

Foundations of Sustainable Agriculture
(SusAg 610, AE 610, Agron 610, Soc 610)
Fall 2009
Tuesday-Thursday 11:00-12:20 – Room 2015 Morrill

SYLLABUS

INSTRUCTORS:

Rob Anex
ABE/GPSA
3202 NSRIC
Phone: 294-6576
rpanex@iastate.edu

Betty Wells
Sociology/GPSA
303 East Hall
Phone: 294-1104
bwells@iastate.edu

Clark Wolf
Philosophy/GPSA
435 Catt Hall
Phone: 294-3068
jwcwolf@iastate.edu

CATALOG DESCRIPTION:

Historical, biophysical, socioeconomic, and ethical dimensions of agricultural sustainability. Strategies for evaluating existing and emerging systems of agriculture in terms of core concepts of sustainability and their theoretical contexts.

REQUIRED TEXT:

Leopold, Aldo, A Sand County Almanac.
Last printed 8/26/2009 8:17:00 AM

COURSE WEBPAGE:

The course webpage can be reached via WebCT (<http://www.celt.iastate.edu/webct/> or via a link on the ISU homepage). Use the “WebCT Gold” login. If you are registered for the course, when you login to WebCT you will find a link to the course webpages. If you are not registered for the course, we will need to add you to the class list so that you can connect via WebCT. Please email or see Dr. Anex to get yourself added to the WebCT class list.

COURSE OBJECTIVES:

- To increase understanding of the historical roots, ethical questions, social and economic policies and farming practices relevant to sustainable agriculture and the development of sustainable agricultural systems
- To enhance critical thinking and analysis of complex, interdisciplinary problems facing agricultural systems along with possible solutions
- To gain familiarity with techniques and principles important for assessing research and for formulating research in sustainable agriculture
- To facilitate student development by:
 - Increasing willingness to investigate personal beliefs, worldviews and preconceptions
 - Increasing understanding and appreciation of the beliefs, worldviews and preconceptions of others
 - Sharing responsibility for the success of the course
- To create an intellectual community for the discussion of questions, ideas, research and issues related to sustainable agriculture

LEARNING OBJECTIVES:

- Students will be introduced to the historical roots of sustainable agriculture
- Students will be introduced to multiple perspectives on sustainable agriculture, and will be provided with resources to enable them to continue pursuing these perspectives on their own.
- Students will be conversant with major concepts, themes, debates and discourse in sustainable agriculture
- Students will be introduced to some of the classic and contemporary literature necessary for an understanding of sustainable agriculture
- Students will gain an improved ability to communicate with others about sustainable agriculture and sustainability
- Students will use case studies as a vehicle to discuss controversial issues and to understand the complexity and multiple perspectives associated with them

ASSESSMENT:

- 30% Midterm essay assignment
- 30% End of term essay assignment
- 15% Synopses of readings, including class discussion of synopses
- 10% Case study
- 10% Contribution to class discussion and participation in case studies
- 5% Annotations

CLASS ASSIGNMENTS:

Synopses of Readings:

Pose a question for each reading and provide a one-paragraph answer to your question. These will provide the material for discussion at the beginning of the lecture on the day the assignment is due. Synopses should be e-mailed to all instructors by 9 a.m. on the due date of the assignment. Synopses will be graded on a satisfactory/nonsatisfactory basis.

Class Bibliography: The class will, as a group, develop an annotated bibliography of readings related to sustainable agriculture. Each student is expected to contribute three entries to the class bibliography. Entries are expected to include complete bibliographical information and a fairly complete factual description of the reading, in addition to any editorial comments you choose to make. Add a rating of 1 to 5 stars as to whether you would recommend this reading to others. The annotation should be posted on the class WebCT site, and turned in electronically to all members of the teaching team. Due dates are noted in the class schedule.

Midterm and End of Term Essay Assignments: At the midpoint and end of the term, students will turn in an essay. This essay will respond to one question from a list distributed in advance.

Case Studies: Students will work in groups to develop a case study exercise to be presented in class. Groups will choose their case study topic. A sample case study will be run in the class as well as a workshop on writing case studies. Groups must distribute the completed case study in the class period prior to the one in which the case is to be presented.

