Class meeting: Online

Instructors: Robert Guillemin
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Skype: guillemins4

Natalie Valpiani
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Skype: nvalpiani

Krissy Scommegna
Teaching Assistant
kristen.scommegna@tufts.edu

Office Hours
Fridays, 4:00 PM to 5:00 PM

Credit awarded: 1 credit

Prerequisites: None

Course description: By preparing and distributing food, food processors, wholesalers, and retailers transform the very nature of what we eat and establish the economic, social and environmental terms that shape much of the food system. This course will examine the dominant food system and explore the alternative strategies that seek to provide a reliable, equitable, and sustainable food supply from the “middle of the food system.”

Course objectives: Upon completion of this course students will be able to:

- Define sustainability in the context of food processing, distribution, and retail.
- Describe the purposes, functions and impacts of the dominant food system (transportation, processing, and retail/institutional formats).
- Identify the leading and emerging sustainability initiatives and strategies that apply to the “middle of the food system.”
- Explain the roles and relationships of important stakeholders (business, advocacy groups, institutions and government agencies).
- Evaluate the economic, social, and technical barriers and trade-offs that challenge a sustainable food system.
- Apply important contextual concepts, including historical, theoretical and technical insights, to analyze and evaluate the course material.
- Consider solutions for improving the way food is processed, distributed or sold.
Course materials: The course has one required text book: *Introduction to the U.S. Food System: Public Health, Environment and Equity*, edited by Roni Neff and published by Josey Bass. The book can be purchased on the publisher’s website (http://www.wiley.com/WileyCDA/WileyTitleproductCd-1118063384,miniSiteCdJBPUBLICHEALTH.html) or on Amazon.com. Students based in Boston can also use the reserve room copy at the Hirsh Library on our Health Sciences campus. Additional required readings are available online through the course website on Trunk.

Academic conduct: The Tufts University official policy holds that academic integrity, including avoiding plagiarism, is critically important. Each student is responsible for being familiar with the standards and policies outlined in the Friedman School’s Policies and Procedures manual: http://nutrition.tufts.edu/student/documents. It is the responsibility of the student to be aware of, and comply with, these policies and standards. In accordance with Tufts University’s policy on academic misconduct, violations of standards of academic conduct will be sanctioned by penalties ranging from grade reduction or failure on an assignment; grade reduction or failure of a course; up to dismissal from the school, depending on the nature and context of any infraction: http://uss.tufts.edu/studentaffairs/judicialaffairs/Academic%20Integrity.pdf.

The material you submit to show mastery of the course material must be your own work. We take proper academic conduct seriously, as it is unfair to other students when academic misconduct is not addressed. The policy followed here is quite simple: any proven plagiarism or cheating will result in a failing grade for the assignment and the entire course, and all violations will be reported to the Dean for Academic Affairs.

Communication: The instructors are available for office hours by Skype to answer any questions students have during the course. You will receive email replies within a day, but please do not expect instant replies. Please also feel free to contact other classmates for help on assignments or if you have questions.

Course assignments and grading criteria:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Grading weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Quiz Assignments (8% each)</td>
<td>40%</td>
</tr>
<tr>
<td>2 Online “Discussion Leader” Post (5% and 10%)</td>
<td>15%</td>
</tr>
<tr>
<td>5 Online Discussion Responses (4% each)</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

Quiz Assignments: Students will complete 5 quiz assignments, each worth 8% of the total course grade. These assignments will require students to apply and practice the concepts and ideas discussed during the week’s readings and lectures. Assignments will include short answer, multiple choice, fill in the blank, and true/false questions. *Quiz answers are due on designated Saturdays at 11:59 pm (EST).*

“Discussion Leader” Article: At the beginning of the course, students will sign up for dates to act as an online Discussion Leader. During discussion weeks, the instructors will provide a prompt question based on the course materials and lectures. The task of the week’s Discussion
Leaders is to write and post a 400-word article that both responds to the prompt and initiates online responses from fellow students. In addition to utilizing course materials, the Discussion Leader is expected to use and cite peer-reviewed and/or grey literature (i.e. periodicals, reports from government or non-government agencies) to craft the article. Several Discussion Leaders may be appointed for each discussion session. As an introduction to the article/response process, for the second week, everyone is assigned to post a discussion article and provide a response, and no Discussion Leaders will be assigned. *Discussion articles must be posted on designated Thursday evenings by 11:59 pm (EST).*

