an important component?
Poor people are already living on the margin, and a having a bad harvest or bad weather can be devastating. This doesn't just put them at risk, but it also makes them reluctant to invest in things that could help them be more productive or more profitable. So rain insurance is a standard part of the package; if rain doesn't fall, they don't pay. Another risk is death; funeral insurance is part of the package.

From Small Farm to Market

5. According to the Rwandan Agriculture Minister, how is the One Acre Fund different than other organizations working with farmers?

Agnes Kalibata says, "When farmers are working with NGOs and the governments, there's always a sense of dependency. When they're working in the private sector, there's a sense of it's a give and take." In other words, she believes that farmers have more incentive to succeed when they're in a business relationship than when they receive charity.

6. Is the One Acre model working so far?

Yes. The loans must be repaid at harvest time, but most farmers begin paying their installments well in advance. The default rate is less than 1 percent. On average, farmers enrolled in One Acre have seen their crop yields triple. Some go from subsistence to finally getting enough food for their families, and also selling their surplus for the first times in their lives.

7. For farmers in Kenya who are able to sell their surplus crops, a new service is available at some markets. What is it and how does it benefit the farmers?

A company called KACE has set up outlets that sell information about prices in markets across Kenya. The company uses the Internet and cell phone connections to update trading boards and link producers with distant buyers. This gives the farmers more bargaining power.

8. Why is One Acre offering farmers loans to store their maize rather than sell it immediately?

The price that buyers will pay for maize is lowest at harvest time, when the market is flooded. It increases later, when it is scarce. The loans help cover farmers' expenses while they wait, like school fees for their children.

9. What are some of the weaknesses or limitations of the Once Acre Fund Approach?

One Acre Fund took in \$5 million in farmer loan revenue in 2011, but still needed a million dollars in grants and donations to cover its expenses. It will take a few more years to break even. But the group's long-term success also depends on the investments that governments make, from building new roads to improving storage facilities and seed and fertilizer supply. Finally, the approach has been successful for most of the farmers it serves, but it only serves a small fraction of the African families that need help.

Name: _____

Date: _____ Class: _____



From Small Farm to Market

In many parts of the world, people rely on small-scale farms for their livelihood. Let's travel to Africa to learn about a program that strives to support these small farmers and increase agriculture output in an effort to sufficiently feed the world's growing population.

Part 1: Where in the World?

Go to the World Food Statistics map at <http://cironline.org/reports/map-world-food-statistics-2971>. Find eastern Africa and the nations of Kenya, Rwanda and Burundi.

1. Use data to describe the agricultural sector and state of hunger in each country.

Part 2: Understanding the Story

Watch the story, "Business fund puts African farmers on road to market," at <http://cironline.org/projects/food-for-9-billion>.

2. What is the "shocking thing and amazing paradox" about hunger?
3. Describe the components of the One Acre Fund's program for individual farmers
4. Why is insurance such an important component?

Name: _____

Date: _____ Class: _____



From Small Farm to Market

5. According to the Rwandan Agriculture Minister, how is the One Acre Fund different than other organizations working with farmers?

6. Is the One Acre model working so far?

7. For farmers in Kenya who are able to sell their surplus crops at market, a new service is available at some markets. What is it and how does it benefit the farmers?

8. Why is One Acre offering farmers loans to store their maize rather than sell it immediately?

9. What are some of the weaknesses or limitations of the Once Acre Fund Approach?