Class Schedule: (Note: Schedule subject to change. Most readings are available on WebCT.)

- 25 Aug **Introduction to the Class**
Introductions, overview of syllabus
Read “Thinking like a Mountain” and “Illinois Bus Ride” in class
- 27 Aug **Biotechnology and Sustainable Agriculture: Golden Rice Case Study (Wolf)**
Reading: Golden Rice Case Study
- 1 Sept **Roots of Modern Agriculture I (Zdorkowski)**
Hudson, John S. 1994. *Making the Corn Belt: A Geographical History of Middle-West Agriculture*. Bloomington, IL: Indiana University Press. Chapter 10 “New Crops and Northward Expansion.” pp. 151-172.
- 3 Sept **Roots of Modern Agriculture II (Zdorkowski)**
Cronon, William. 1991. *Nature’s Metropolis*. NY: WW Norton.
Chapter 3. Pricing the Future: Grain. Pp. 97-147 and
Chapter 5. Annihilating Space: Meat. Pp. 207-259.
- 8 Sept **Creating Case Studies (Wolf et al.)**
- 10 Sept **Philosophical Roots of Sustainable Agriculture I: Agriculture in Environmental Ethics (Wolf)**
Reading:
Leopold, Aldo. 1949. The Land Ethic. In *A Sand County Almanac*.
- 15 Sept **Philosophical Roots of Sustainable Agriculture II: The Guano Ring (Wolf)**
Thompson, Paul. 1995. *The Spirit of the Soil*. NY and London: Routledge.
Ch. 1, “The Ethics of Soil”; Ch. 2, “The Environmental Critics of Agriculture”
- 17 Sept **Economics and Sustainability (Wolf)**
Daly, Herman. 1980. *Economics, Ecology, Ethics: Essays Toward a Steady-State Economy*. San Francisco: W.H. Freeman. Ch. 1 Introduction to Steady State Economy”
Mill, John Stuart. *The Principles of Political Economy*. Book IV.VI “Of the Stationary State.”
- 22 Sept **Historical Roots of Sustainable Agriculture (VISITOR: Fred Kirschenmann)**
“A Journey toward Sustainability
- 24 Sept **Historical Roots of Sustainable Agriculture (VISITOR: Matt Liebman)**
Liebman, Matt, F. Kirschenmann, R. Pirog, J DeWitt.2008. Sustainable Agriculture in the United States: Maturation and New Directions. White paper. Available on WebCT.

First annotation due

29 Sept **Environmental Economics (Wolf)**

Costanza et al. 1997. The value of the world's ecosystem services and natural capital. *Nature* 387: 253-260.

Costanza, Robert. 2008. Stewardship for a "Full" World. *Current History*, 107:30-35.

Pimm, S.L. 1997. The value of everything. *Nature* 387: 231-232.

Bonus Reading:

Howarth, R.B. and S. Farber. 2002. Accounting for the value of ecosystem services. *Ecological Economics* 41(3): 421-429.

1 Oct **Concepts and Conceptualizations (Wells)**

Arjen E. J. Wals and Richard Bawden. 2005. Worldviews as conceptual windows on the world. In A. E. J. Wals (ed). *Curriculum Innovations in Higher Education*. Elsevier Overheid: The Hague.

6 Oct **Nature as Measure (Wells)**

Berry, Wendell. 1990. Nature as a Measure. Pp. 204-210 in *What Are People For: Essays By Wendell Berry*. NY: North Point Press.