**Grading Rubric: “Discussion Leader” Article**

<table>
<thead>
<tr>
<th>Components</th>
<th>Expected Level of Competence</th>
<th>Moving Towards Expected Level of Competence</th>
<th>Below Expected Level of Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submission posted on time</td>
<td>Complete and submit memo on time.</td>
<td>Post is submitted late.</td>
<td>Post is not submitted</td>
</tr>
<tr>
<td>Style guidelines</td>
<td>Adheres to word limit. Writing is clear and succinct. Demonstrates care in writing, which may be informal, but thoughtful. The post has a smooth flow of ideas and is well organized and logical.</td>
<td>Does not adhere to page limit. Writing lacks clarity in some places. Flow of ideas could use some improvement.</td>
<td>Does not adhere to page limit. Writing lacks clarity throughout. Flow of ideas is rough. Post is not well organized.</td>
</tr>
<tr>
<td>Demonstrates careful reading &amp; listening to lecture material</td>
<td>Demonstrates serious contemplation of the readings and lectures. Shows original thought that goes beyond the obvious.</td>
<td>Demonstrates reading was completed/lecture was watched, but relies primarily on summary rather than integration of information.</td>
<td>Gives little indication that reading/lecture viewing was completed.</td>
</tr>
<tr>
<td>Application of theories/concepts to consumer behavior</td>
<td>Articulates strengths and limitations of theory’s application to professional context. Elaborates statements with accurate explanations, reasons, or evidence.</td>
<td>Provides general discussion of theory’s application but lacks thoughtful critique. Takes a position with respect to theory application but with little evidence or explanation. Examples to support points are not well integrated or not effective.</td>
<td>Missing or limited theory application. Little evidence used to support points or evidence is out of context.</td>
</tr>
</tbody>
</table>
**Online Discussion Responses**: There are five online discussion sessions throughout the course. The first session will be prompted by an article provided by the instructors, whereas the remaining four will be prompted by articles posted by student Discussion Leaders. All students (including the week’s Discussion Leaders) must post at least one response for each of the five discussion sessions. The response posts should deepen the nature of the class discussion by introducing ideas and insights, raising questions, and articulating opinions. Responses can address one or more of the discussion articles and/or posted student responses. **Response posts are due on designated Sunday evenings by 11:59 pm (EST).**

**Grading Rubric: Online Discussion Responses**

<table>
<thead>
<tr>
<th>Components</th>
<th>Expected Level of Competence</th>
<th>Moving Towards Expected Level of Competence</th>
<th>Below Expected Level of Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantity &amp; timeliness of contributions</strong></td>
<td>Reads the messages in the discussion area. Contributes 5 constructive responses to discussion post over the entire course.</td>
<td>Reads some of the messages in the discussion area. Contributes 2-4 constructive responses to discussion posts over the entire course.</td>
<td>Does not read messages in discussion area and does not contribute any constructive responses to discussion posts over the course of the semester.</td>
</tr>
<tr>
<td><strong>Quality &amp; relevance of response</strong></td>
<td>Responses are concise, clear, and thoughtful. Responses contribute something original or build upon what has been said; they are not repetitious.</td>
<td>Responses are related to the discussion posts, but messages only address peripheral issues. Repetition of questions or points made by others.</td>
<td>Responses do not relate to the discussion posts. Makes, short, irrelevant remarks or responds with minimum effort.</td>
</tr>
<tr>
<td><strong>Interaction with others</strong></td>
<td>Questions are raised to stimulate discussion. Encourages a variety of viewpoints. Responds to questions and comments from others. When disagreeing, does so respectfully.</td>
<td>Participation is evident, but posts do not involve others or encourage others to think critically.</td>
<td>Rarely raises questions to stimulate discussion and rarely responds to the questions and comments raised by others. Comments are unconstructive or non-courteous.</td>
</tr>
</tbody>
</table>

