FOOD-GE 2281: *Advanced Topics: Organic Agriculture* Spring 2014
Carolyn Dimitri New York University

Meeting time: Wednesday, 4:55
Location: Silver 514

Course objective

In this course, we explore organic agriculture from multiple angles, starting with a historical exploration of organic and finishing with policy approaches to organic. Specific aspects studied include the environmental benefits of organic production systems, the political economy of the US organic regulation, health benefits of organic, and organic consumption and marketing.

Required books and activities

No books are required; the syllabus links to the readings when possible.

Course requirements

Active participation in the weekly discussions makes class more interesting and productive for all of us. Please come to class prepared, having finished the readings, and ready with 1 question to share with the class.

Three assignments are required:

Assignment 1: 30% of final grade

Option 1: Volunteer 1 shift at the urban farm lab, at any time during the semester. What activities did you do at the farm? How do the activities relate to the readings? (6-8 page double spaced paper)

Or

Option 2: Write a 6-8 page paper that ties the compost workshop (led by Christina Ciambrello during one class) to the readings.

Due date: last class

Assignment 2: 30% of final grade

Select one environmental benefit of organic agriculture (soil quality, climate change, water quality, ecosystem services, etc) and write a 5-7 page paper discussing the readings assigned. Due 3/26.

Assignment 3: 30% of final grade

In a 8-10 page research paper, analyze some aspect related to the political economy of organic agriculture. The paper can be based on the readings on the industry development, creation of the organic standard, or any other aspect you find interesting. The only topics off limits are the 3 debates (listed on the syllabus) we will discuss in class. Due 4/16.

Course Policies

Attendance/lateness/participation policy – Please do your best to be on time. Attendance is not explicitly required (except for the farming classes), but since the class is a seminar/lecture, you will miss many subtleties if you don't regularly attend class. Also note that participation makes up a large portion of your grade – it is impossible to participate if you are not present.

Academic Integrity

Please review NYU's academic integrity policy.
Steinhardt's academic integrity website is available at:
(http://steinhardt.nyu.edu/policies/academic_integrity).

Statement on Disability Services

Any student attending NYU who needs an accommodation due to a chronic, psychological, visual, mobility and/or learning disability, or is deaf or hard of hearing should register with the Moses Center for Students with Disabilities at 212 998-4980, 240 Greene Street, www.nyu.edu/csd.

Key dates

Spring break – no class 3/16

Course schedule

Topic 1: The development of organic agriculture

1/29 *Course overview*

Coleman, P. 2012. *Guide for organic crop producers.* NCAT-ATTRA. https://attra.ncat.org/attra-pub/summaries/summary.php?pub=67

Levaux, A. 2012. "The war between conventional and organic misses the point." *The Atlantic.* *http://www.theatlantic.com/health/archive/2012/05/the-war-between-organic-and-conventional-farming-misses-the-point/257140/*

Parr, J. F., Papendick, R. I., & Youngberg, I. G. (1983). Organic farming in the United States: Principles and perspectives. *Agro-ecosystems*, *8*(3), 183-201. http://ezproxy.library.nyu.edu:2205/0304374683900033/1-s2.0-0304374683900033-main.pdf?_tid=901316e0-8794-11e3-a852-00000aab0f26&acdnat=1390855969_7355c26e48bf7d783b8f04b502e5ab0a

Tilman, D., Cassman, K. G., Matson, P. A., Naylor, R., & Polasky, S. (2002). Agricultural sustainability and intensive production practices. *Nature*, *418*(6898), 671-677. http://www.cedarcreek.umn.edu/biblio/fulltext/t1860.pdf

2/5 *The philosophic and scientific contributions to the beginning of organic agriculture by Steiner, Pfieffer, Howard, Northbourne*

Dimitri, C. "Biodynamic agriculture." In *Encyclopedia of Organic, Sustainable and Local Agriculture.* Leslie Duram. University of Nebraska Press. 2009.

