



F 2015

ENVS 467/567: Issues in Sustainable Agriculture

MW 10:00-11:50

McKenzie 214

Prof. Galen Martin

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Hours: W 2:30-4:00, Th 4:00-5:00 or F by appointment

Hours: Tu 11:00-12:00

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, Waste, and Food Justice

Unit 10: Prospects for Change

Course Requirements:

Class Participation: (20%) 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 and attend classes. I encourage thoughtful and respectful contributions to class discussion. Participation includes attending field trips or arranging for alternative experiences.

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. Instructions are posted in Blackboard. *Late responses will be docked on letter grade for each class meeting.*

Sustainable Alternatives Research Project: (40%) Students will engage in a research project focusing on “best practices” in alternative agriculture. Topics may range from technological remedies to policy change. The work includes a book review, construction of a research question, an annotated bibliography and a final report. Detailed instructions and deadlines are included in a separate handout.

GRADUATE STUDENTS: Required to complete all readings, submit 5 three-page reading critiques/video reviews, field trip reports, book review, and a 12-15 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 minute presentation
Research Paper	40	12-15 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, Brain (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. Hard copies of the texts will be placed on reserve in the Knight Library. Back issues of *Capital Press: The West's Ag Weekly* will be on reserve in the ENVIS office.

READING SCHEDULE

Note: Readings are subject to change throughout the course.

(Un)Sustainable Agriculture and Food Systems

September 28

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

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

September 30

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

October 5

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.

October 7

"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

October 12

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

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

October 14

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

October 19

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.

October 21

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.

Water Conservation and Management

October 26

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

October 28

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

Saturday a.m. , *October 31*

FIELD TRIP

Soil Conservation and Management

November 2

*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.

November 4

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

November 9

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.

November 11

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

November 16

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.

November 18

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, Waste, and Food Justice: Urban Designs

November 23

*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.

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.

November 25

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.

Emerging Alternatives and Prospects for Change: Group Presentations

November 30, December 2

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

*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.

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