

DISCUSSION GUIDE

DEVELOPED BY THE CENTER FOR ECOLITERACY

participant^o
MEDIA



FOOD, INC.

A ROBERT KENNER FILM

YOU'LL NEVER LOOK AT DINNER THE SAME WAY AGAIN

FOOD, INC.

D I S C U S S I O N G U I D E

DEVELOPED BY THE CENTER FOR ECOLITERACY

A FILM BY ROBERT KENNER

**FROM MAGNOLIA PICTURES, PARTICIPANT MEDIA, AND
RIVER ROAD ENTERTAINMENT**

FOOD, INC. DISCUSSION GUIDE

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INTRODUCTION TO FOOD, INC.

The documentary film *Food, Inc.* provides a critical look at the industrialized nature of our country's food supply. It explores the relationship between how our food is produced and human health, workers' rights, animal welfare, and other issues.

Award-winning filmmaker Robert Kenner and investigative authors Eric Schlosser (*Fast Food Nation*) and Michael Pollan (*The Omnivore's Dilemma*) present how complicated the U.S. food system has become in the last few decades. In addition to compelling footage, the film includes the voices and stories of food experts, farmers, businessmen and women, government representatives, and food advocates.

While revealing many concerns about our food system, *Food, Inc.* also reminds us that we each have the ability to bring change to the system through our food choices.

LETTER FROM ZENOBIA BARLOW

COFOUNDER AND EXECUTIVE DIRECTOR, CENTER FOR ECOLITERACY

Dear Educator,

Food, Inc. presents the challenges posed by our current food system. It also offers hope.

As an educator, you play a vital role as communities address the issues facing them today. You challenge your students to think critically and to grapple with complex questions. You inspire them to become engaged citizens and help them gain the knowledge and skills they will need in order to develop sustainable solutions.

I believe that you will find *Food, Inc.* and this companion discussion guide to be valuable tools. This guide is designed to support you and your students in exploring the profound impacts of daily actions. It is a learning aid that demonstrates how to make choices that promote well-being by honoring nature's ways of sustaining the web of life.

The Center for Ecoliteracy is dedicated to schooling for sustainability. I hope that you will look to us as a resource. Through our initiative Smart by Nature, we offer guidance and support for school communities, from designing curricula to examining the ways in which schools provision themselves and use energy and resources. I invite you to consult our website, www.ecoliteracy.org, to learn more about our publications and programs on a wide range of topics, including school food, gardens, campus design, and curricular innovation.

Thank you for all that you do to educate students about creating sustainable communities.

Warmly,

A handwritten signature in black ink, appearing to read 'zbarlow', with a stylized, cursive script.

Zenobia Barlow

Cofounder and Executive Director, Center for Ecoliteracy



USING THIS GUIDE

This guide is designed to help instructors maximize the educational impact of *Food, Inc.* for their students.

APPLICATIONS The guide is aimed at the high school level and may be used to introduce or explore subject themes in a variety of courses, including economics, environmental science, English, geography, science, social studies, and vocational agriculture. The discussion questions and many of the suggested activities would also be effective in college courses, community organizations, and other teen or adult group settings.

APPROACH The guide is designed around the Socratic discussion approach to teaching. In this approach originally attributed to Socrates, the teacher or leader asks provocative, probing questions to progressively challenge students' thinking and to help them attain a deeper understanding of complex ideas.

STRATEGY The guide suggests sets of questions for facilitating rigorously thoughtful Socratic discussions about the issues presented in *Food, Inc.*, including animal welfare, workers' rights, health, and sustainability. For each chapter of the film, a Focus Question presents the central issue to be explored, while Deepening Questions help students examine the issue more critically. Rather than present a specific point of view, the discussion questions are designed to help students explore the issues through a deeper and deeper exploration of their own thinking.

Even if you choose not to conduct a Socratic discussion, you may use the questions to deepen students' understanding of the topics presented in *Food, Inc.* You may select questions from throughout the guide that you feel will further your course objectives or best engage your students.

ORGANIZATION The guide is organized around the nine chapters of the film. In addition to a Focus Question and Deepening Questions, each chapter includes an Opener to get students thinking about the topics presented in the film chapter before watching it, as well as Ideas for Action to extend their learning beyond the classroom. Depending on your course objectives and the time available, you may show the film a chapter at a time—stopping it to explore the chapter topics more

deeply—or show the film in its entirety and choose Openers, questions, and Ideas for Action from throughout the guide to fit your curriculum.

NOTE: The first 3-minute segment of the film introduces the topics and issues addressed in the film chapters. Even if you do not plan to show the entire film, we recommend showing this introductory segment before presenting any of the other chapters.

OBJECTIVES

The film *Food, Inc.* presents a number of complex issues surrounding the U.S. food system. The discussion questions and activities suggested in this guide will help students:

- Think through their own perceptions, ideas, and solutions so that they are better prepared to make thoughtful choices about food.
- Make connections between ways of thinking about the food-related issues presented in the film and the big questions we face in life.
- Develop the knowledge and skills they need to participate in a meaningful public dialogue about food and food systems.
- Take action to address food-related issues in their own lives.

NATIONAL STANDARDS CORRELATIONS

National curriculum standards are national guidelines for student achievement in specific content areas and serve as the basis for many state standards. The topics explored in *Food, Inc.* and in this guide help to meet the following national standards. They are listed below by subject, document title and section number, and the educational organization that developed the standards.

ENGLISH: STANDARDS FOR THE ENGLISH LANGUAGE ARTS, by National Council of Teachers of English

All students must have the opportunities and resources to develop the language skills they need to pursue life's goals and to participate fully as informed, productive members of society, so that:

- 6 Students apply knowledge of language structure, language conventions (e.g. spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts.
- 8 Students use a variety of technological and information resources (e.g. libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

GEOGRAPHY: NATIONAL GEOGRAPHY STANDARDS, by National Geographic Society

STANDARD 16: ENVIRONMENT AND SOCIETY

By the end of the twelfth grade, the student knows and understands:

- 2 How resource development and use change over time.
- 3 The geographic results of policies and programs for resource use and management.

SCIENCE: NATIONAL SCIENCE EDUCATION STANDARDS, by National Research Council

CONTENT STANDARD E - SCIENCE AND TECHNOLOGY

As a result of activities in grades 9-12, students should develop an:

- Understanding about science and technology.

CONTENT STANDARD F - SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 9-12, all students should develop an understanding of:

- Personal and community health
- Natural resources
- Environmental quality
- Natural and human-induced hazards
- Science and technology in local, national, and global challenges.

SOCIAL STUDIES: CURRICULUM STANDARDS FOR SOCIAL STUDIES, by National Council for the Social Studies

V. INDIVIDUALS, GROUPS, AND INSTITUTIONS

Social studies programs should include experiences that provide for the study of interaction among individuals, groups, and institutions, so that the learner can:

- f Evaluate the role of institutions in furthering both continuity and change.

- g Analyze the extent to which groups and institutions meet individual needs and promote the common good in contemporary and historical settings.

VI. POWER, AUTHORITY, AND GOVERNANCE

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

- a Examine persistent issues involving the rights, roles, and status of the individual in relation to the general welfare.
- b Prepare a public policy paper and present and defend it before an appropriate forum in school or community.

VII. PRODUCTION, DISTRIBUTION, AND CONSUMPTION

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

- b Analyze the role that supply and demand, prices, incentives, and profits play in determining what is produced and distributed in a competitive market system.

VIII. SCIENCE, TECHNOLOGY, & SOCIETY

Social studies programs should include experiences that provide for the study of relationships among science, technology, and society, so that the learner can:

- c Analyze how science and technology influence the core values, beliefs, and attitudes of society, and how core values, beliefs and attitudes of society shape scientific and technological change.

- d Evaluate various policies that have been proposed as ways of dealing with social changes resulting from new technologies, such as genetically engineered plants and animals.

ABOUT SOCRATIC DISCUSSIONS

Food, Inc. presents a number of ethical and moral issues related to our food supply. As with most dilemmas we face as individuals and as a society, resolving these issues requires choices or compromises among differing values.

One way to help students understand the complexity of an issue is through a teaching approach known as Socratic discussions (or Socratic seminars or circles). This approach is attributed to the Greek philosopher Socrates, who used questioning and discussion to help his students explore the issues of their time. Socrates believed that helping students to think was more important than filling their minds with facts, and that questions—not answers—are the driving force behind learning.

Socratic discussions allow students to explore issues, ideas, and values in a meaningful way. Students are able to face conflicting viewpoints, test their ideas against their peers', and explore possible solutions. The teacher or leader guides this process by asking them a series of questions to deepen their understanding. Rather than stating what is right or wrong, the teacher allows students to work out their own beliefs and to clarify their own thinking.

In addition to helping students understand complex issues, Socratic discussions also can promote critical thinking, speaking, and listening skills; teach respect for diverse ideas; deepen students' knowledge base; and encourage divergent thinking.

FACILITATING SOCRATIC DISCUSSIONS

Using Socratic discussions in your classroom may require a shift in your role as teacher. Rather than directly teaching content, your task is to facilitate students

in exploring their own thinking on complex issues. Following are suggestions for facilitating successful Socratic discussions on the film topics:

SETTING THE STAGE

- 1 After showing the *Food, Inc.* chapter(s), explain any unfamiliar concepts or vocabulary presented in the film that would enhance the discussion.
- 2 If possible, have the class sit in a circle in chairs or on the floor so that all participants can have eye contact.
- 3 If you have more than 15 students, consider splitting the group in two, with half the students sitting in an inner circle and the other half in an outer circle. With this two-circle format, the inner circle takes part in the discussion, while the outer circle participates by writing journal responses to the discussion or coaching a partner in the inner circle. Students may change places halfway through the discussion.
- 4 Explain the purpose and structure of the discussion.
- 5 Introduce or review guidelines for participation (see page 19 for sample guidelines).

OPENING THE DISCUSSION

- 1 Initiate the discussion by asking students the “Focus Question” and allowing plenty of time for them to think and then respond freely to the question.
- 2 Make clear to students that you are not looking for a particular answer to the question, and that, in fact, there is no right or wrong answer. (To that end, avoid giving verbal or nonverbal affirmation or disapproval of students’ responses.)
- 3 Keep in mind that your role is to ask questions, to accept student responses, to paraphrase or restate ideas based on students’ responses, to guide students

to a deeper understanding of the issues raised by the film, and to help them respect different points of view.

- 4 As appropriate, help clarify students' thinking; for example: "What I hear you say is...", "How would you compare Liam's response to what Tamara said?" or "What in the film supports that view?"
- 5 Invite and encourage participation by all students; you might say, for example, "I'd like to hear what Sophie thinks." If need be, consider distributing an equal number of chips or tokens for students to "spend" each time they talk.
- 6 If necessary, stop the discussion to commend positive behavior or to end negative behavior.

DEEPENING THE DISCUSSION

- 1 Ask "Deepening Questions" to help students probe further into the topic and clarify their thinking. Pose questions that seem appropriate for the discussion as it unfolds. At each stage of the discussion, allow time for an exploration of ideas by several participants.
- 2 If the discussion gets quiet, wait and give students time to gather their thoughts. Silence often allows the most insightful ideas to surface.
- 3 The first time you conduct a Socratic discussion with your students, limit it to 30 minutes. As students become more familiar and comfortable with this format, you can expect longer and more sustained discussions of 45-50 minutes.

PROVIDING CLOSURE

- 1 When you determine that it is time to end the discussion, ask students to summarize the main ideas explored in the discussion. Have them go around

the circle and comment on how the discussion went for them. Is there anything they would improve for next time?

SAMPLE GUIDELINES FOR PARTICIPANTS

- Make sure your comments are appropriate and respectful.
- Stick to the topic currently being discussed. (Take notes on ideas you want to come back to later.)
- Talk to each other, not to the teacher or leader.
- Speak up so that everyone can hear you.
- Listen carefully to others' comments.
- Try to add on to or make a link with something someone else has said.
- Encourage others to join in the discussion.
- Say "pass" if you want time to think before contributing.
- Refer to the film when possible, citing examples from it or drawing connections to it.