Howard, Sir Albert. *An Agricultural Testament.* (available at http://journeytoforever.org/farm_library/howardAT/ATtoc.html): read Preface, Chapter 1, Chapter 2, Chapter 3, Chapter 4, and Chapter 12 http://muse.jhu.edu/books/9780813132099

Koepf, H. "What is bio-dynamic agriculture?" *Biodynamics.* Fall 2007. http://67.199.14.95/pdf/f07bd/f07bd-koepfwhatisbdag.pdf

Northbourne, Lord. 1940. Chapter 1. *Look to the Land.* Reprinted in 2003.

Stinner, D.H. 2007. "The Science of Organic Farming." In *Organic Farming An International History* edited by W. Lockeretz. CAB International. Oxfordshire and Cambridge.

Optional readings:

Paull, J. (2011). The secrets of Koberwitz: The diffusion of Rudolf Steiner's Agriculture Course and the founding of Biodynamic Agriculture. *Journal of Social Research & Policy*, *2*(1), 19-29. (optional)

Rudolf Steiner. Lectures on Agriculture (1-8), available at: http://wn.rsarchive.org/Lectures/Agri1958/Ag1958_index.html (optional)

2/12 *Organic agriculture becomes an industry*

Conford, P. (2008). 'Somewhere Quite Different': The Seventies Generation of Organic Activists and their Context. *Rural History*, *19*(02), 217-234. http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=2202736

Heckman, J. "A history of organic farming: Transitions from Sir Albert Howard's *War in the Soil* to USDA National Program." *Renewable Agriculture and Food Systems: 21(3); 143-150.* *http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=693124*

Youngberg, G., & DeMuth, S. P. (2013). Organic agriculture in the United States: A 30-year retrospective. *Renewable Agriculture and Food Systems*, 1-35. http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9082354

2/19 *Political economy of the National Organic Standards: The NOSB and the National List*

Cornucopia Institute. 2012. *Organic Watergate.* *http://www.cornucopia.org/USDA/OrganicWatergateWhitePaper.pdf*

Dimitri, C. and C. Bronsing. 2014. US National Organic Standards Board: Does it preserve the public voice amidst USDA and corporate interests?

Topic 2: Environmental benefits of organic agriculture: it starts with the soil

2/26 *Soil and water quality and organic farming systems*

Baldwin, K.R. 2009. "Soil quality considerations for organic farmers." Center for Environmental Farming Systems. http://www.cefs.ncsu.edu/resources/organicproductionguide/soilqualityfinaljan09.pdf

Karlen, D. L., Mausbach, M. J., Doran, J. W., Cline, R. G., Harris, R. F., & Schuman, G. E. (1997). Soil quality: A concept, definition, and framework for evaluation (a guest editorial). *Soil Science Society of America Journal*, *61*(1), 4-10. Available at: http://xbiblio.ecologia.edu.mx/biblioteca/Cursos/Manejo/Karlen_etal.pdf

Michalak, P. *The Rodale Institute Water Agriculture and You.* February 2004. http://strauscom.com/rodale/way.pdf

Penn State Extension. 2012. Introduction to soils. Soil Quality. http://pubs.cas.psu.edu/freepubs/pdfs/ee0040.pdf

3/5 *Climate change, agriculture, and organic farming systems*

Stern, N. 2006. "The Stern Report." Executive Summary of report on Economics of Climate Change. http://www.electricdrive.org/index.php?ht=a/GetDocumentAction/id/27938

Howitt, R.E., R. Catala-Luque, S. De Gryze, S. Wicks, and J, Six. "Realistic payments could encourage farmers to adopt practices that sequester carbon." *California Agriculture.* April – June 2009 pp 91-95 http://ucce.ucdavis.edu/files/repositoryfiles/ca6302p91-65650.pdf

Lal, R. (2004). Soil carbon sequestration impacts on global climate change and food security. *Science*, *304*(5677), 1623-1627. http://www.rowan.k12.ky.us/userfiles/959/Classes/10689/stegall%20kandra%2011302011%20327%20pm%20soilcarbon.pdf

Muller, A., Olesen, J. E., Davis, J., Dytrtova, K., Gattinger, A., Lampkin, N., & Niggli, U. (2012). Reducing global warming and adapting to climate change: The potential of organic agriculture. http://orgprints.org/20174/1/EditorialContribution_OrganicAgricultureAndClimateChange_11_4_2012_FiBLTitle.pdf

