



W 2014

ENVS 467/567: Issues in Sustainable Agriculture

MW 4:00-5:50

COL 142

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Hours: W 10:30-11:50, Th 2:00-3:30

Course Description and Purpose:

The purpose of the class is for students to develop an informed critique of agricultural production. We will review traditional non-industrialized, modern industrialized, modern organic, and GMC (genetically modified crops)-based systems through the lens of sustainability. For our purposes, sustainability includes not only environmental, but also economic and cultural considerations. While holding a holistic perspective, the course examines the various material components of production systems. In each unit we will highlight problems and explore alternatives to current methods of production. Finally, we will discuss food policy and food security. The greatest single share of the course material stems from North American experience but the class is decidedly global in scope.

Schedule

- Unit 1: Defining Sustainable Agriculture**
- Unit 2: Traditional Agriculture and the Green Revolution**
- Unit 3: The Curious Case of Corn**
- Unit 4: Seeds and Genetically Modified Crops**
- Unit 5: Water Conservation and Management**
- Unit 6: Soil Conservation and Management**
- Unit 7: Pest Control Options**
- Unit 8: Energy and Agriculture**
- Unit 9: Access and Food Justice**
- Unit 10: The Global and the Local**
- Summary: Prospects for Change**

Course Requirements:

Class Participation: (15%) All students are expected to be present and active participants in this seminar. This will only be possible if you stay current with the readings. I encourage thoughtful and respectful contributions to class discussion.

Reading, Video, and Event Critiques: (40%) Students are required to submit **six** 2-page critiques (one sheet, printed two sides) from the twenty daily readings and **two** video or event reviews. Reading responses are due at the beginning of each class period starting with the second meeting. Video reviews and event reports are due within one week of the showing or event. At least **four** critiques must be submitted by the beginning of week six. *No late responses will be accepted.*

Field Reports: (10%) Field reports are responses to two field trips, either group or self-designed investigative outing (details to follow).

Book Review with Supplementary Annotations: (35%) Students will prepare a 5-6 page book review accompanied by 8-10 annotated sources related to the book **or** a standard 8-10 page research paper on an approved topic.

GRADUATE STUDENTS: Required to complete all readings, submit 5 three-page reading critiques/video reviews, field trip reports, book review, and a 15-18 page research paper to be formally presented to the class. I am willing to consider alternative proposals for the research paper.

Reading responses	30	5x 6% of grade
Book review	20	4-5 pages
Oral Presentation	10	20-30 minute presentation
Research Paper	40	15-18 page work

Class and Reading Schedule

Texts: Will be placed on reserve in the Knight Library

Richard Manning (2000) Food's Frontier: The Next Green Revolution. North Point Press: New York.

Norman Wirzba, ed. (2003) The Essential Agrarian Reader: The Future of Culture, Community, and the Land. The University of Kentucky Press: Lexington.

Halweil, Brian (2004) Eat Here: Reclaiming Homegrown Pleasures in a Global Supermarket. New York: W.W. Norton & Company.

Pollen, Michael (2006) The Omnivore's Dilemma. New York: Penguin Books.

Worldwatch Institute (2011) State of the World: Innovations that Nourish the Planet. New York: WW Norton & Company.

Wes Jackson, Wendell Berry and Bruce Coleman, eds. (1984) Meeting the Expectations of the Land: Essays in Sustainable Agriculture and Stewardship. North Point Press: San Francisco. (*Assigned chapters are integrated into the reading packet. The book is out of print. No need to purchase.*)

Electronic Reading Packet: All readings will be posted on the course Blackboard site.
READING SCHEDULE

(Un)Sustainable Agriculture and Food Systems

January 6

John Steinbeck, The Grapes of Wrath, 446-449.

Roberts, Paul (2008) Prologue to The End of Food, ix-xxiii.

January 8

Walsh, Bryan (2010) "America's Food Crisis and How to Fix It", Time (August 31).

Pollen, "Our National Eating Disorder", 1-11.

Norman Wirzba (2003) "Why Agrarianism Matters- Even to Urbanites," in Norman Wirzba (ed.), The Essential Agrarian Reader, The University of Kentucky Press: Lexington, 1-22.

Halweil, "All Our Eggs in One Basket", 1-21.

Traditional Agriculture and the Green Revolution

January 13

Miguel Altieri, "Ecological Impacts of Industrial Agriculture and the Possibilities for Truly Sustainable Farming", Monthly Review Vol. 50, no. 3 (July/August 1998), 60-71.

Angus Wright, "Innocents Abroad: American Agricultural Research in Mexico", in Meeting the Expectations..., 135-151.

January 15

"Billions Served". Norman Borlaug interviewed by Ronald Bailey in Reason (April 2000)
<http://reason.com/0004/fe.rb.billions.html>, 1-10.

Manning, "Roots: Restoring Rural Wisdom", 173-190 and "The Seed: The Case for a Second Green Revolution", 3-21.

Video: Seeds of Profit, Seeds of Hunger

The Curious Case of Corn

January 20

Halweil, "Where Have all the Farmers Gone?", 59-78.

Pollen, "The Plant: Corn's Conquest", 15-31 and "The Farm", 32-56.