**Final exam**: The final exam will assess mastery of specific content relevant to material presented during the course. It will be a two-hour timed exam during the last week of the course. Questions will be in the form of multiple choice, short answer, fill in the blank, long answer, and
true/false questions. This exam will be administered through Trunk and will require computer and internet access in order to be completed. Students should ensure they have reliable access to a computer and the internet during the final exam week. If, for some reason, you need scheduling accommodations for the final exam please email the instructors as soon as you are aware of any issues, and no later than the end of Week 6 of the course.

**Assignments and submission instructions:** All homework assignments should be uploaded to Trunk in your assignment dropbox by the specified deadline. Discussion posts and responses are to be posted to the class discussion forum on Trunk. Assignments received after their deadline will not be accepted or graded unless an extension is approved in advance of the due date. Students who are unable to complete an assignment, discussion post/response, or exam on time for any reason should notify either Rob or Natalie by email or phone call as soon as possible, and at least 48 hours prior to the deadline, with a brief explanation for why the extension is needed. Deadlines for each assignment are listed in the Course Calendar below.

**Accommodation of disabilities:** Students with documented disabilities are entitled to reasonable academic accommodation appropriate to their needs. If you require accommodations for this course, contact Rob or Natalie confidentially prior to the end of the second week of classes.
## COURSE CALENDAR

Note: This schedule is subject to modification at the discretion of the instructors

<table>
<thead>
<tr>
<th>Dates</th>
<th>Week</th>
<th>Topic</th>
<th>ASSIGNMENTS &amp; ACTIVITIES</th>
<th>ASSIGNMENT DUE DATES</th>
<th>LECTURER and/or GUEST SPEAKER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/18 - 1/22</td>
<td>1</td>
<td>Introduction to course and overview of Food System and Markets</td>
<td>Readings</td>
<td>Introductions: 1/22 at 11:59 pm EST</td>
<td>Rob Guillemin</td>
</tr>
<tr>
<td>1/23 - 1/29</td>
<td>2</td>
<td>Crop and Food Animal Production</td>
<td>Readings and Discussion #1</td>
<td>Article: 1/26 at 11:59 pm EST Response: 1/29, 11:59 pm EST (everyone posts article &amp; response)</td>
<td>Rob Guillemin</td>
</tr>
<tr>
<td>1/30 - 2/5</td>
<td>3</td>
<td>Environmental and Public Health Effects</td>
<td>Readings and Quiz #1</td>
<td>Quiz answers: 2/4, 11:59 pm EST</td>
<td>Natalie Valpiani</td>
</tr>
<tr>
<td>2/6 - 2/12</td>
<td>4</td>
<td>Food Environment, Food Access, and Nutrition</td>
<td>Readings and Discussion #2</td>
<td>Article: 2/9, 11:59 pm EST Response: 2/12, 11:59 pm EST</td>
<td>Natalie Valpiani Jen Obadia</td>
</tr>
<tr>
<td>2/13 - 2/19</td>
<td>5</td>
<td>Food Distribution and Transport</td>
<td>Readings and Quiz #2</td>
<td>Quiz answers: 2/18, 11:59 pm EST</td>
<td>Rob Guillemin</td>
</tr>
<tr>
<td>2/20 - 2/26</td>
<td>6</td>
<td>Food Processing and Packaging</td>
<td>Readings and Discussion #3</td>
<td>Article: 2/23, 11:59 pm EST Response: 2/26, 11:59 pm EST</td>
<td>Rob Guillemin</td>
</tr>
<tr>
<td>2/27 - 3/5</td>
<td>7</td>
<td>Regional Food Hubs and Food Security</td>
<td>Readings and Quiz #3</td>
<td>Quiz answers: 3/4 11:59 pm EST</td>
<td>Nicole Tichenor Kathy Nyquist</td>
</tr>
<tr>
<td>3/6 - 3/12</td>
<td>8</td>
<td>Supermarkets and Alternative Retail Formats</td>
<td>Readings and Discussion #4</td>
<td>Article: 3/9, 11:59 pm EST Response: 3/12, 11:59 pm EST</td>
<td>Rob Guillemin</td>
</tr>
<tr>
<td>3/13 - 3/19</td>
<td>9</td>
<td>Direct to Consumer</td>
<td>Readings and Quiz #4</td>
<td>Quiz answers: 3/18, 11:59 pm EST</td>
<td>Jen Obadia</td>
</tr>
<tr>
<td>3/20 - 3/26</td>
<td>10</td>
<td>Restaurants</td>
<td>Readings</td>
<td>None</td>
<td>Rob Guillemin</td>
</tr>
<tr>
<td>3/27 - 4/2</td>
<td>11</td>
<td>Farm to Institutions</td>
<td>Readings and Discussion #5</td>
<td>Article: 3/30, 11:59 pm EST Response: 4/2, 11:59 pm EST</td>
<td>Jen Obadia</td>
</tr>
<tr>
<td>4/3 - 4/9</td>
<td>12</td>
<td>Waste in the Food System</td>
<td>Readings and Quiz #5</td>
<td>Quiz answers: 4/8, 11:59 pm EST</td>
<td>Jen Obadia</td>
</tr>
<tr>
<td>4/10 - 4/16</td>
<td>13</td>
<td>Policies that Shape the Food System</td>
<td>Readings</td>
<td>None</td>
<td>Rob Guillemin Natalie Valpiani</td>
</tr>
<tr>
<td>4/17 - 4/23</td>
<td>14</td>
<td>Review and Final Exam</td>
<td>Final Exam</td>
<td>Posted on Monday 4/17 at 9:00am EST. Due Wednesday 4/19 at 11:59 pm EST</td>
<td>Rob Guillemin</td>
</tr>
</tbody>
</table>
Week 1: Introduction and Overview of Food System and Markets