2 After the discussion, allow students time to reflect on the ideas explored. (See "Reflection" sections for specific suggestions.)

ASSESSING SOCRATIC DISCUSSIONS

You may assess student participation and understanding in several ways:

SELF-EVALUATION Have students evaluate their participation by responding to questions such as: How did you help move the discussion forward? What is an example of when you actively listened and built on others' ideas? If your opinion changed during the discussion, what changed it? What would you change about your participation next time?

ASSESSMENT RUBRIC Use a rubric for assessing student participation based on observable criteria. Examples include how well the student participates in the discussion without prompting, makes relevant comments that expand on the previous speaker's ideas, makes connections between the film and the ideas generated in the discussion, or pays attention when others speak.

REFLECTION Use student work from the "Reflection" sections to assess each individual's grasp of the discussion topics.

RESOURCES ON SOCRATIC DISCUSSIONS

Copeland, Matt (2005). *Socratic Circles: Fostering Critical and Creative Thinking in Middle and High School*. Portland, ME: Stenhouse Publishers.

National Paideia Center (2009). *The Paideia Seminar: Active Thinking Through Dialogue for the Secondary Grades*. Chapel Hill, NC: National Paideia Center.

Phillips, Christopher (2001). *Socrates Café: A Fresh Taste of Philosophy*. New York: W. W. Norton.

Polite, Vernon, Adams, Arlin (1996). *Improving Critical Thinking through Socratic Seminars*. Available online at www.temple.edu/lss/pdf/publications/pubs96-3.pdf.

Tredway, Lynda (1995). Socratic seminars: Engaging students in intellectual discourse. *Educational Leadership*, 53(1).



CHAPTER 1

FAST FOOD TO ALL FOOD

SYNOPSIS OF FILM CHAPTER

This first chapter of *Food, Inc.* opens with a brief history of the fast food industry. It depicts how fast food has transformed not only what and how people eat, but also farming practices and the entire global food system. As one example of this transformation, the chapter focuses on how the food industry has altered the way that chickens are raised, including changes in farm operations, the living conditions of chickens, and even the chickens themselves.

RUNNING TIME: 12:52 MINUTES

BACKGROUND INFORMATION

When most of us think of a farm, we imagine a place with a red barn, green pastures, and chickens running around the yard. But the reality of most farms in the United States today is far from that image. Farming has become so industrialized and mechanized that many modern farms are like factories.

The poultry industry is an example of this change to factory farms. As depicted in *Food, Inc.*, chickens today are often raised in huge metal buildings with no access to light or fresh air, confined together with thousands of birds in one building, and made to grow so quickly that often their bones cannot keep up and they can lose their ability to walk.

In this factory farming model, a single corporation may own or control all aspects of the chicken production process, from animal rearing and feed production to slaughter, packaging, and distribution. A corporation may also contract farmers in an arrangement where the corporation determines all aspects of raising the animals, while the farmer is responsible for the capital expenditures, the waste disposal, and much of the risk.

As the film depicts, the transition to factory farming took place partly in response to our society's move to fast food. As people came to expect food that was inexpensive and unvarying in quality and taste, the food industry looked for ways to produce the food as efficiently and uniformly as possible. Unfortunately, while industrially produced food appears inexpensive, the price we pay at the cash register doesn't reflect its true cost. Factory farming creates a tremendous amount of water and air pollution, can be detrimental to public health, and relies on government subsidies—all costs our society bears.

Factory farming also clearly affects the animals. In the factory farm, the animal is considered a unit of production rather than a living creature, and efficiency and earnings often outweigh animal health and welfare. People have differing views on how much comfort and freedom farm animals deserve. Some would say that to keep food inexpensive, animals should be raised in the most efficient and cost-effective way possible. Others would argue that animals should not suffer needlessly and that they should have a certain level of cleanliness and space.

OPENER

Before showing the film chapter, distribute copies of the Lunch Survey student handout on page 28 to complete. Ask students to share some of the factors they considered when deciding what to eat for lunch. Ask: If everyone is looking for similar things in their food—for example, that food be cheap and easy to get—how might that affect what food is available? In what ways might that affect how food is grown and produced?

SOCRATIC DISCUSSION

FOCUS QUESTION

Do animals have the right to a certain quality of life?

Remind students that in the Opener, they considered how people's food choices affect what and how food is produced. Have students name a couple of scenes in the film that relate to this idea. Pointing out that we could not give animals equal rights, because that might mean entitlement to citizenship, public education, or other things, ask students whether they think animals have a right to a certain quality of life.

DEEPENING QUESTIONS

- How many of you have pets at home? Do your pets have the same rights as the people who live with you? What rights do your pets have? In what ways are your pets' rights limited? (For example, they may not be able to choose what or when to eat, or when and how to get exercise.)
- Are there any rights that all animals should have?
- If animals should have certain rights, do you think those rights also apply to animals we raise for food, like chickens or pigs? Are there any rights that these farm animals should have? If so, what are they?
- How do you think farm animals should be treated? How do your ideas compare to what you saw in the film?
- Richard Lobb of the National Chicken Council says in the film, "In a way, we're not producing chickens, we're producing food." What does this statement mean? Do you agree or disagree with it? How might this perspective affect the way that chickens are raised?

- If we are in consensus that even food animals deserve to have a certain quality of life, who has the responsibility to oversee the treatment of chickens or other food animals? What responsibility do individuals and consumers have? The government? Companies?
- If we are in consensus that food animals should not have rights to a certain quality of life, what might be some repercussions of that position?
- As consumers, do we have the right to know how the chickens we eat are being raised? Do we want to know?
- As portrayed by the film, consumers wanting faster, cheaper food has altered the way chickens are raised. Can you think of parallel situations where consumers wanted certain products or experiences, and industry responded to meet the demand? (For example, we want to have inexpensive clothes, so companies hire low-wage workers in other countries to make them; when people became increasingly concerned about air pollution from vehicles, companies created hybrid-fueled cars.)
- We've been talking about the rights of food animals. What did the film bring up about people's rights?
- Distribute copies of the Raising Chickens student handout, page 28. Have students follow the instructions on the handout based on their viewing of the film. What are the connections between the individuals involved in raising chickens? Which players are more valued? Who has the most and least rights?
- Based on this 13-minute chapter of the film, we've been focusing on just one food most people eat—chicken. What ethical questions emerged from our discussion?

REFLECTION

Have students choose one of the individuals on the Raising Chickens student handout and write persuasively from that viewpoint about the rights this individual should have and why.

IDEAS FOR ACTION

- Have students consider the Raising Chickens student handout and choose one person they think has some responsibility for making a change. Invite them to write a respectful letter to that person asking for a change for which he or she would be responsible. Before writing the letter, have students identify characteristics of a respectful letter. (For example, letters should have a courteous tone; avoid aggressive, accusing, or threatening language; be specific, honest, and straightforward; and be brief, but include appropriate details.)
- Invite students to seek out organizations in your community that advocate for the rights of animals or people. Do these organizations describe or list various rights that animals or people should be afforded? Do students agree with them?



STUDENT HANDOUT

LUNCH SURVEY

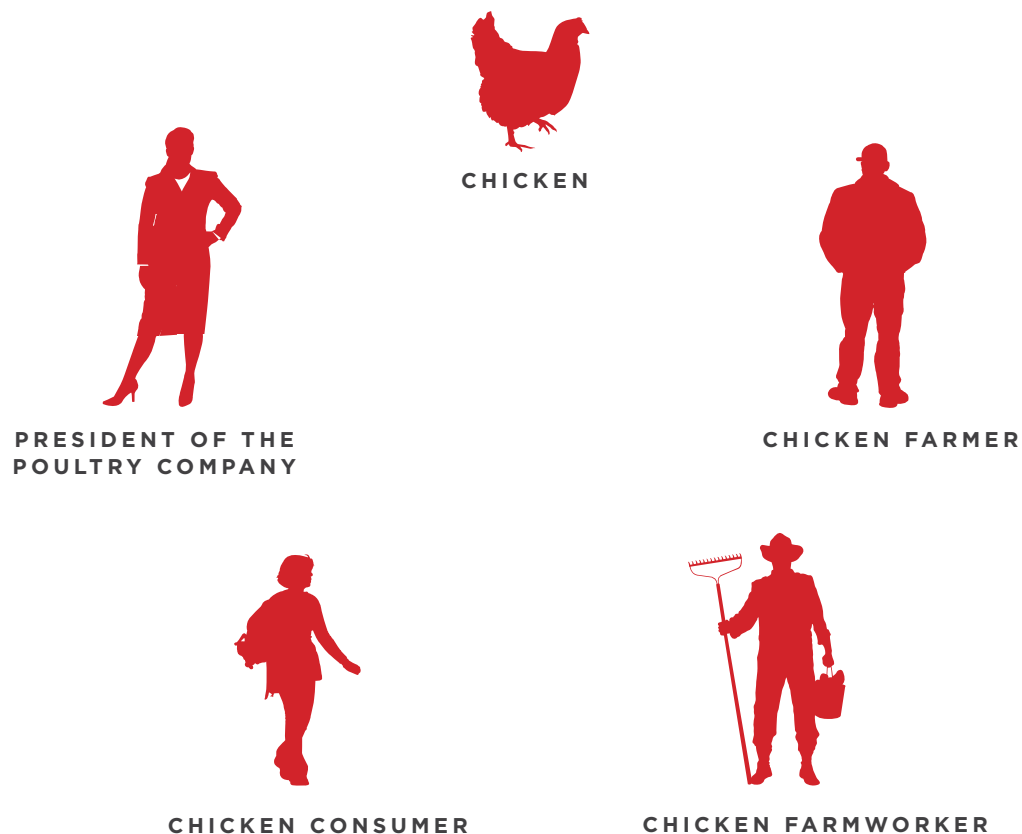
Think about what you had for lunch today or yesterday. Put a ✓ next to each of the following factors you considered when you decided what to eat for lunch.

- ☐ It was fast or easy.
- ☐ It was what I usually eat.
- ☐ It was nutritious.
- ☐ It tasted good.
- ☐ It was a good price.
- ☐ It was in season.
- ☐ My friends liked it.
- ☐ Other factor: _____
- ☐ I didn't have any choice in what I ate.

STUDENT HANDOUT

RAISING CHICKENS

- 1 As presented in the film, below are some of the various individuals involved in raising chickens for food. Draw lines between the individuals that are directly connected.
- 2 Put a ★ next to the individual that is most valued in our society and an X next to the one that is least valued.
- 3 Which individual do you think has the most rights? (Place a **1** next to that individual.) Which has the least? (Put a **5** next to that individual.) How would you rank the other individuals?





CHAPTER 2

A CORNUCOPIA OF CHOICES

SYNOPSIS OF FILM CHAPTER

In this chapter, the film explores the pervasiveness of corn in the foods we eat today and illustrates how government subsidies of corn and other commodity crops have greatly altered the way that food is produced and consumed in the United States. As the film describes, corn is a cheap ingredient compared to other sources, and food producers have found many uses for it, including high-fructose corn syrup, saccharin, xanthan gum, and a whole range of other food additives.

RUNNING TIME: 7:54 MINUTES

BACKGROUND INFORMATION

Ask people whether they eat corn, and chances are they will picture the sweet, fresh corn on the cob that they sometimes enjoy in the summer. With that image in mind, many people will be surprised to learn that corn is a major component of the modern American diet. Most of the corn Americans eat today comes not from the cob, but by way of food ingredients and additives in processed foods and meat from corn-fed livestock.

