Emerging Alternatives in Modern Agriculture

Modern agriculture is the source of a great majority of our food and is a foundation of the American economy. However, it is an economic system that relies on cheap fuel, low labor costs, and ever-increasing consolidation. In recent years, these industrialized inputs and processes have been indicted as a root cause of many of modern society’s woes: hunger, obesity, disease, environmental degradation, climate change, economic injustice, and physical and mental estrangement from the land. And yet, alternative systems of agriculture have emerged. Some are the simple revival of "antiquated" practices while others apply agricultural principle to technological innovation. Cities and communities are becoming active players in these new systems, and food is being "slowed down". This course attempts to outline and elucidate some of these emerging agricultural systems, providing theoretical background and discussion, practical, hands-on tools for becoming a part of these new systems, and preparation for civic engagement.

Syllabus

Week 1: Introduction

- review syllabus

- fast paced group brainstorm centered around three crops: tomatoes, iceberg lettuce, bagged tea
  - origins (planting, cultivation, harvesting), processing (packaging, regulation), shipping (distance, intermediate steps), marketing (sales, return to farmer, customer interaction with product)
  - to gauge interest in and opinions of food and agroindustry
- begin discussion of modern agricultural system

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- if time available, brief discussion of class's interaction with Tufts garden

Week 2: A Brief History of US Agriculture from 1914

- the state of US agriculture prior to 1914

- World War I
  - modern globalization and industrialization
  - emergence of modern community gardens and food security programs

- The Great Depression, the Dust Bowl, and the origins of the Farm Bill
- World War II
  - Victory Gardens
  - chemical weapons become basis of agrochemical industry

- Green Revolution
- reflections on consolidation, industrialization, mechanization, subsidies
- Farm financial crises
• growth of alternative movements (social, environmental, community, Rachael Carson)
• segue to modern issues; mention of upcoming guest lectures

• amending and feeding the garden soil
  o soil as the founding structure of the garden
  o techniques and materials for building soil structure

Readings:


Optional readings:

2. Farm Policy Timeline (handout)

Week 3: Industrial Agriculture

Guest lecturers: Sarah Clark, AFE '11, Friedman School, and Nick Strutt, FPAN '11, Friedman School

• modern agricultural policy
• international agricultural trade
• agricultural biotechnology: science, practice, and controversy

• starting a garden
  o choosing a site (or evaluating the student garden)
  o Why cultivate? How much is too much?
  o how to begin amending the soil

Readings: TBD by lecturers

Optional readings:


Week 4: Regional Planning
• The potential for regions to feed themselves
• Foodsheds
• Farmland Preservation
• Zoning and regulations relating to agriculture

• Case Study: New York

• laying down or planting mulch for the winter
  o why?
• planting garlic

Readings:


Optional readings:


Week 5: Alternative production techniques

• Review of the defining traits of modern industrial agriculture
• Review of possible traits of alternative agricultural systems
• Diversity in the agricultural landscape
• Nutrient cycling
• Inputs to agricultural systems
• Annual versus perennial cropping systems
• Season extension
• Shifts in land ownership, tenureship, and general use
• Case Study - Growing Power, Milwaukee, WI
• Harvest and marketing
• Role of the farm beyond food production

• beginning planning for the spring
  o choosing seeds
deciding crop rotations
building on last week’s "taking stock" conversation, decide what is NOT realistic for the spring

Readings:


Optional readings:
3. Farmers of Forty Centuries. F.H. King. 1911.

Week 6: Alternative processing and distribution models

- CSAs and CSFs, farmers' markets, community kitchens
- Larger local distribution models
- Case Study: The Food Project or World Peas CSA
- Guest Lecture: Jennifer Hashley from New Entry Sustainable Farming Project (TBD)

seed starting
- where?
- when to plant?
- direct seeding

Readings:

1. Scaling Up: Meeting the Demand for Local Food. Lindsey Day-Farnsworth, UW-Extension Ag Innovation Center & UW-Madison Center for Integrated Agricultural Systems, December, 2009

Week 7: Livestock Agriculture
• Meat production, processing, distribution, and consumption
• The Dairy Industry
• The Fishing Industry

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• transplanting seedlings (brief)
  o hardening-off
  o plants' relative hardiness

Readings: TBD

Week 8: Farm to Institution

• School Lunch Program
• What's going on at Tufts, the Real Food Challenge and Farm to School.
• Guest Lecture: Julie Lampie from Tufts Dining or Tina Woolston from TOOS

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• weeding and cultivation
  o tools, techniques
  o complexity of organic versus conventional growing systems

Readings:

2. Browse the Real Food Challenge website http://realfoodchallenge.org

Week 9: Food Justice & Farmworker rights

• Free trade versus fair trade
  o What are they and do they exist?
• Right to land
• Right to seed
• Right to fair wages
• Popular literature - *The Octopus* by Frank Norris and *The Grapes of Wrath* by John Steinbeck
• Case Study - Immokalee
• Case Study - United Farm Workers
• season extension
  o cold frames
  o hoophouses
  o low tunnels

Readings:


Optional readings:

Week 10: Food Justice - food security

• Federal Food Programs
• Food Deserts
• Community Food Security

Readings:

5. Bringing good food to others: investigating the subjects of alternative food practice. Julie Guthman. Cultural Geographies 2008; 15; 431
Week 11: Community Organizing and Political Engagement

- Screening of “The Garden” OR guest lecture by Tim Griffin, director of Agriculture, Food and the Environment program, Friedman School
- discussion drawing upon previous classes and week’s readings

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- scaling up: garden, field, and farm-scale techniques
  - Introduction to SPIN method, GROW Biointensive, Permaculture
  - integration of season extension techniques and field growing
  - barn to field and back again (closed systems)

Readings:


Week 12: The Boston Food System and Local Organizations

Guest lecturers: leaders and board members of Boston food system NGOs (TBD)

Readings:


Week 13: Final presentations