Lectures

- Course introduction, requirements and overview
- Why the middle of the food system matters
- Defining sustainability and the food system
- Systems thinking approach
- Review “wicked” problems
- Sustainability hierarchy for assessing the food industry
  - Regulatory controls
  - Policies and proclamations
  - Measurement and management
  - Superior leadership commitment

Learning objectives

- Understand the requirements of the course from start to finish.
- Provide a broad overview of the US food system, including its elements, characteristics and relationships.
- Explain a systems approach to the food system.
- Review the “wicked problems” construct as a means of understanding the challenges that face the food system.
- Identify the stages of sustainability commitment for assessing the food industry.
- Review the regulatory underpinnings of the industrial food system.

Required readings

- *Introduction to the U.S. Food System*, Chapter 1: Food Systems
- https://docs.google.com/document/d/1eak-H_LvyyBHvRU29jkc-SVBoVcIsWDbk0756pV9cM/edit?usp=sharing
- Video: The History of Food Regulations: https://www.youtube.com/watch?v=1y-VeZ2YPYI
- Video: ISO 14000 - Environmental management: https://www.youtube.com/embed/_hs54V3x1VQ?fs=1&autoplay=1&rel=0
- Video: Bob Massie: Measuring Sustainability Disclosure (Global Reporting Initiative) https://www.youtube.com/watch?v=aVMqD4CKL50
- Video: Global Reporting Initiative Standards: https://www.globalreporting.org/standards

**Tools and Resources**
- **Violation Tracker 2.0**: The first national search engine on corporate misconduct based on data from 30 regulatory agencies. [http://www.goodjobsfirst.org/violation-tracker](http://www.goodjobsfirst.org/violation-tracker)
- **Global Reporting Initiative’s Sustainability Disclosure Database**: The first and most authoritative standards for global sustainability reporting as well as a searchable database of reports.
  - GRI Standards: [https://www.globalreporting.org/standards](https://www.globalreporting.org/standards)