According to the National Corn Growers Association, U.S. farmers plant about 90 million acres of corn each year, with less than 1 percent of that being sweet corn. The vast majority is field corn, bred for its high starch content and harvested when the kernels are hard and relatively dry. Field corn is the main ingredient in most livestock feed. It is also processed into a wide array of foods, such as

breakfast cereals, salad dressings, margarines, syrups, and snacks, as well as products like baby powder, glue, soap, alcohol, medicine, and fuel ethanol.

The iconic American meal of a cheeseburger, fries, and shake includes several corn-based ingredients: the patty (corn-fed beef), the cheese (cornstarch), the bun (high-fructose corn syrup), the ketchup (high-fructose corn syrup and corn syrup), the fries (corn oil), and the shake (corn syrup solids and cellulose gum). See the Corn from A to Z student handout, page 37, for a partial list of corn-based food ingredients.

The United States is currently the number one corn-growing country in the world, with more acres devoted to corn than any other crop. In 1920, an acre cornfield yielded just 20 bushels of corn, compared to 180 bushels today. Several factors have led to both the higher yield and the greater total acreage of corn.

First, in 1930, a hybrid seed was developed that produced plants with sturdier stalks, allowing them to be grown very closely together and to resist being blown over. Then, in 1947, scientists discovered a way to convert surplus ammonium nitrate (which had been used in explosives during World War II) into a chemical fertilizer that increased soil nitrogen levels; this made it possible to grow corn from year to year without exhausting the soil. In the 1970s, a major change in the U.S. farm policy included direct payments to farmers and encouraged them to grow corn and sell it at any price; not surprisingly, this resulted in a dramatic increase in the total U.S. acreage of corn as many farmers converted their land to field corn. More recently, the federal push for corn-based ethanol production as an alternative to fossil fuels prompted farmers to convert more land to field corn.

In the 1960s and 1970s, scientists discovered how to develop a low-cost sweetener from corn known as high-fructose corn syrup. Since that time, high-fructose corn syrup and corn by-products have found their way into nearly every processed food and drink sold today. While cattle, pigs, poultry, and sheep eat about 60 percent of the corn grain that is grown each year, most of the remaining corn is processed at a wet mill, which turns it into a variety of substances. The skin of the kernel becomes vitamins and nutritional supplements; the germ is crushed for corn oils; and the rest of the kernel—the starchy endosperm—is made into acids, sugars (including high-fructose corn syrup), starches, and alcohols.

NOTE This film chapter shows images of a cow with a hole in its side. Researchers routinely put holes, known as fistulas, into some cows' stomachs so that they can observe the digestibility of foods in cattle. The fistula and a sealing cover, called a cannula, are inserted under anesthesia, and the process does not hurt the cow. In fact, fistulated cows actually live longer than other cows because it is easier to treat them when they have illnesses.

OPENER

Bring in a sample of the following foods (or list them on the board) and, before showing the film chapter, ask students to think about what these foods all have in common as they watch the film. (They are all products often made from or with corn.)

BREAKFAST CEREAL

KETCHUP

SOFT DRINKS

CAKE MIX

YOGURT

BREAD

JAM

MARGARINE

VANILLA EXTRACT

JUICE

SALAD DRESSING

WHITE VINEGAR

You might also tell students about fistulated cows (see Background Information) before showing the film chapter.

SOCRATIC DISCUSSION

FOCUS QUESTION

Do people have the right to know what is in their food?

Immediately after watching the film, ask students what they think the foods you listed for the Opener have in common. Ask how many of them were surprised to learn how prevalent corn is in our food. Ask whether they think people have the right to know what is in their food.

DEEPENING QUESTIONS

- In the film, food science professor Larry Johnson says, “If you go and look on the supermarket shelf, I’ll bet you 90 percent of [the products] would contain either a corn or soybean ingredient. And most of the time, it’ll contain both.” Why might it be a problem that the majority of our food is made mostly from just corn and soybeans—so that nearly everything we eat contains them? (Responses might include it being unhealthy because our bodies need more variety, or our food system being in danger if those crops develop a pest or other problem.)
- Many of us were surprised to learn that corn is so prevalent in our foods. Why do you think we were so surprised? Do you think the government and food producers have kept it a secret? Why don’t more people know this fact?
- [Using the corn-based food products you brought in for the Opener and the Corn from A to Z student handout, page 37, point out which ingredients are from corn.] Food labels actually do list corn-based ingredients, but not always in a recognizable way. How do you feel about ingredients being included in your diet without your knowledge?
- Whose responsibility do you think it is to inform us about what is in our food? Is it our responsibility to find out, the producer’s responsibility to make it more clear, or both? Why do you think so?

- [Have students place themselves along a spectrum, standing at one end if they feel it is individuals' responsibility to inform themselves about what is in their food, at the other end if they think it is the producer's responsibility, and in the middle if they think both have some level of responsibility.] What are the consequences of different positions along the spectrum?
- If people are responsible for informing themselves about what is in their food, what would help them be more informed? If producers are responsible, what would be the more effective ways for them to inform people?
- The movie points out that cows and farm-raised fish, which are not biologically suited to eating corn, are now given a modified diet that is based on corn. Do you think people's diets have been modified in a similar way? How do you feel about the possibility of your food being modified without you being aware of it?

REFLECTION

- Ask students to write their responses to the question "What can people do to be better informed about what is in the foods they eat?"

IDEAS FOR ACTION

- Provide students with copies of the Corn from A to Z student handout, and have them use it to look for and record corn-based ingredients listed on food labels they find at home or at the grocery store. Analyze the results as a class.
- Invite students to design a digital poster, video, presentation, or other informational piece that illustrates the prevalence of corn and soybeans in American diets.
- Have students analyze their lunch to determine how many raw ingredients it contains. They might talk with cafeteria personnel to find out what ingredients

or additives are in the foods served at school, read labels of lunch items brought from home, or get nutrition information from fast food restaurants.

- Ethanol, which is primarily made from corn, has been promoted by both government officials and private companies as a viable alternative to petroleum-based gasoline. Challenge students to identify the positive and negative impacts of using corn for fuel.



STUDENT HANDOUT

CORN FROM A TO Z

Look for products at home or at the grocery store that contain the following corn-based ingredients. List each product (including the brand) next to the ingredient found in it.

CORN-BASED INGREDIENT	PRODUCTS CONTAINING EACH INGREDIENT
-----------------------	-------------------------------------

ASCORBIC ACID	
BAKING POWDER	
CARAMEL	
CELLULOSE	
CITRIC ACID	
CORN FLOUR	
CORN OIL	
CORNSTARCH	
CORN SYRUP	
DIGLYCERIDES	
ETHYL ACETATE	
FRUCTOSE	
FUMARIC ACID	
GLUTEN	
HIGH-FRUCTOSE CORN SYRUP	
INVERT SUGAR	
MALTODEXTRIN	
SACCHARIN	
SORBIC ACID	
SORBITOL	
STARCH	
SUCROSE	
XANTHAN GUM	
XYLITOL	
ZEIN	
OTHER:	



CHAPTER 3

UNINTENDED CONSEQUENCES

SYNOPSIS OF FILM CHAPTER

This chapter of *Food, Inc.* focuses on one of the unintended consequences of our current food system: the occasional contamination of the food supply and the very real risks presented to the population. The film puts a face on this problem by interviewing the mother of a toddler who died from *E. coli* contracted from eating a hamburger. The film describes how feeding cows corn—a cheap and abundant crop because of subsidies—has increased the incidence of *E. coli*, since corn raises the level of *E. coli* in cows' guts. In light of this higher risk of contamination, the film shows meat packers taking such measures as using ammonia to cleanse meat meant for human consumption.

RUNNING TIME: 13:56 MINUTES

BACKGROUND INFORMATION

Each year, approximately 325,000 Americans are hospitalized and 5,000 die from food-borne illness. Like two-year-old Kevin in the film, many are sickened by *Escherichia coli* (*E. coli*), a group of bacteria that live inside the intestines of humans, other mammals, and birds. While most *E. coli* are beneficial and help to break down food in the process of digestion, certain strains can cause serious infection, leading to severe stomach cramps, bloody diarrhea, kidney failure, and even death.

People can become infected with *E. coli* by consuming foods or beverages that have been contaminated with animal manure, particularly cattle manure. One of the most deadly strains, known as *E. coli* O157:H7, was first found in 1982 and has been traced to ground beef, sausages, unpasteurized milk and cheese, unpasteurized apple and orange juice, alfalfa and radish sprouts, lettuce, spinach, and drinking water. Recent research indicates that an increased presence of *E. coli* in cows' guts may be the result of their high-corn diet, which favors acid-resistant bacteria strains like *E. coli* O157:H7.

Numerous federal agencies are responsible for food safety and inspection in the United States, including the U.S. Department of Agriculture (USDA), the Food and Drug Administration (FDA), and others. However, no one agency is responsible for all foods, and agencies may split responsibility for even the same food product. With frozen pizzas, for example, the cheese is regulated by the FDA and the pepperoni by the USDA. One drawback with this system is that potential problems can slip through the cracks. Another is that each agency has competing priorities for funding and staffing. At the FDA, for example, most of the budget funds drug regulation—not food inspection—and at the USDA, there is a chronic shortage of meat inspectors.

A wave of recent food recalls is an indication of the inadequacy of our food safety system. A recall is when consumers are asked to return potentially unsafe products for refund and usually results from an outbreak of illness. While recalls do control the immediate spread of the illness, they also underscore a systemic lack of prevention strategies.

As depicted in the film, the fragmentation of our food safety system can lead to tragic results. Barbara Kowalczyk and Patricia Buck, Kevin's mother and grandmother, have worked for years to pass the Meat and Poultry Pathogen Reduction and Enforcement Act, or "Kevin's Law." This bipartisan bill was designed to increase the USDA's authority to set and enforce food safety standards for meat and poultry. For example, if a meatpacking plant were to repeatedly fail contaminant tests, the USDA could shut it down.

Some people say that regulations like Kevin's Law would keep consumers safer. However, others argue that such regulations are impractical and based

on contaminant tests that do not give an accurate picture of meat and poultry safety. Still others believe that regulations like this are only a stop-gap measure and that a reorganization of the entire food safety system is necessary for real change.

OPENER

Before showing this chapter of the film, ask students whether they have ever heard of a food being recalled. Ask, “What do we mean by a food recall? Why are foods recalled?” Have them generate a list of food recalls that they know of.

SOCRATIC DISCUSSION

FOCUS QUESTION

Who’s responsible for keeping our food safe?

Have students summarize the story of what happened to two-year-old Kevin Kowalczyk, who died from an *E. coli* O157:H7 infection. Ask students for their perspectives on the question “Who is responsible for keeping our food safe?”

DEEPENING QUESTIONS

- Who’s responsible for Kevin’s death?

[Throughout the discussion, if the students name a group of people as responsible for Kevin’s death, help them narrow it down to the specific individuals they would hold responsible. For example, if they name the meatpacking company, ask them, “Who at the company is responsible: The forklift driver? The meatpacking worker? The owner?”]

- You are a salesperson at the restaurant who sold the hamburger to Kevin's mom. Are you responsible?
- You are the meat distributor who sold the meat to the restaurant. You weren't aware that the meat was contaminated. Are you responsible?
- You are a worker at the meatpacking plant whose job is to cut the carcass. You are a good worker and follow the procedures set up by the plant. Are you at all responsible?
- What about the federal court judges who said that the government doesn't have the authority to shut down a meatpacking plant that repeatedly fails contaminant tests. Should they be held partly responsible?
- What about the people who started feeding corn to cows in the first place? Should they be held partly responsible?
- Does this situation remind you of any other parallel situation where there are unintended consequences of people's actions? (For example, texting an important message in a hurry to a friend may have the unintended consequence of it being misconstrued, or the use of gasoline-powered cars has had the unintended consequence of raising carbon dioxide levels in the atmosphere.) What are some of the unintended consequences in that situation?
- If any of these people didn't intend for Kevin to die, does that get them off the hook?
- Imagine that you accidentally hit and killed someone while driving your car. You didn't mean to hurt the person and you are very sorry about it. Does that mean you are not responsible?
- If a particular party is responsible for Kevin's death, what do you think the consequences or repercussions should be?