Phelan, Larry. Ecology-based agriculture and the next green revolution: is modern agriculture exempt from the laws of ecology? Agroecosystem management for ecological, social, and economic sustainability

8 Oct **Productionism (Anex)**

[Johnson, D. G. 2000. Population, Food, and Knowledge. *American Economic Review*, 90\(1\):1-14.](#)

Thompson, Paul. 1995. *The Spirit of the Soil*. NY and London: Routledge. Ch. 3,. The Productionist Paradigm

MIDTERM QUESTIONS DISTRIBUTED

13 Oct **Global Effects (Anex)**

Grubler, A. 1998. *Technology and Global Change*, NY: Cambridge Press. Ch 5. "Agriculture" (on web)

15 Oct **Systems Thinking (Wells)**

Meadows, Donella. 2002. Dancing with Systems. *The Systems Thinker*. Vol. 13, No. 2 (March) <http://www.sustainabilityinstitute.org/pubs/Dancing.html>

Bawden, Richard, 1990, Towards action research systems. Pp. 10-35 in Ortrun Zuber-Skerritt (eds.), *Action Research for Change and Development*. Brookfield, VT:

Avebury

Activity to be assigned

20 Oct **Interdisciplinarity (Anex et al.)**

Caruso, Denise and Diana Rhoten. 2001. A Hybrid Vigor White Paper, Lead, Follow, Get Out of the Way: Sidestepping the Barriers to Effective Practice of Interdisciplinarity. The Hybrid Vigor Institute. April.

http://www.hybridvigor.net/interdis/pubs/hv_pub_interdis-2001.04.30.pdf

Additional Reading to be assigned

- 22 Oct **The Farm Bill—Discussion with Chad Hart**
Johnson, R. 2008. What Is the “Farm Bill?” Congressional Research Service Report for Congress. Updated May 28.

MIDTERM ESSAY DUE

- 27 Oct **Ag, Energy and Risk; Where Are We Now.** Guest: Sterling Liddell, Iowa Farm Bureau Federation
- 29 Oct **Technology Choices and Technological Lock-In (Anex)**
Reading:
Chapter 5 “Choices”. In *Beyond Engineering*, Robert Pool, Oxford University Press, 1997.

Second Annotation due

- 3 Nov **Appropriate Scale (Anex)**
Schumacher, E.F. 1973. *Small is Beautiful: Economics as if People Mattered*. NY: Harper and Row. Ch. 4 “Buddhist Economics”
- 5 Nov **Case Study 1**
- 10 Nov **Why does Scale Matter? (Anex)**
Krafel, Paul. 1999. *Seeing Nature: Deliberate Encounters with the Visible World*. White River Junction, VT: Chelsea Green. pp. 83-102.
- 12 Nov **Case Study 2**
- 17 Nov **Quantitative and Qualitative Research (Wells)**
Trochim, William M. "Positivism and Post-Positivism"
<http://www.socialresearchmethods.net/kb/positvsm.htm> (current as of Aug 10, 2006).
Trochim, William M. "The Qualitative-Quantitative Debate"
<http://www.socialresearchmethods.net/kb/qualdeb.htm> (current as of Aug 10, 2006)
- 19 Nov **Case Study 3**

Third Annotation due

- 24 Nov **FALL BREAK**
- 26 Nov **FALL BREAK**

- 1 Dec **Sustainable Agriculture and Social Justice (Wells)**
Clancy, Kate. 1994. Social justice and sustainable agriculture: moving beyond theory [commentary]. *Agriculture and Human Values*, 11(4), 77–83.
Ikerd, John, Sustainable Agriculture: A Question of Social Justice
http://www.idrc.ca/en/ev-30587-201-1-DO_TOPIC.html
Karen J. Warren, 2000, *With Justice for All*. Chapter 8 in *Ecofeminist Philosophy*, pp. 175-291. Boulder, Co: Rowman & Littlefield Pub.
- 3 Dec **Diversity (Wells)**
Jaffe, JoAnn and Michael Gertler. 2006. Victual Vicissitudes: Consumer Deskillling and the (Gendered) Transformation of Food Systems *Agriculture and Human Values* 23: 143-162(20).
Maffi, Luisa 2007 *Biocultural Diversity and Sustainability*. Chapter 18, pp. 267-277 in Jules Pretty et al. (eds.), *The Sage Handbook of Environment and Society*. Los Angeles: Sage.

FINAL ESSAY QUESTIONS DISTRIBUTED

- 8 Dec **Sustainability: Contested Concept (Wolf et al.)**
Reading, if any, to be announced

- 10 Dec **Annotations and evaluation**

END OF TERM ESSAY: Due on scheduled date of Final Exam. There will be no final exam in this course.