**Supplementary Materials**
- Video: Healthy or junk food? Busting food labels (CBC Marketplace): [https://www.youtube.com/watch?v=kUKOt_SvTQc](https://www.youtube.com/watch?v=kUKOt_SvTQc)

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**Understanding the Dominant Food System**

**Week 2: Crop and Food Animal Production**

**Lectures**
- What the world eats: A pictorial review of global diets
- Agriculture and the Dawn of Civilization
- Cycles of boom and bust
- Industrialization of the food system
- Concentration of the food industries
- Alternative farming: Agroecology and organic farming
- Alternative farming: Local and regional markets

**Learning objectives**
- Describe the historical and contemporary shift from traditional farming and animal production to industrial practices.
- Give examples of the factors that drove the industrialization of food production as well as the associated tradeoffs.
• Explain nature and impacts of industrial concentration.
• Describe alternative farming practices, including organic, agroecology, and local farming practices.
• Review the debates regarding the advantages and challenges of organic and local food.

Required readings
• *Introduction to the U.S. Food System*, Chapter 11: Crop Production and Food Systems
• *Introduction to the U.S. Food System*, Chapter 12: Food Animal Production
• Video: Crash Course: The Agricultural Revolution: https://www.youtube.com/watch?v=Yocja_N5s11
• "Food Politics: What Everyone Needs to Know" by Robert Paarlberg. Chapter 12: Organic and Local Food (p.139-153): https://drive.google.com/open?id=0Bxo8dOyj6d9rVUZKaVp5VzVwLUFuZFr4ZXdiTzhreHZuWDRJ

Supplementary material

Week 3: Environmental and Public Health Effects of Predominant Diet and Production System
Lectures
• Overview of average American diet, comparison to recommended intakes
• Public health effects of the average American diet
• Ecological integrity and its role in food production capacity
• Environmental and public health risks of production system supporting this diet:
  o The impacts on land, oceans, freshwater, energy resources and ecosystem services
  o Occupational health risks
  o Consumer health risks (antibiotic resistance, food-borne illness, etc.)
• Life-cycle assessment (LCA) as a means of evaluating sustainable outcomes

Learning objectives
• Describe food intakes and eating patterns in the United States and major trends in the intake since the 1970s.
• Describe the major diet-related conditions and their health and economic impacts.
• Understand why food production capacity depends on ecological integrity.
• Describe how food systems have impacted the status of land, oceans, freshwater, genetic diversity, energy resources and ecosystem services.
• Describe some of the occupational and environmental health risks associated with food and agricultural industries.

Required Readings
  o Chapter 1: Key Elements of Healthy Eating Patterns (Skim)
  o Chapter 2: Shifts Needed to Align With Healthy Eating Patterns
• Introduction to the U.S. Food System, Chapter 2: Food System Public Health Effects

Supplementary material
• Online documentary: A Farm for the Future (48 minutes) (http://www.youtube.com/watch?v=nhVWNwCRpKg)
Week 4: Food Environment, Food Access, and Nutrition in the U.S.

Lectures
- Brief review of current U.S. eating patterns and their health consequences
- Social ecological model as a framework for understanding drivers of food choice
- The food environment – points at which food products are marketed to consumers
- Issues of healthy food access within the current food environment
  - Food insecurity – definition, measurement, prevalence
    - Public health effects of household or individual food insecurity
  - Food deserts
    - Extent of food deserts, debate about public health nutrition consequences
- Initiatives aimed at improving individual and community access to healthy food.

Learning objectives
- Use the social ecological model as a framework for understanding drivers of health behaviors and for planning food system interventions that promote health.
- Describe factors that drive food choice at each level of the social-ecological model.
- Understand associations between the current food marketing environment and Americans’ dietary habits.
- Define food insecurity, identify programs aimed at addressing it.
- Explain the associations between food access and diet-related disease.
- Provide examples of policies and programs that aim to improve food access.