- The mother says, “Sometimes it feels like industry was more protected than my son.” What do you think of her words?
- Thinking back on our discussion, who are all the parties we identified? Which of them did we think were responsible, at least in part, for Kevin’s death?
- Do we have the right to assume that our food is safe? If so, who do you think should be responsible for ensuring its safety?

REFLECTION

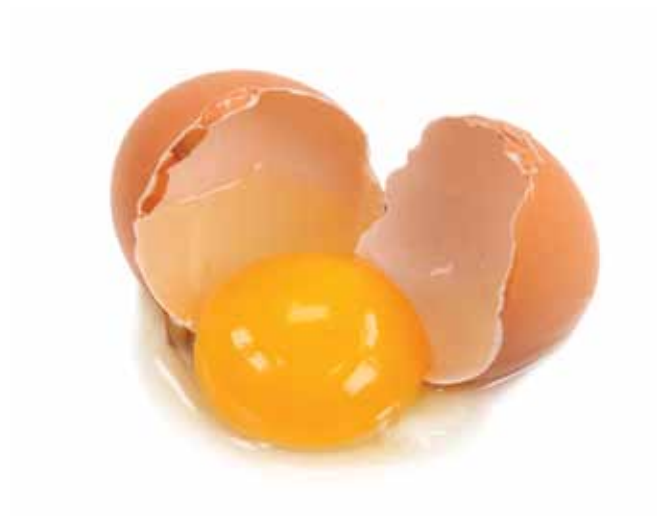
- Ask students to imagine that they are charged with making sure a death like Kevin’s never happens again. What steps would they take to ensure it doesn’t?
- Point out to students that feeding cattle cheap and abundant corn seemed like a good idea when people started doing it, but it had some unintended consequences. Ask students to write about a situation at home, school, or in your community when something that started as a solution created more problems than existed in the first place.

IDEAS FOR ACTION

- Encourage students to find out more about Kevin’s Law and its status (Kevin’s Law is formally called the Meat and Poultry Pathogen Reduction and Enforcement Act). Have them check the Center for Foodborne Illness website, www.foodborneillness.org, to learn about recent efforts to curb *E. coli* contamination.
- Invite students to consider whether there is a rule at their school or in their community that they would want changed. What specific change would they want to see? Who has the authority to make that change? What is the process

for making a change? What would they need to do to promote the change?
Help students develop an action plan for working toward that change.

- Have students research *E. coli* and other food contaminants and create a brochure for families on keeping food safe from contamination.





CHAPTER 4

THE DOLLAR MENU

SYNOPSIS OF FILM CHAPTER

This chapter of *Food, Inc.* focuses on the fact that fast food and processed foods are often less expensive than healthier foods like fruits and vegetables because many of the ingredients come from crops subsidized by the federal government. The film highlights one family's dilemma at the grocery store: Since the father has diabetes, the family members are aware that a healthier diet with more fresh foods would be best for him, but they must choose foods they can afford. As the film suggests, people with lower incomes are more likely to eat cheaper, processed foods, and are also more likely to suffer from obesity, Type 2 diabetes, and other diet-related health problems.

NOTE Be sensitive to the fact that the portrayal of the family in the film may hit close to home for some of your students. Make sure that the discussion avoids stigmatizing or blaming low-income individuals and families, or those with obesity or diabetes.

RUNNING TIME: 5:12 MINUTES

BACKGROUND INFORMATION

U.S. farm subsidies first began during the Great Depression as a way to help farmers survive wide fluctuations in crop prices. The idea was to give farmers a guaranteed minimum price for certain crops that could be stored from year to year. When prices were low, these so-called commodity crops could be taken off the market and stored until prices recovered.

Today, the federal government spends \$35 billion each year subsidizing commodity crops in a complicated system of subsidies. Over time, these subsidies have artificially lowered the prices of certain crops, like corn and soybeans, encouraging their overproduction and making them much cheaper than other crops. Since these crops are so cheap and abundant, meat and food producers have turned them into a wide range of end uses, such as hydrogenated oils, high-fructose corn syrup, and animal feed. With farm subsidies, the price of soft drinks—which contain high-fructose corn syrup—decreased by 23 percent between 1985 and 2000, while the price of fruits and vegetables increased by almost 40 percent.

As author Michael Pollan says, “That’s what we’ve been heavily subsidizing, encouraging farmers to grow more of, and that’s what makes fast food so cheap. Meanwhile over in the produce section, the head of broccoli costs more than a fast-food hamburger. Why is that? We do very little to encourage farmers to grow what are called specialty crops, which is actual food you can eat.”¹

The lowest-cost options at the grocery store are often those made up of refined grains with added sugars and fats. The main reason these products are cheap is that they contain one or more subsidized ingredients. For example, nearly all processed foods contain high-fructose corn syrup.

This proliferation of cheap—but unhealthy—food has had the greatest impact on low-income families, who spend a larger percentage of their earnings on food. Because they must live on tight budgets, the price difference between fresh fruits

¹ Parker-Pope, Tara (2008, October 24). “Mr. President, Let’s Talk about Food.” New York Times blog. <http://well.blogs.nytimes.com/2008/10/24/mr-president-lets-talk-about-food/?partner=rssuserland&emc=rss>.

and vegetables and food with subsidized ingredients forces them to consume more processed foods than they otherwise would. An unfortunate result is that income is now the most accurate predictor of obesity and Type 2 diabetes—two conditions linked to diet.

Diabetes is a condition in which the body fails to break down glucose derived from food, a process normally aided by insulin. People who have what is known as Type 2 diabetes produce insulin, but it is inadequate. This type of diabetes is directly linked to obesity: People who are obese are up to seven times more likely to develop Type 2 diabetes than those of normal weight. Studies also show a link between Type 2 diabetes and a diet of refined carbohydrates, which causes insulin spikes in the bloodstream.

Income, diet, obesity, and Type 2 diabetes are all linked, and the film suggests that our country's farm subsidy system plays a part. Some say that food choices fall under the realm of personal responsibility; according to this view, what we buy and eat is a choice, and individuals should be responsible for making healthier food choices. Others argue that healthy food choices should be available to everyone and not just those with means; according to this view, people shouldn't have to choose between healthful food and medicine, for example, and the farm subsidy system should be restructured to provide healthier foods for all.

OPENER

Bring in a head of broccoli (or another vegetable) and a bag of chips, noting the price of each. Before showing the film chapter, show students the broccoli and the chips and ask: Which do you think costs more? Which one has the most ingredients and is the most processed? Why isn't that one more expensive? Introduce the idea of subsidies (see Background Information).

SOCRATIC DISCUSSION

FOCUS QUESTION

Should access to healthy food be a right for everyone?

After viewing the film chapter, answer any fact-based questions students may have about subsidies, diabetes, and so on (see Background Information). Then, ask students to share their perspectives on whether everyone should have the right to healthy food.

DEEPENING QUESTIONS

- Would it be okay with you that healthy food is only available to people who can afford it?
- If so, what might be the consequences of that—both to individuals and society? (For example, by eating less healthy food, low-income individuals have more health issues, are sick more often, require more health care, miss more days of work, and have lower job performance.)
- If not, how might we make healthy food available to everyone?
- The film gives the impression that food is either cheap or healthy. Do you think it is true that food is either one or the other, or is this a false dichotomy?
- In the film, the mother, Maria Andrea Gonzalez, says, “We’re really tight from either paying for his [Alfredo Orozco’s] medicine to be healthy or buying vegetables to be healthy.” Which should she choose if she cannot afford both?
- How have our government policies affected the types and costs of available foods?
- How does the cheap price of processed food affect low-income families? Is this fair?

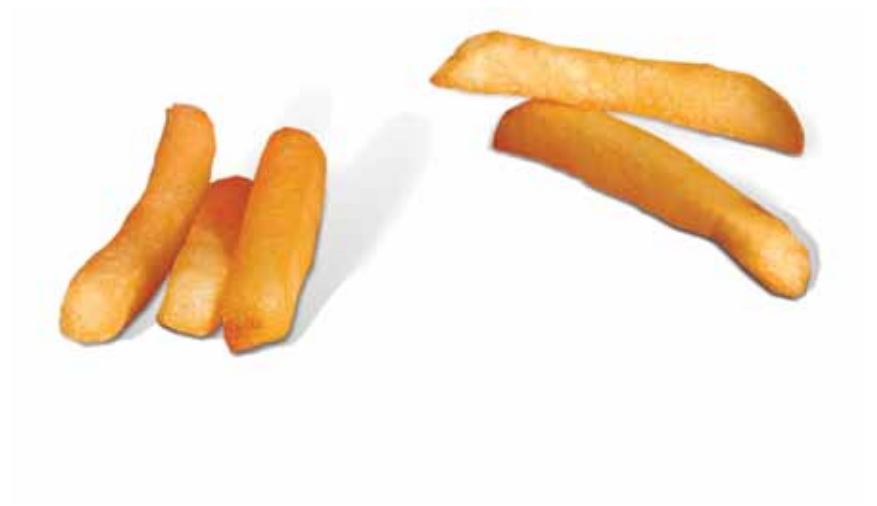
- Subsidies make certain foods cheaper than they would be otherwise. Without subsidies, how might low-income families afford food?
- In the film, author Michael Pollan says, “We’ve skewed our food system to the bad calories, and it’s not an accident.” What does he mean by this?
- With cheap food, it seems our society pays at both ends—at the production end with subsidy tax dollars, and at the consumption end with poorer health and lower productivity. Who benefits from cheap, fast food? Is it really cheap for everyone?
- How might our government policies be restructured to allow more access to healthier foods? (For example, policies might educate people about healthful eating or give incentives to grow and buy fruits, vegetables, whole grains, and other healthier foods.)
- Do you think healthy eating should be a right, a responsibility, or a privilege? [Placing a sign for each position around the room, have students stand under the sign that shows their position. Ask students at each sign to explain their position.]

REFLECTION

- Ask students to write a personal response to the question of whether healthy eating should be a right, a responsibility, or a privilege.
- Have students write a brief response to the question “How do you think the way your grandparents used to eat differs from how you eat today?”

IDEAS FOR ACTION

- Encourage students to keep a food log for a week and to look for ways to include healthy food in their diet.
- Invite groups of students to create a day's menu that costs as little as possible and includes whole grains, fruits, and vegetables. You might assign groups different food sources (grocery store, farmers' market, discount outlet, and so on) to compare costs.
- Create a class cookbook of inexpensive and simple recipes using whole grains, fruits, vegetables, and other nutritious ingredients to share with families in the school community.
- Have students talk with a farmer in your area to learn his or her views on the questions raised in the film. You may connect with a farmer through your local farmers' market, community-supported agriculture network, county cooperative extension office, or state department of agriculture.





CHAPTER 5

IN THE GRASS

SYNOPSIS OF FILM CHAPTER

This chapter of *Food, Inc.* explores differences between small-scale farming and industrial farming, and introduces issues of workers' rights and immigration. The chapter opens with an organic farmer comparing his farm to industrial agriculture practices. After showing the small-scale butchering of some of his chickens, the film moves to show the large-scale processing of hogs in the biggest slaughterhouse in the world. The film portrays that while the unskilled laborers in large slaughterhouses have one of the most dangerous jobs in the U.S., they have low wages, little job security, and no union to represent them. It also describes how meatpacking companies have actively recruited workers in Mexico, where 1.5 million farm jobs have been lost since 1994, partly due to U.S. policies. The final scene of the chapter shows immigration agents arresting meatpacking workers at a trailer park.

NOTE This chapter of the film includes brief footage of a chicken being killed, as well as some disturbing images of a slaughterhouse kill floor. Let students know that they can close their eyes during these scenes. You might also allow individuals to opt out of watching the chapter if it would upset them.