January 22

Mark Shapiro (2002), "Sowing Disaster? How Genetically Engineered American Corn Has Altered the Global Landscape", The Nation (28 October), 11-19.

Fred Kirschenmann (2003) "The Current State of Agriculture: Does It Have a Future?" in The Essential Agrarian Reader, 101-120.

Video: King Corn

Seeds and Genetically Modified Organisms

January 27

Daniel Charles (2001) "Global Claims" in Lords of the Harvest: Biotech, Big Money and the Future of Food. Cambridge, MA: Perseus Press, 262-282.

Manning, "The Genie in the Genome: Bioengineering in Context", 191-207.

January 29

Vandana Shiva (2003) "Globalization and the War against Farmers and the Land," in The Essential Agrarian Reader, 121-139.

Manning, "In Wildness Is the Preservation of the World: Sustaining Traditional Farming and Genetic Resources", 149-172.

Salopek, Paul (2011) "Closed-Source Crops", Conservation Magazine, Summer, 18-25.

GUEST SPEAKER: Nathan Lillegard

Water Conservation and Management

February 3

*Donald Worster (1985) Rivers of Empire, Oxford University Press: New York, 257-326.

February 5

Sandra Postel (2011) "Getting More per Drop" in State of the World, W.W. Norton and Company: New York, 39-50.

E. John Sadler and Neil C. Turner (1994) "Water Relationships in a Sustainable Agriculture System" in J.L. Hatfield and D.L. Karlen ed. Sustainable Agriculture Systems, Lewis Publishers: London, 21-46.

Video: Cadillac Desert

Soil Conservation and Management

February 10

*Hans Jenny, "The Making and Unmaking of a Fertile Soil", in Meeting the Expectations. 42-55.

*James Glantz (1995) "Fear in a Handful of Dust," in Saving Our Soil, Johnson Books: Boulder, 26-46.

February 12

Bunch, Roland (2011) "Africa's Soil Fertility Crisis and the Coming Famine" in State of the World, W.W. Norton and Company: New York, 59-70.

Pollen, "Grass", 185-207.

Wes Jackson and Marty Bender, "Investigations into Perennial Polyculture", in Meeting the Expectations..., 183-194.

Pest Control Options

February 17

Manning, "From Basket Case to Bread Basket: When Biotechnology Has a Brain Trust", 79-94

*Joseph E. Funderburk and Leon G. Higley (1994) "Management of Arthropod Pests" in J.L. Hatfield and D.L. Karlen ed. Sustainable Agriculture Systems, Lewis Publishers: London, 199-228.

February 19

Manning, "Genetic Revolution: Bioengineering on the Loose", 111-127.

Clarren, Rebecca (2008) "Pesticide Drift", Orion Magazine (July/August). (BB)
<http://www.orionmagazine.org/index.php/articles/article/3045/>

Agriculture and Energy

February 24

Bourne, Joel (2007) "Green Dreams", National Geographic, October, 38-59.

Shiva, Vandana (2008) "Food for Cars of People", in *Soil Not Oil*, Boston: South End Press, 77-94.

February 26

Pollen, "Big Organic", 134-184.

Kenfield, Isabella, "Brazil's Ethanol Plan Breeds Rural Poverty, Environmental Degradation", IRC Americas Program Discussion Paper, March 6, 2007. (BB)

Access and Food Justice: Urban Designs

March 3

Stuart, Tristram (2011) "Post-Harvest Losses: A Neglected Field" in State of the World, W.W. Norton and Company: New York, 59-70.

Manning, "A Common Ground: Food, Cities and the Integrity of Rural Life", 208-218.

March 5

Stuart, Karanja and Mary Njenga (2011) "Feeding the Cities" in State of the World, W.W. Norton and Company: New York, 109-119.

Pollen, "The Consumer", 100-108 and "The Meal", 109-119.

The Global and the Local

March 10

Susan Witt (2003) "New Agrarians: Local Innovators," in The Essential Agrarian Reader, 212-221.

*Molly D. Anderson and John T. Cook (2000) "Does Food Security Require Local Food Systems?" in Jonathan Harris (ed.), Rethinking Sustainability: Power, Knowledge, and Institutions, The University of Michigan Press: Ann Arbor, 228-248.

GUEST SPEAKER: Dan Armstrong

Halweil, "Leveling the Field", 133-144.

Halweil, "Coming of Age in Naples", 146-156.

Roberts, Paul (2009), "Spoiled : Organic and Local is So 2008", Mother Jones (2 March). (BB)

Prospects for Change

March 12

*Bill Mollison (1990) "Introduction," to Permaculture: A Practical Guide to a Sustainable Future, Island Press: Covelo California, 1-9.

Manning, "The Critical Mass: The Fate of Farming in an Industrializing World", 95-110.

Wes Jackson (2003) "The Agrarian Mind," in The Essential Agrarian Reader, 140-153.

Gene Logsdon (2003) "All Flesh is Grass: A Hopeful Look at the Future of Agrarianism," in The Essential Agrarian Reader, 154-170.

Broad, William (2008) "Food Revolution That Starts With Rice", NYT, June 17, D1. (BB)