Required readings
- Introduction to the U.S. Food System, Chapter 17: Healthy Food Environments
  - Chapter 2. The Extent of Limited Food Access in the United States
  - Chapter 4. Food Access and its Relationship to Diet and Health Outcomes

Supplementary material

Food Manufacturing and Distribution

Week 5: Food Distribution and Transport

Lectures
• Why food is transported?
• The nature of food distribution channels and primary segments
• Key environmental concerns of food transportation
  o Food miles and climate change
  o Refrigeration, ozone holes, and climate change
• The strengths and limitation of local and regional food systems
• Sustainability opportunities for transportation
  o EPA SmartWay program
  o EPA GreenChill program

Learning objectives
• Understanding the history of the US food distribution system.
• Describe the nature of distribution channels, including primary segments of the food distribution system and trends.
• Explain the strengths and limitation of local and regional food systems.
• Understand the environmental impact of food transport, including climate change and ozone depletion.
• Describe leading programs and initiative designed to address the environmental impacts of distribution, transportation and refrigeration.

Required readings
• *Introduction to the U.S. Food System,* Chapter 14: Food Distribution
• Video: U.S. Railroad History Map 1830 - 1990s (2:40): https://www.youtube.com/watch?v=a8lX5A2q-Eo
• Video: History of Food Distribution (3:26): https://www.youtube.com/watch?v=Qxw8AHlkGAY
• Video: The Story of Frozen Food (2:40): https://www.youtube.com/watch?v=uWZwncX_4hk
• Video: How Chlorofluorocarbons Destroy Ozone (2:10): https://www.youtube.com/watch?v=IniJx-vRHG0
  o Note: This article represents the initial thinking about food miles, which shifted from strict miles to a wider range of considerations, including how food was produced and processed.


**Supplementary materials**

• The U.S. Environmental Protection Agency’s GreenChill Program: [https://www.epa.gov/greenchill/about-greenchill](https://www.epa.gov/greenchill/about-greenchill)

• The U.S. Environmental Protection Agency SmartWay Program: [https://www.epa.gov/smartway](https://www.epa.gov/smartway)


**Week 6: Food Processing and Packaging**

**Lectures**

• A brief history of food processing and packaging

• The economic benefits food processing and packaging

• Food processing methods, advantages and drawbacks

• Food packaging methods, materials, advantages and drawbacks

• Energy and resource consumption in the food processing industry

• Sustainability opportunities for food processing and packaging

**Learning objectives**

• Understand why foods are processed and how processing can change foods in positive and negative ways.

• Identify the four major methods of processing foods and their benefits and drawbacks.

• Understand the functions of food packages, materials used, and how packaging impacts the environment.

• Apply a historical, economic, and environmental critique to a discussion about food processing and packaging.

**Required readings**

• *Introduction to the U.S. Food System*: Chapter 13: Food Processing and Packaging

• Evelyn Kim, Processed Food: A 2-Million-Year History, Scientific America, September 1, 2013. [https://drive.google.com/open?id=0Bxo8doYj6d9reXZVcXVTR1owNLk](https://drive.google.com/open?id=0Bxo8doYj6d9reXZVcXVTR1owNLk)

- Environmental Self-Assessment for the Food Processing Industry: A Quick and Easy Checklist of Pollution Prevention Measures for the Food Processing Industry (March 2001): [https://drive.google.com/open?id=0Bxo8dOyj6d9rNGVSBExqM2N5THc](https://drive.google.com/open?id=0Bxo8dOyj6d9rNGVSBExqM2N5THc)
- Understand pollution, environmental impacts from food in 6 charts, GreenBiz.com, by Jeff Kohn and Kelsey Kruger, November 17, 2016: [https://www.greenbiz.com/article/understand-pollution-environmental-impacts-food-6-charts](https://www.greenbiz.com/article/understand-pollution-environmental-impacts-food-6-charts)

**Supplementary materials**

- Food Manufacturing Industry: Profile on Pollution Prevention and Other Sustainable Development Strategies, Abt Associates (prepared for the Toxic Release Inventory Program Division, Office of Chemical Safety and Pollution Prevention, U.S. EPA), August 1, 2016: [https://drive.google.com/open?id=0Bxo8dOyj6d9rNjBKT0lGUnduWWhfUG5EWUNrRXFXRC1N](https://drive.google.com/open?id=0Bxo8dOyj6d9rNjBKT0lGUnduWWhfUG5EWUNrRXFXRC1N)