RUNNING TIME: 13:44 MINUTES

BACKGROUND INFORMATION

Meatpacking is the wholesale packaging of meat, which includes slaughtering, gutting, skinning, butchering, and further processing such animals as cattle, pigs, chickens, turkeys, and sheep. Most meatpacking today is done in large-scale slaughterhouses that are highly mechanized for fast and efficient processing. The Smithfield plant depicted in the film, for example, processes 32,000 hogs each day, or 2,000 hogs per hour. By using machines and other technologies, companies are able to employ unskilled, low-wage laborers for many tasks, which reduces their cost. However, the risk of both accidents and meat contamination are high when so many animals are processed and workers must work at a high speed.

At the turn of the 19th century, the industry was unregulated, which meant little to no protection for workers or consumers from unsafe or unscrupulous meatpacking practices. After Upton Sinclair's *The Jungle* was published, worker conditions slowly improved through antitrust laws, labor unions, and tighter regulations. By the 1950s, meatpacking plants offered skilled jobs at a good wage.

The industry has undergone a lot of change since the 1980s, as the fast food industry has demanded more meat at cheaper prices. To cut costs, meatpacking companies lowered wages, sped up production, and had workers perform the same task again and again to increase efficiency. They moved operations from big cities to rural communities closer to feedlots and began contracting primarily with large farm operations that raise huge numbers of animals. In addition, the companies became more consolidated so that today, just five companies control over 83 percent of the beef packing market and 66 percent of the pork packing market.¹

As the film portrays, these changes have had a profound impact on the workforce. Most of the jobs are low-paying ones, and an increasing number are filled by Mexican immigrants.

¹ Starmer, Elanor. Hogging the market: How powerful meat packers are changing our food system and what we can do about it (Leveling the Field, Issue Brief #4). The Agribusiness Accountability Initiative. http://www.ase.tufts.edu/gdae/Pubs/rp/AAI_Issue_Brief_4.pdf.

The film refers to the North American Free Trade Agreement (NAFTA), a treaty among Mexico, Canada, and the United States that has been in effect since January 1994. The aim of this treaty was to promote greater trade among the three countries, and, toward that end, it eliminated tariffs on goods shipped between them.

NAFTA is just one example of the ways in which our food choices can affect workers. Some argue that NAFTA has been good for Mexican workers because Mexico has seen poverty rates fall and real income rise, but others argue that it has been bad for Mexican workers because it has caused larger income disparities within that country. As the film points out, NAFTA has caused prices to drop, thus hurting small farms with little resilience to such changes. In fact, an estimated 1.5 million farm jobs have been lost in Mexico since 1994. Although NAFTA is only one factor in this decline,² the trade agreement has forced small-time Mexican farmers to compete with U.S.-subsidized corn producers. As the film suggests, many of the displaced farmers and farmworkers are making their way across the U.S. border in search of work, some in response to active recruiting by meatpacking corporations and other companies.

OPENER

Before showing this chapter of the film, ask students to name all the jobs they can think of that are involved in getting their lunch to them. The list might include truck drivers, cafeteria workers, farmers, meat processors, and so on.

2 For example, at the same time NAFTA came into effect, Mexico also drastically reformed its farm policies, removing price supports and subsidies to farmers. Mexico has also been moving away from subsistence farming toward larger commercial farms. Source: Villarreal, M. Angeles, and Cid, Marisabel (2008, November). NAFTA and the Mexican economy (CRS Report for Congress). Washington, DC: Congressional Research Service of the Library of Congress. <http://www.fas.org/sgp/crs/row/RL34733.pdf>.

SOCRATIC DISCUSSION

FOCUS QUESTION

When deciding what to eat, how much should we consider the workers who pick, process, and transport it?

After watching the film chapter, have students give their general impressions. Then, ask them to what extent the workers involved in bringing us food should factor into our food choices.

DEEPENING QUESTIONS

- In the film, union organizer Eduardo Peña says, “We want to pay the cheapest price for our food. We don’t understand that it comes at a price.” Do you agree or disagree with him? What evidence do you see in the film that led you to agree or disagree? What evidence do you see in your life that informs your position as well?
- How would you compare the slaughtering of the chickens by Polyface Farms to the slaughtering of the Smithfield hogs? How do the workers’ conditions compare?
- You’ve seen in the film how the production of some of the meat we eat affects the workers involved in the production. It portrays these people as having no choice because farmers in other countries can no longer farm as a result of our food system. Assuming it is true that there aren’t local people to do this work, do you think companies have the right to recruit foreign workers to come into the country, as you saw in the film? What do you think of that?
- What alternative might the companies have if they can’t find local people to do the work?
- If you think it is okay for companies to recruit foreign workers this way, what might be the repercussions of that?

- Keith Ludlum in the film says, “They have the same mentality toward workers as they do toward the hogs.” What do you think of this statement? If it is true, how might that influence the treatment of both workers and hogs?
- Slaughterhouse workers may earn as little as \$8 an hour to do the work shown in the film.³ For how much money would you be willing to do this work? What else might you demand?
- If you would require a large amount of money to do this work, how would the company meet your demand? How would they cover the additional cost? If you say that no amount of money would be enough, what alternatives would the company have, since people like you will not do the work?
- When a person chooses to eat meat, who else does that decision affect?
- What might people do to make sure that their eating meat does not harm other people or animals?
- Author Michael Pollan uses the phrase “Vote with Your Fork” to mean that consumers have the ability to influence companies by what they choose to eat. Is there a way as a group, school, or town that we could possibly influence this situation?
- Whether or not you think illegal immigration (or the influx of undocumented workers) is a problem, how is illegal immigration connected to the food we eat?

³ Source: U.S. Department of Labor, Bureau of Labor Statistics (2007). “Occupational Employment & Wages, 2007: Slaughterers and Meatpackers.” <http://www.bls.gov/oes/current/oes513023.htm>.

REFLECTION

The film describes how the meatpacking industry took advantage of immigrant workers a century ago, until Upton Sinclair wrote *The Jungle*—a landmark book that spurred major improvements, including antitrust laws and labor unions. Remind students of this part of the film and ask them to write a short reflection, describing how people fixed the meatpacking industry’s labor problems before and how we might fix them again in an enduring way.

IDEAS FOR ACTION

- Help students choose an action they can take to “vote with their fork.” For example, they might pledge to go without eating meat one day a week for the next month.
- Help students identify ranchers in your area who raise animals in more humane ways and pay their workers fair wages and benefits. Visit one of the ranches or invite the rancher to speak to your class about the ranch’s business and agricultural practices.
- Encourage students to read Upton Sinclair’s *The Jungle*. Have them compare what is portrayed in the book to modern-day meatpacking practices.





CHAPTER 6

HIDDEN COSTS

SYNOPSIS OF FILM CHAPTER

This chapter takes a look at the economics of our food system and some of the market forces that influence food companies. The owner of the organic farm from the previous chapter talks about industrial food not being “honest food” because it doesn’t include the environmental, societal, and health costs associated with it. The CEO of a once-small organic yogurt producer that has been bought out by Groupe Danone (Dannon Yogurts) walks the filmmakers through the Natural Products Expo in Anaheim. He points out other small companies that have been acquired by corporations, and explains how Walmart is now selling his company’s organic yogurts.

RUNNING TIME: 8:00 MINUTES

BACKGROUND INFORMATION

Our modern food system is largely based on the idea that people should have access to plenty of inexpensive food, and it is designed to produce, process, and distribute enormous quantities of food as cheaply as possible. One reason for this focus on abundance is our human history of periodic famines. As recently as World War II, global food shortages cost millions of civilian lives, and American farmers were pushed to produce as much food as possible as part of the war effort. Since then, farmers have continued to maintain high levels of production, using chemical fertilizers, pesticides, and other technologies to maximize yield.

On the face of it, cheap, abundant food is a worthy goal, especially when it prevents world famine. But as the film points out, by focusing on cost and abundance, our society may be trading off safety, health, environmental quality, and other things we value, while promoting large, profit-oriented corporations at the same time.

One thing we may have traded off is the iconic family farm. While prices for commodity crops like corn and soybeans have remained constant since about 1970, costs for fuel, seed, fertilizer, and everything else a farmer needs have risen steadily with inflation. That means that it takes large quantities of capital to run a farm, a reality that has wiped out many small farms and transformed most U.S. agriculture to large businesses. As a result, the number of farms in the U.S. dropped from 7 million in 1930 to 2 million in 2000—and of those 2 million farms, just 3 percent produced 75 percent of the nation's farm output.¹

The organic food movement has been an effort to lessen the environmental trade-offs related to agriculture. It began in the 1960s and 1970s as a response to growing public concern that agricultural chemicals were polluting water and causing other environmental problems. As an alternative to these chemicals, organic farmers use natural fertilizers and traditional pest control methods. At first, organic products were primarily from small farms and represented a tiny segment of the food market. However, their popularity grew over the years, and large producers started to enter the organic market.

This chapter centers on the executive of a small organic yogurt company that was bought out by a huge multinational corporation. The yogurt company executive in the film says that being part of a corporation now gives them bargaining power with large retailers like Walmart, which could bring organic yogurt to a larger market and foster more organic farming. However, others argue that because large corporations focus on the bottom line, they may cut corners by using lower-quality ingredients or paying lower wages to boost profits.

¹ "Agriculture since the Industrial Revolution." Encyclopedia of Food and Culture. Ed. Solomon H. Katz. Vol. 1. Gale Cengage, 2003. eNotes.com. 2006. 23 Jun, 2009. <http://www.enotes.com/food-encyclopedia/agriculture-since-industrial-revolution>.

OPENER

List the following consumer products on the board:

BACKPACK

CAR

CELL PHONE

JEANS

PENCIL

SHAMPOO

SHOES

SOCKS

TV

Before showing the film chapter, ask students to look at the products you have listed and indicate those products for which low cost would be their top priority. For the other products, have them name factors they would consider a greater priority than cost.

SOCRATIC DISCUSSION

FOCUS QUESTION

Does it matter to you which food companies produce your food?

After viewing the chapter, have students revisit the list of products from the Opener and ask whether the company making the product is a factor they would consider. Ask them whether it matters to them which food companies produce their food, and have them explain their position.

DEEPENING QUESTIONS

- In the film, we see that Stonyfield Yogurt is now owned by Groupe Danone, Tom's of Maine by Colgate, Kashi by Kellogg, and Burt's Bees by Clorox, which are all large corporations. What kinds of consumers do you think these products are geared for? How do you think those consumers might react to learning that the products are actually made by big corporations?
- As the film suggests, small companies and producers are often bought out or taken over by very big companies. What might be the implications of that—both positive and negative?
- Why might corporations continue marketing the small companies' products under their original labels, as we saw in the film? What do you think of that practice?
- Walmart's dairy purchaser says that Walmart and other companies react to what the customers want. How might individual purchases affect Walmart's dairy offerings? Can you think of any situation where companies should not provide what the customer wants?
- Farmer Joel Salatin in the film says, "We're willing to subsidize the food system to create the mystique of cheap food when actually it's very expensive food." What might he mean by that?
- As portrayed in the film, cost and efficiency drive our current food system. Should price be the most important force behind our food industry? Why or why not? How might our food system change if it was driven by other values, like health or environmental sustainability?
- Some people seek out organic food and some follow a vegetarian or vegan diet. What other examples can you think of where people make food or consumer choices based on their values?
- Yogurt company executive Gary Hirshberg says that Walmart started selling organic yogurt not because of a "moral enlightenment," but for economic

reasons. Do you think economics is a good enough reason by itself for companies to make changes that affect our society? Why or why not?

- What do you think of Gary Hirshberg's statement that "nobody can challenge the fact that a sale of another million dollars to Walmart helps to save the world"? Do you agree with him? Why or why not?

REFLECTION

Give students copies of The Company You Keep student handout, asking them to indicate where they would place themselves on the spectrum between "I'll buy what I like to eat, no matter who makes it" and "I'll only buy food from companies whose values I agree with." Have them write about their position.

IDEAS FOR ACTION

- The film suggests that many small food producers have been bought by large corporations. Help the class explore the companies behind different food products. Have students choose a product, identify what company makes that product, and then find out whether that company is owned by a parent company. If it is owned by a parent company, what else does that company produce? To find the information, they may look at labels, search on the Web, and ask local store managers. Have students share and analyze their findings. How easy was it to find the information?
- Invite a farmer to talk with your students about organic versus nonorganic farming and about why organic food products are often more expensive than nonorganic products. To locate an organic farmer in your area, check www.eatwellguide.org.

STUDENT HANDOUT

THE COMPANY YOU KEEP

Place yourself on the following scale.

"I'LL BUY WHAT
I LIKE TO EAT,
NO MATTER WHO
MAKES IT."

"I'LL ONLY BUY
FOOD FROM
COMPANIES
WHOSE VALUES
I AGREE WITH."



Explain your position in three or four sentences.

How has the film affected your perspective?





CHAPTER 7

FROM SEED TO THE SUPERMARKET

SYNOPSIS OF FILM CHAPTER

This chapter of *Food, Inc.* focuses on soybean seeds that were developed through genetic modification and patented by Monsanto. It explains that farmers used to save seeds from one year's crop for the next year's planting. Since Monsanto now owns the patent on most soybean seeds used in the United States today, the company has the legal right to protect their patent and keep people from saving the seed. In the film, three different farmers and the owner of a small seed cleaning company (which cleans seeds so they can be saved) describe being sued or investigated by Monsanto for alleged violations of its soybean patent. One farmer says that he doesn't plant Monsanto soybeans, but his fields have been contaminated by his neighbors' and he is still held accountable. Another says he was wrongly accused of violating the Monsanto patent but decided to settle the case because he lacked the money to fight it. The third also agreed to settle and must speak anonymously in the film as a condition of the settlement.

RUNNING TIME: 10:07 MINUTES

BACKGROUND INFORMATION

People have been tinkering with the genetic makeup of plants and animals since the earliest farmers recognized variations among wild plants and selected those with desirable traits to sow. However, that tinkering has been taken to a new level with molecular genetics, which has enabled scientists to pinpoint the specific gene sequence that produces a particular trait and to transfer desirable genes between species. Genetically modified organisms, or GMOs, are developed by transferring genes and their traits from one organism to another.

GMO technology offers the potential benefits of increased yield, enhanced nutrition, and increased drought resistance to help feed the world's poor. At the same time, it also raises concerns of antibiotic resistance and other human health impacts, unintended transfer of genes through cross-pollination, loss of biodiversity, and the control of world food production by private companies.²

Genetically modified crop seeds began to be sold in the United States in 1996. By 2008, over 309 million acres—or 483,000 square miles—of GMO crops were planted worldwide.³ Despite the potential for nutritional advances, most commercially available GMO crops today have been developed solely for their tolerance to a particular herbicide (weed killer). Herbicide-tolerant crops enable farmers to apply that herbicide to kill weeds without damaging the crop; for example, Monsanto's Roundup Ready soybean described in the film can tolerate the herbicide Roundup, which is also produced by Monsanto. According to a 2008 report by Friends of the Earth, over 80 percent of the world's GMO crop acreage is planted with herbicide-tolerant soybean, corn, cotton, and canola.⁴

2 U.S. Department of Energy (2008, November 5). "What are genetically modified (GM) foods?" Human Genome Project Information. http://www.ornl.gov/sci/techresources/Human_Genome/elsi/gmfood.shtml.

3 GMO Compass (2009, February 12). "Rising trend: Genetically modified crops worldwide on 125 million hectares." http://www.gmo-compass.org/eng/agri_biotechnology/gmo_planting/257.global_gm_planting_2008.html.

4 Friends of the Earth International (2008, January). "Who benefits from GM crops?" Agriculture and Food, Issue 112. <http://www.foei.org/en/publications/food-sovereignty/publications>.

As depicted in the film, companies like Monsanto can patent their genetically modified seeds.⁵ That means that they own the specific genetic sequencing contained in the seed and can control the use of all seeds with that particular sequence. It used to be that seeds could not be patented, and that farmers were allowed to save and exchange seeds. But in 1985, the U.S. Patent and Trade Office began granting patents for genetically modified seeds. A U.S. Supreme Court decision in 2001 upheld a company's right to patent these seeds and effectively banned the saving of genetically modified seeds in the United States. As shown in the film, Monsanto and other companies have actively sued farmers for allegedly saving their patented seeds.

Some people believe that companies should have the right to patent genetic material that they spent money and resources developing. They might point out that if companies are unable to protect these patents and other forms of intellectual property, future innovations that could benefit the world will be thwarted. Others believe that genetic material is not the same as intellectual property and that patenting seeds gives companies excessive power over something that is vital for everyone. They might point to the fact that most of the world's commercial seed today is owned by a handful of agrichemical-biotech companies.

OPENER

Before showing the chapter, provide students with copies of A Review of Seeds and Plant Reproduction student handout, pages 76–77. Instruct them to read the article, underlining sentences that describe the importance of seeds and circling sentences that describe a societal conflict involving seeds. Have students refer to what they circled and write a one-sentence statement or question summarizing the debate. Ask individuals to share their responses.

5 International Center for Technology Assessment (2001, December 19). "ICTA analysis of Supreme Court decision in patent case." <http://www.cropchoice.com/leadstrya594.html?recid=540>.

SOCRATIC DISCUSSION

FOCUS QUESTION

Should companies be able to own the DNA contained in plant seeds?

After viewing this film chapter, ask students to name some of the issues raised about genetically modified organisms. Ask them whether they think companies should be able to own the genetic material contained in plant seeds. What might be arguments for each side?

DEEPENING QUESTIONS

- From Monsanto's perspective, it is expensive to develop new seeds like these, and the seeds save farmers time and enable them to produce more soybeans. What might be the consequences—both positive and negative—of the company owning the genetic information in the seed?
- How does this situation compare to downloading music from “free” sites?
- How does it compare to the Microsoft monopoly case in which Microsoft was accused of having an unfair competitive advantage when it required consumers to buy both its Web browser and computer operating system together?
- Intellectual property can be defined as creations of the mind—such as music, art, writing, inventions, symbols, images, designs, or names—that have commercial value. In our country, these things are legally protected and cannot be sold or used without the permission of the owner. Do you think people should be able to own an idea? Why or why not?
- Saving seeds from each year's crop is a tradition farmers have followed for thousands of years. Think of a tradition that has been in your family for a long time. What if you could no longer have this tradition because someone now legally claims it as theirs?

- Why might we care whether Monsanto or another company owns the DNA in seeds?
- Do you think it is fair that the one farmer had to settle (say he was guilty) because that was cheaper than trying to fight Monsanto's lawsuit? Why or why not?
- The film includes an image of Lady Justice holding scales, with the side that is able to put the most money on the scales depicted as the winner. What do you think of that image?

REFLECTION

Have students consider what it would be like if people could buy and sell DNA on eBay, and then write a short story illustrating the possible implications.

IDEAS FOR ACTION

- Help students investigate seed banks or other organizations working to save seeds. For each organization, find out the goals and purposes of their seed saving efforts, who they work with, and how they go about saving seeds.
- Invite students to search for other examples of companies owning something that was traditionally in the public domain. (One example is water, which used to be a resource anyone could access, but now many companies own water rights and make money from selling it. Another is sports teams, which were often community-owned, but are now mostly owned by companies or private individuals.) What are the consequences of these things being owned by companies?
- Have students write a position paper on whether people should be able to own or copyright an idea, including the pros and cons of their position. For background, see Mann, Charles C. "Who Will Own Your Next Good Idea?" The Atlantic Monthly Online. September 1998. www.theatlantic.com/issues/98sep/copy.htm.

STUDENT HANDOUT

A REVIEW OF SEEDS AND PLANT REPRODUCTION

A seed is rather an amazing thing. If you examine a poppy seed or apple seed, it probably doesn't appear to be alive. It doesn't respire or move, and it doesn't seem to change. Yet, given moisture and the right conditions, a seed will germinate and mature into a plant.

A seed is basically a baby plant or embryo enclosed in a protective coat with a supply of food. This little packet of stored life is an innovation that allows all flowering plants to reproduce across space and time. With seeds, a plant's offspring can grow far away from the parent plant, giving it a better chance to survive because it does not have to compete with the parent for sunlight or water. Seeds also allow offspring to wait for the right growing conditions, helping them avoid harsh winter, drought, fire, or other difficulties. Seeds can stay in this dormant state for a long time: One living seed was recently found to be 2,000 years old.

Seeds are clearly important to flowering plants, but people also depend on them to live. Almost all the fruits and vegetables we eat—from berries to broccoli—are grown from seeds. Besides allowing us to grow food, many seeds themselves also provide us with important nutrients. Most human diets are based on grains (like wheat, rice, corn, and rye) and beans (like pinto beans, soybeans, and peas), which are all seeds. People also use seeds to make cooking oils, manufacture paint and other industrial chemicals, and produce biofuels.

Each seed is the result of a plant flower being fertilized by pollen. Through a process known as sexual reproduction, seeds develop after a plant's male part (the pollen) joins with a plant's female part (the ovule) to create a fertilized egg. Depending on the type of plant, the pollen and ovule may be from the same or different flowers, or from the same or different plants. Some plant species require cross-pollination between two separate plants and depend on wind or bees or other insects to transfer the pollen from one plant to the ovary of another.

A seed's cells contain the complete "blueprint" for the particular plant, and they determine how the plant will grow, look, and taste. Like all other living cells, seed cells include the genetic material that chemically directs the cell's activities. This

genetic material—called deoxyribonucleic acid or DNA—is the same in every cell of a particular organism. While all DNA is made from the same four chemical building blocks, each plant has a unique DNA sequence that determines its characteristics.

The DNA in seed cells comes from the parent plants and transfers characteristics from the parent to the offspring. With sexual reproduction, the genetic information in seeds is a combination of both the male and female parent parts. This allows new genetic combinations that produce slight variations in the plant's traits.

Over the 10,000 years that people have been practicing agriculture, they have been improving crops by selecting plants with desired traits, and saving seeds from those plants to sow the following year. By doing so, people have developed plants that are more productive, tasty, frost- or drought-resistant, and easy to harvest than the original wild plants. Modern-day grains, beans, and other crops were developed through this process.

In the past few decades, people have been using a new process, called genetic modification or bioengineering, to develop plants with specific traits. With this process, scientists in a laboratory change the DNA sequence of a plant by adding, duplicating, deleting, or inserting pieces of DNA from other organisms—like bacteria or viruses—to produce certain plant traits.

Genetic modification speeds up the process of improving plants, which otherwise can take many, many years for even small changes. It also allows people to develop plants with new traits that cannot be found in nature, such as the ability to resist specific diseases. But genetic modification also raises many concerns. For one thing, we do not know all the long-term consequences of genetic modification to human health or the environment. For another, there is no way to keep genetically modified crop varieties separate from conventional varieties when they are cross-pollinated by wind and insects; in fact, people have already found genetically modified DNA in conventional corn, soybeans, and canola seeds.⁶ Other concerns are that the use of genetic modification may lead to fewer species and less genetic variety within species, and that it may give bioengineering companies too much control over the world's food production.

6 Union of Concerned Scientists. "FAQs: Seed contamination." http://www.ucsusa.org/food_and_agriculture/science_and_impacts/impacts_genetic_engineering/faqs-seed-contamination.html.