**Week 7: Regional Food Hubs and Food Security**

**Lectures**

- Regional Food Systems
- What is a Regional Food Hub
- The 2013 National Food Hub Survey
- Case Study: Fair Acre Traders
Learning objectives

- Define local and regional in the context of food systems.
- Identify strengths and challenges to food systems at each scale.
- Define the terms Food Hub and Community Food Security
- Explain the challenges faced by small- and mid-sized farmers in accessing markets.
- Explain strengths and weaknesses to the food hub model.

Required readings

- *Introduction to the U.S. Food System*, Chapter 6: Community Food Security

Supplementary materials


Food Retail Venues

**Week 8: Supermarkets and Alternative Retail Formats**

Lectures

- Brief history of U.S. Food Retail
- Retail Food OperationsEconomic and regulatory drivers in the food retail sector
- Description of conventional and alternative store formats
- Review of sustainability goals, methods and initiatives

Learning objectives

- Recount the development of food retail in the US (early 19th century to present).
- Explain profit and cost drivers, including regulatory concerns.
- Discuss the different store formats and the evolving competition in the industry.
- Explore several sustainability evaluation methods to assess conventional supermarket performance.
- Review the emerging alternative food retail formats from a sustainability perspective.

Required readings

  [https://drive.google.com/open?id=0Bxo8dOyj6d9rcmJnN215bz13S3M](https://drive.google.com/open?id=0Bxo8dOyj6d9rcmJnN215bz13S3M)
  - *Reader Note:* Concentrate on Trends and Drivers (pages 3-6) and Landscape of Sustainability Initiatives (pages 28-36). Skim pages 7-27 to receive a gist of the range of activities: [https://lup.lub.lu.se/search/publication/2364054](https://lup.lub.lu.se/search/publication/2364054)

• Environmental Practices Inventory: A Survey of Minnesota Grocers, Minnesota Pollution Control Agency (2009): [https://www.pca.state.mn.us/sites/default/files/p-p2s1-01.pdf](https://www.pca.state.mn.us/sites/default/files/p-p2s1-01.pdf)


• Sustainable Sourcing Guide for High Impact Commodities, Food Marketing Institute (2010): [https://drive.google.com/open?id=0Bxo8dOyi6d9rNGl4aUpOUTdMMGs](https://drive.google.com/open?id=0Bxo8dOyi6d9rNGl4aUpOUTdMMGs)

• “Bringing the supermarket of the future to the present” by Sarah Shemkus, Boston Globe, MAY 9, 2016: [https://www.bostonglobe.com/business/2016/05/08/futurefood/hM0k0bMJ8EamzwWCG8zELJ/story.html](https://www.bostonglobe.com/business/2016/05/08/futurefood/hM0k0bMJ8EamzwWCG8zELJ/story.html)


**Supplementary materials**


• Sustainability on the Shelves: A Guide for Category Managers, Food Marketing Institute (September 30, 2010): [https://drive.google.com/open?id=0Bxo8dOyi6d9rQnk3eWJWOFETDQ](https://drive.google.com/open?id=0Bxo8dOyi6d9rQnk3eWJWOFETDQ)

**Week 9: Direct to Consumer**

**Lectures**

• Farmers Markets (brief history, common characteristics and customers) (17 minutes) — Jen Obadia (guest lecturer)

• Direct to Consumer Sales (prevalence, formats, benefits, challenges, and federal policies) (19 minute) — Jen Obadia (guest lecturer)

**Learning objectives**

• Identify the benefits and challenges to direct to consumer sales.

• Explain the economic contribution of direct sales to farmer income.