CHAPTER 8

THE VEIL

SYNOPSIS OF FILM CHAPTER

In this chapter, *Food, Inc.* explores why consumers are unaware of the details of how food is processed and what it contains. The film describes some of the measures taken by businesses and lobbies to protect the image of their products, to hold onto intellectual property, and to avoid providing more detailed labels or warnings on their food products. It points out some connections between government regulators and agribusiness and suggests that these connections affect the regulation of the food industry. It also shows the seed cleaner (introduced in the previous chapter) defending himself in a lawsuit brought by Monsanto for “inducing farmers to break the patent law” through his seed cleaning business.

RUNNING TIME: 7:59 MINUTES

BACKGROUND INFORMATION

Food is a huge industry, with Americans spending over \$1.5 trillion a year on food.¹ Since there is so much at stake, it is perhaps not surprising that food corporations—from agribusinesses to food processors to retailers—do everything in their power to maximize earnings. As described in other film chapters,

¹ Plunkett Research (2008). Food industry overview, 2008. <http://www.plunkettresearch.com/Industries/FoodBeverageTobacco/FoodBeverageTobaccoStatistics/tabid/248/Default.aspx>.

companies may increase profitability by using lower-cost ingredients (Chapter 4), minimizing labor costs through automation and other means (Chapter 5), consolidating operations (Chapter 6), or curtailing competition (Chapter 7).

This film chapter focuses on ways in which the food industry influences laws and regulations to protect their earnings. It presents food libel laws, food labeling laws, and patent laws as specific examples.

Food libel laws, also known as food disparagement laws, have been passed in thirteen states and make it illegal to disseminate misinformation about foods. They also make it easier for food companies to sue critics. In 1999, Oprah Winfrey was famously sued by Texas beef producers for questioning the safety of hamburger meat.

Food labeling laws mandate that certain information be printed on a product's label, such as a listing of ingredients, nutrition data, and allergy information. A new labeling law went into effect in March 2009, requiring most fresh meats and some other foods to list where they originated. The food industry tends to fight these laws as burdensome and as giving the impression of a problem.

Patent laws protect intellectual property and have been used by agribusinesses to defend the ownership of genetically modified seeds (see the Background Information of Chapter 7 for more information).

The film mentions a so-called Cheeseburger Law, which was passed by Congress in 2004. This law, formerly called the Personal Responsibility in Food Consumption Act, makes it illegal to sue food companies for obesity and other health effects of eating junk foods. Touted as preventing frivolous lawsuits against the industry, the law also enables food companies to avoid revealing possibly damning evidence about their practices, as had happened when lawsuits were brought against tobacco companies.²

2 Simon, Michele (2004, April 1). "'Big food' lawsuits can help trim America's waistline," Pacific News Service, New America Media. http://news.pacificnews.org/news/view_article.html?article_id=46522d2cbbce7094682c78c8dad20704.

One of the issues of regulation pointed out by the film is that regulatory agencies and the industry often hire employees from the same pool. Since government regulators need people knowledgeable about the industry, they may hire former industry executives; since the industry needs people knowledgeable about regulation, they may hire former regulators. Reasonable and impartial regulation is possible under these circumstances, but it can be challenging for regulators to remain objective when they may know people in the industry.

The film portrays the food industry as intentionally drawing a “veil” to keep people in the dark about their food and how it is produced. Some would argue that keeping certain information from consumers is necessary for the smooth functioning of our food system, which is so vital to all of us. They might say that companies should be able to guard valuable trade secrets; minimize unnecessary fear in consumers, which could create panic; and keep costs down by blocking frivolous lawsuits. However, others would argue that the “veil” does more than protect the food system—it protects companies at the expense of consumers. They might say that short-term profit is valued over health, safety, and the environment, which are also necessary for a sustainable food system.

OPENER

Before showing this film chapter, pose the following to students: Some of us have foods we don’t particularly care for, but many of us have foods or ingredients we are truly afraid of. Consider what kinds of foods or ingredients are you afraid to eat and why. Ask volunteers to share their responses.

SOCRATIC DISCUSSION

FOCUS QUESTION

Should a company have the power to decide what information to give consumers about the food it produces?

After viewing the film chapter, ask students to summarize some of the ways shown in the film that companies may control the information provided to consumers about food. Ask them whether they think companies should be able to decide what information to give consumers, and why or why not.

DEEPENING QUESTIONS

- In the film, Noel Kramers of the California Farm Bureau says that the bureau is against labeling because it “creates unnecessary fear in the consumer’s mind.” Do you agree with this reasoning? Why or why not?
- Thinking back to the Opener, how would information about a food raise or lower your fear of it?
- In the film, author Michael Pollan says, “I think that one of the most important battles for consumers to fight is the right to know what’s in their food and how it’s grown.” How does his position compare with the California Farm Bureau’s position?
- Can you name different consumer products that have warning labels about their use or safety (cigarettes, alcohol, appliances, games, and so on)? What impact, if any, do you think these labels have?
- Health experts recently called for warning labels on energy drinks, pointing out the effects of “caffeine intoxication”—a syndrome that can cause anxiety, insomnia, gastrointestinal upset, tremors, rapid heartbeat, and even death. Would a warning label affect whether or not you buy energy drinks? Why or why not?
- How effective are labels in helping consumers make decisions about their food? What might be more effective?
- What do you think about Oprah being sued for saying she wasn’t sure if she wanted to continue eating hamburgers, as described in the film? What do you think about a law that prevents you from saying something negative about a particular food item?

- In the film, Barbara Kowalczyk appears to be afraid to say how her eating habits have changed as a result of her son's death, and she does not reveal the source of the meat that killed him. What do you think of that?
- People who have been in the industry are knowledgeable about that industry. What are the pros and cons of them becoming regulators working for the government?
- Who do you think should have the power to decide food policies, laws about food safety, and other food-related matters?

REFLECTION

Have students imagine that detailed information about all of our food was readily available. Have them write about their thoughts on whether that would affect their food choices, and how.

IDEAS FOR ACTION

- Invite students to investigate organizations that advocate a right to know what is in food and create an annotated bibliography of them.
- Distribute copies of the Labels Survey student handout for class members to give to their peers. Have them tally the results and evaluate the impact of labels on foods and other products.
- Have students choose a member of a U.S. Senate or U.S. House committee related to food and do a background check to find out whether that person has ever worked in one of the industries they now regulate. (See www.senate.gov or www.house.gov and follow the links for a list of committees and committee members.)

STUDENT HANDOUT

LABELS SURVEY

- 1 How often do you read the Warning or Caution labels on products you buy or use?

____ Always ____ Sometimes ____ Never

- 2 Do the Warning or Caution labels affect whether you buy or how you use a certain product?

____ Always ____ Sometimes ____ Never

- 3 How often do you read the Ingredients list of foods you buy or eat?

____ Always ____ Sometimes ____ Never

- 4 Does the Ingredients list affect whether you buy or how much you eat a certain food?

____ Always ____ Sometimes ____ Never

- 5 How often do you read the Nutrition Facts of foods you buy or eat?

____ Always ____ Sometimes ____ Never

6 Do the Nutrition Facts affect whether you buy or how much you eat a certain food?

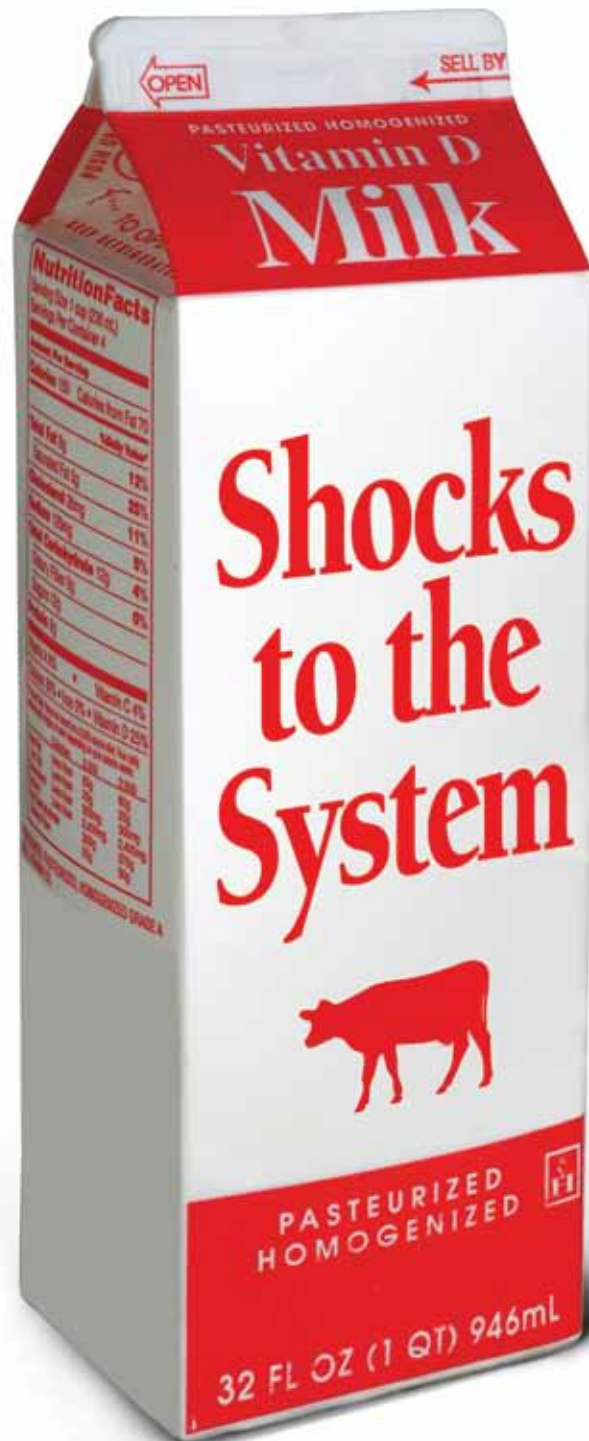
_____ Always _____ Sometimes _____ Never

7 How often do you think warning labels on cigarettes and alcohol keep people from using these products?

_____ Always _____ Sometimes _____ Never

8 Foods high in fat can lead to obesity, which is a major health problem. Some people think a warning label should be included on foods that are high in fat. Would a warning label like that keep you from eating high-fat foods?

_____ Always _____ Sometimes _____ Never



CHAPTER 9

SHOCKS TO THE SYSTEM

SYNOPSIS OF FILM CHAPTER

In this chapter, the film touches on some of the other major issues raised by our current food system, including the possibility of a world food shortage, the tremendous amount of energy that goes into food production, and the impacts of industrialized food on our health and environment. The film points out that while the average consumer may feel powerless in the face of these issues and the vastness of the food system, the system does respond to consumer demand.

RUNNING TIME: 7:07 MINUTES

BACKGROUND INFORMATION

It is easy to feel overwhelmed by the enormity of issues raised by the film about our current food system. The manner in which our food is produced and marketed affects not only our personal health, but also the health of our society and our planet. This film chapter offers hope that individual and collective actions can make a difference and move us toward creating a more sustainable food system.

One way that individuals can effect change is through their food purchases. As the film makes clear, corporations can and do alter their practices based on consumer demand. One example mentioned in this chapter is Walmart switching to rBST-free milk as a result of consumer pressure. A synthetic hormone injected in cows to increase milk production, rBST or recombinant bovine somatotropin

has been controversial since its approval by the FDA in 1993. While it elevates milk production, it also increases udder infections, which require the use of more antibiotics and may lead to a greater probability of antibiotic-resistant diseases.

Another example mentioned in the chapter is the recent change in public policies related to tobacco. For centuries, a major factor in the development and enforcement of tobacco policies has been the economic importance of the tobacco industry. However, scientific research, lawsuits against the government and the industry, organized education campaigns, and other efforts have led to significant progress in changing the industry and tobacco policies worldwide. Today, policies that tax tobacco, restrict smoking in workplaces and public areas, promote education, and regulate tobacco manufacturing have all made a difference in reducing the number of smokers. As suggested by author Eric Schlosser in the film, a similar multipronged approach could bring change to our food system.