• Explain the economic impact of direct sales on the community.
Required readings


Supplementary materials

- Website: *Community Supported Agriculture* (CSA), U.S. Department of Agriculture. [https://www.nal.usda.gov/afsic/community-supported-agriculture](https://www.nal.usda.gov/afsic/community-supported-agriculture)

Week 10: Restaurants

Lectures

- Brief history of restaurants and the rise of fast food chain (8 minutes) — Rob Guillemin
- Describe dominant restaurant formats and markets (6 minutes) — Rob Guillemin
- Economic and social drivers and trends in the American restaurant industry (12 minutes) — Rob Guillemin
- Review sustainability challenges, methods and initiatives (12 minutes) — Rob Guillemin
- Alternative restaurant formats that promote sustainability (8 minutes) — Rob Guillemin

Learning objectives

- Explain the advent of modern restaurants and contemporary categories of store format categories.
- Describe the economic and demographic trends that have led to the increased popularity of out-of-home dining experiences.
- Review the attributes of a “Green” restaurant and the related certification programs.
- Understand the major sustainability and corporate responsibility initiatives pursued by conventional and alternative store formats.
- Explain the cost constraints and market drivers that shape the industry’s sustainability successes and limitations.

Required readings

• Brian McGinn (April 22, 2015). A Sustainable Chef, New York Times. This short documentary explains why one world-class chef overhauled his menu to emphasize sustainable ingredients.  Watch video

• National Restaurant Association (2013). Shedding Light on Sustainability: Shedding Light on Sustainability:

**Supplementary materials**
- The Sustainable Restaurant Association (RSA). http://www.thesra.org/

**Week 11: Farm to Institutions**

**Lectures**
- Farm to institution overview (20 minutes) — Jen Obadia (guest lecturer)
- Food service management companies (29 minutes) — Jen Obadia (guest lecturer)

**Learning objectives**
- Explain the challenges and opportunities for institutions to purchase more sustainable products.
- Explain the role of food service management companies
- Provide examples of current initiatives aimed at improving the sustainability of food procured by institutions.

**Required readings from *Introduction to the U.S. Food System***:
- Review the National Overview of the USDA Farm to School Census at: http://www.fns.usda.gov/farmtoschool/census/#/
- Look up statistics for farm to school in your own state at: http://www.fns.usda.gov/farmtoschool/census/#/map

**Supplementary materials**
Sustainable Food Retail and Manufacturing Trends

Week 12: Waste in the Food System

Lectures
- Food loss (24 minutes) — Jen Obadia (guest lecturer)
- Quantifying food waste (17 minutes) — Megan Lenherd (guest lecturer)

Learning objectives
- Explain the main sources of “leakage” or waste in the food system.
- Describe the environmental and social impacts of wasted food.
- Provide examples of the ways in which gleaned food is reallocated.
- Provide examples of technologies, programs and policies designed to prevent and divert waste food from landfills.

Required readings

Supplementary materials
- RecycleWorks Case Studies on supermarkets (text and two videos): http://www.recyclingworksma.com/how-to/business-sector-guidance/supermarkets/
- Intermarche’s “Inglorious Fruits and Vegetables” program (video, 2 minutes) https://vimeo.com/98441820

Week 13: Policies that Shape the US Food System

Lectures
- Food Policy (49 minutes — Jen Obadia (guest lecturer)
  - Food Policy Councils (history, purpose, function, format)
  - Local policies to support food systems
  - State policies to support food systems
Learning objectives

- Become familiar with a brief history of food and agriculture policy in the United States.
- Describe the process for policy proposals to become legislation and then receive federal funding.
- Appreciate the role of alliances, stakeholders, and other political factors in policy change.
- Identify ways food system policies can affect price and thus shape of the food system.
- Understand food systems policies as critical drivers of public health and health disparities.
- Describe examples of local, state, federal and international policies and programs that promote sustainable food processing, distribution and retail sectors.

Required readings

- *Introduction to the U.S. Food System*, Chapter 8: Policies that Shape the US Food System

Week 14: Final Exam

Lecture

- Review session via Skype for whole class.

Learning objectives

- Review material presented throughout entire class.
- Test student’s knowledge of material presented during the class.

Readings

- None

Assignments

- Review session
- Final exam posted on [Date]

*This reading list is subject to modification at the discretion of the instructors*