Because food is something people consume three times a day—every day—personal behaviors and choices can have an impact on the food system through a multiplicative effect. In addition to food purchases, individuals can also advocate for more healthy lunch options at school, better labeling, improved working conditions, and safer food. The film lists specific actions that individuals can take, and those are reprinted on page 93.

OPENER

Before showing the film chapter, explain how working in a group at school, at the workplace, or in advocacy settings requires members to take on different roles in order for the group to function effectively. Distribute the Key Group Roles student handout and ask students to reflect individually on the skills they bring to a group, then write a brief paragraph about those skills.

SOCRATIC DISCUSSION

FOCUS QUESTION

What individual or collective actions are you willing to take to improve our food system, and what would be their impact?

After watching the film chapter, make a class list of food-related issues raised by the film. Ask students to name individual or collective things people could do to improve the food system, and list these on the board (they may start with the Things You Can Do listed at the end of the film and on page 93). Ask them which actions they would be willing to take and what the impact of those actions would be.

DEEPENING QUESTIONS

- What kinds of actions have you taken before to make a change at home, at school, or in the community? What was effective? What wasn't?
- Yogurt company executive Gary Hirshberg states in the film, "The consumer does not feel very powerful, but it's the exact opposite. When we run an item past the supermarket scanner, we're voting for local or not, organic or not." What does he mean by this statement? Do you agree or disagree with it? Why or why not?
- Aside from the supermarket, in what other arenas can individuals and groups make an impact on our food system?
- As portrayed in the film, our food system has become very mechanized as a way to cheaply and efficiently provide vast quantities of food. Would it be possible to feed the hundreds of millions of people who live in our country without this kind of industrialized food system? If so, how? If not, what might we do to avoid the problems that seem to come with it?

- In the film, farmer Joel Salatin asks us to “imagine what it would be if as a national policy we said we would be only successful if we had fewer people going to the hospital next year than last year.” What changes would need to happen for this to be a reality? What other goals might we have for our food system?
- Author Michael Pollan points out in the film that “to eat well in this country costs more than to eat badly. It will take more money and some people simply don’t have it. And that’s one of the reasons that we need changes at the policy level so that the carrots are a better deal than the chips.” If healthful, environmentally sustainable food were to cost less than other food, do you think people would eat more of it? Why do you think that?
- There is plenty of research showing that healthful food makes people feel better, have more energy, and stay well. Do you think if more people knew about this research, they would make different food choices? Why or why not?
- Which do you think would be a more effective way to change people’s food choices: changing policy or informing the public about health benefits and environmental impacts? Why do you think so?
- What are other things we can do—either individually or collectively—to encourage our families, our friends, or others around us to make changes in their lives toward food that is more healthful and environmentally sustainable?

REFLECTION

- Have students place the student-generated actions (from the Focus Question) on different scales, according to which would have the biggest or smallest impact, which would be easiest or hardest to implement, and which would have an immediate versus a long-term impact.
- Have students write their response to the following: “What are the advantages and disadvantages of collective actions versus individual actions?”

IDEAS FOR ACTION

- From the list of student-generated actions (from the Focus Question), help the class choose six or so actions to pursue. Have students interested in taking on a particular action meet together to develop an action plan. Encourage each group to identify three to five steps they can take individually or collectively toward that action, putting an “I” next to those that are individual steps and a “C” next to those that are more collective. Support the groups in carrying out their action plans. Have them report their results to the class.
- Have students identify key representatives involved in farm and food policy and write to them, advocating a specific change in current policies.
- Invite students to design a publicity campaign to inform the public about research related to healthful eating, the environmental impacts of food, or other food-related issues, presenting the information in an interesting and easily understandable way.

STUDENT HANDOUT

KEY GROUP ROLES

Individuals bring different strengths to the collective when they are working together to make a change. In order for a group to function effectively, members take on different key roles depending on the group's needs and their individual skills.



Some people are the creative force, helping the group envision all that is possible and moving the focus from what is to what could be.



Other people are skilled at researching a topic and figuring out ways to convey knowledge in a clear, accurate manner.



Some are action-oriented, bringing practical strategies to the group and making sure it keeps moving forward.



Others are skilled at human relations, making sure everyone is heard and strengthening the interactions among members of the group.

Write a brief paragraph describing the skills and strengths you bring to a group.

THINGS YOU CAN DO

YOU CAN VOTE TO CHANGE THIS SYSTEM. THREE TIMES A DAY.

- Buy from companies that treat workers, animals, and the environment with respect.
- When you go to the supermarket, choose foods that are in season. Buy foods that are organic. Know what's in your food. Read labels.
- The average meal travels 1,500 miles from the farm to the supermarket. Buy foods that are grown locally. Shop at farmers' markets. Plant a garden. (Even a small one.)
- Cook a meal with your family and eat together.
- Everyone has a right to healthy food. Make sure your farmers' market takes food stamps. Ask your school board to provide healthy school lunches.
- The FDA and USDA are supposed to protect you and your family. Tell Congress to enforce food safety standards and re-introduce Kevin's Law.
- If you say grace, ask for food that will keep us and the planet healthy. You can change the world with every bite.

HUNGRY FOR CHANGE? GO TO [TAKEPART.COM/FOODINC](https://takepart.com/foodinc).

VOCABULARY

ANTIBIOTIC RESISTANCE The ability of bacteria and other microorganisms to survive and multiply in the presence of an antibiotic compound that once killed them.

BLACKLIST To put on a list of people to be shunned, banned, or rejected.

BOYCOTT To protest by refusing to buy or do business with a particular company or organization.

CAFO (confined animal feeding operation) An animal feedlot operation with more than 1,000 animals at a time.

DNA (deoxyribonucleic acid) The long molecule in living cells that contains genetic information.

E. COLI (*Escherichia coli*) A group of bacteria that live inside the intestines of humans, other mammals, and birds.

ECONOMIC Concerning financial resources (money).

EFFICIENCY Ability to be effective without wasting expense, time, or effort.

FALSE DICHOTOMY A situation in which only two alternatives or viewpoints are presented as the only options, when in fact there are others. Also called false dilemma.

FEEDLOT A building or stockyard where livestock is fattened for market.

GMO (genetically modified organism) An organism whose DNA has been deliberately altered by laboratory methods.

GRAIN-FED (vs. grass-fed) Livestock raised on a diet of corn, soybeans, and other by-products, rather than pasture or grass.

INTELLECTUAL PROPERTY Creations of the mind—such as music, art, writing, inventions, symbols, images, designs, or names—that have commercial value.

LIBEL (also called defamation, slander, or vilification) Spreading negative information about someone or something.

NAFTA (North American Free Trade Agreement) A 1994 treaty among Mexico, Canada, and the United States aimed at promoting greater trade among the three countries.

ORGANIC FOOD Food produced without synthetic pesticides, artificial fertilizers, hormones, antibiotics, or genetic modification.

PATENT A document granting the inventor sole rights to an invention and allowing the inventor to stop others from making, using, or selling the invention.

rBST-FREE Dairy products produced without the use of the bovine growth hormone rBST (recombinant bovine somatotropin).

SETTLE To end a legal dispute by arriving at an agreement or settlement.

SUE To file a legal action against someone.

RESOURCES

For additional information on the issues and topics raised by the film:

REFERENCES

Center for Ecoliteracy (2008). *Big ideas: Linking Food, Culture, Health, and the Environment*. Berkeley: Learning in the Real World. www.ecoliteracy.org.

Food and Agriculture Organization (FAO) of the United Nations (2008). *The State of Food and Agriculture, 2008—Biofuels: Prospects, Risks and Opportunities*. www.fao.org/publications/sofa/index_en.html

Food and Agriculture Organization (FAO) of the United Nations (2003–2004). *The State of Food and Agriculture, 2003–2004—Agricultural Biotechnology: Meeting the Needs of the Poor?* www.fao.org/publications/sofa/index_en.html

Garcia, Deborah Koons (2004). *The Future of Food*. Lily Films.

Monsanto Company website. www.monsanto.com.

Participant Media (2009). *Food, Inc: How Industrial Food is Making Us Sicker, Fatter and Poorer—and What You Can Do about It*. Weber, Karl, editor. New York: Public Affairs.

Pollan, Michael (2008). *In Defense of Food: An Eater's Manifesto*. New York: Penguin.

Pollan, Michael (2006). *The Omnivore's Dilemma: A Natural History of Four Meals*. New York: Penguin.

Polyface Farms website. www.polyfacefarms.com.

Pringle, Richard (2005). *Food, Inc.: Mendel to Monsanto—The Promises and Perils of the Biotech Harvest*. Simon and Schuster.

Richardson, Jill (2009). *Recipe for America: Why our Food System is Broken and What We Can Do To Fix it*. Brooklyn, NY: Ig Publishing.

Roberts, Paul (2009, March/April). *Spoiled: Organic and Local Is so 2008*. Mother Jones. www.motherjones.com/environment/2009/02/spoiled-organic-and-local-so-2008.

Schlosser, Eric (2001). *Fast Food Nation: The Dark Side of the All-American Meal*. New York: Houghton Mifflin.

Singer, Peter, and Mason, Jim (2006). *The Way We Eat: Why our Food Choices Matter*. Emmaus, PA: Rodale.

Smithfield Foods Company website. www.smithfieldfoods.com.

Stonyfield Farm Organic Yogurt website. www.stonyfield.com.

Sustainable Table. Eat well guide. www.sustainabletable.org.

Tasch, Woody (2008). *Inquiries into the Nature of Slow Money: Investing as if Food, Farms, and Fertility mattered*. White River Junction, VT: Chelsea Green.

OTHER ORGANIZATIONS

California Center for Public Health Advocacy, www.publichealthadvocacy.org.

Center for Food Safety, www.centerforfoodsafety.org.

Center for Foodborne Illness Research and Prevention, www.foodborneillness.org.

Center for Science in the Public Interest, www.cspinet.org.

Cool Foods Campaign, www.coolfoodscampaign.org.

EatWellGuide.org.

Food and Water Watch, www.foodandwaterwatch.org.

Heifer International, www.Heifer.org.

The Humane Society of the United States, www.hsus.org.

Meatless Monday, www.meatlessmonday.com.

National Farm to School Network, www.farmtoschool.org.

Organic Consumers Association, www.organicconsumers.org.

Oxfam International, www.oxfam.org.

Pesticide Action Network of North America, www.panna.org.

Slow Food USA, www.slowfoodusa.org.

The United Farm Workers of America, www.ufw.org.

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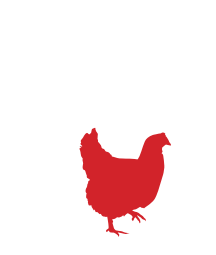
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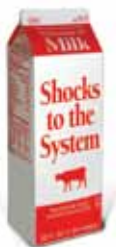
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The Center for Ecoliteracy is a Berkeley-based nonprofit organization dedicated to education for sustainable living. Through its initiative Smart by Nature: Schooling for Sustainability, the Center offers expertise, inspiration, and support to the growing sustainability movement in K-12 education. It provides books, teaching guides, and other publications; professional development seminars; and consulting services, including academic program audits, in-depth curriculum development, and coaching to improve teaching and learning around sustainability. The Center's 2009 book, *Smart by Nature: Schooling for Sustainability*, showcases inspiring stories about public, independent, and charter schools across the nation. Environmental educator David W. Orr calls *Smart by Nature* "must reading for teachers, school administrators, parents, and the concerned public." Learn more at www.ecoliteracy.org



The Food, Inc. Discussion Guide, developed by the Center for Ecoliteracy, is designed for use in high school classrooms. It provides questions and activities to help students make more thoughtful choices about food and participate in a meaningful public dialogue about food and food systems. The Center for Ecoliteracy supports and advances education for sustainable living.

More information: www.participantmedia.com and
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