Reilly, J. 2004. "US Agriculture and Climate Change: Perspectives from Recent Research." *Choices.* http://www.choicesmagazine.org/2004-3/climate/2004-3-06.htm

Scialabba, N El-Hage, and M. Muller-Lindenlauf. 2010. "Organic agriculture and climate change." *Renewable Agriculture and Food Systems.* 25(2): 158-169. (optional)

3/12 *Ecosystem Services, biodiversity, and organic farming systems*

Bayon R. And M. Jenkins. 2010. "The business of biodiversity." *Nature.* pp 466-67. doi:10.1038/466184a

Goldman, R. L. "How people benefit from nature." *Environment Magazine.* Sept/Oct 2010. pp 15-23. http://www.environmentmagazine.org/Archives/Back%20Issues/September-October%202010/ecosystem-services-full.html

Helm, D., & Hepburn, C. (2012). The economic analysis of biodiversity: an assessment. *Oxford review of economic policy*, *28*(1), 1-21. http://www.cameronhepburn.com/wp-content/uploads/2012/09/the-economic-analysis-of-biodiversity-an-assessment.pdf Note: Skip section IV.

Hole, D. G. Perkins, A. J. Wilson, J. D. Alexander, I. H. Grice, P. V. Evans, A. D. 2005. "Does organic farming benefit biodiversity?," *Biological Conservation*. 122: 1, 113-130 http://www.ecosensus.ca/Hole2005.pdf

Sandhu, H.S., S.D. Wratten, R. Cullen. "Organic agriculture and ecosystem services." *Environmental Science and Policy.* 13 (2010) pp 1-7. http://www.sciencedirect.com/science/article/pii/S146290110900166X (this link will only work on campus).

Tuomisto, H. L., Hodge, I. D., Riordan, P., & Macdonald, D. W. (2012). Does organic farming reduce environmental impacts?–A meta-analysis of European research. *Journal of environmental management*, *112*, 309-320. http://scholar.google.com/scholar?cluster=6696399677993408038&hl=en&as_sdt=0,33&as_vis=1 (there is a link to the pdf from this page).

3/19 *Spring break*

Topic 3: The organic food market

3/26 *The logistics of marketing organic food, and who buys organic food, and why?*

Dimitri, Carolyn and Rachael L. Dettmann. 2012. "Organic food consumers. What do we really know about them?" *British Food Journal.* *http://www.emeraldinsight.com/journals.htm?articleid=17036175&show=abstract*

Dimitri, Carolyn. 2009. "Marketing organic food." in *Encyclopedia of organic, sustainable, and local food.* Edited by Leslie A. Duram. Greenwood Publishing. Santa Barbara, CA.

Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of consumer behaviour*, *6*(2-3), 94-110.

http://www.ccs.dcu.ie/consumingidentity/publications/documents/Hughner%20et%20al%202007.pdf

4/2 *Organic farming in the US and EU*

Cranfield, J., Henson, S., & Holliday, J. (2010). The motives, benefits, and problems of conversion to organic production. *Agriculture and Human Values*, *27*(3), 291-306. http://link.springer.com/article/10.1007/s10460-009-9222-9 (only works on campus)

Dimitri, C. and L. Oberholtzer. 2005. *Market-led growth vs. government-facilitated growth: Development of the U.S. and EU organic agricultural sectors.* Outlook Report No. (WRS 05-05). US Department of Agriculture, Economic Research Service. August, 26 pp. http://webarchives.cdlib.org/sw1tx36512/http://www.ers.usda.gov/Publications/wrs0505/

Klein, K., & Winickoff, D. E. (2011). Organic regulation across the Atlantic: emergence, divergence, convergence. *Environmental Politics*, *20*(2), 153-172. **DOI:** 10.1080/09644016.2011.551022. http://www.tandfonline.com/doi/abs/10.1080/09644016.2011.551022

Sahm, H., Sanders, J., Nieberg, H., Behrens, G., Kuhnert, H., Strohm, R., & Hamm, U. (2012). Reversion from organic to conventional agriculture: a review. *Renew Agric Food Syst. doi*, *10*, S1742170512000117.

Stolze, M and N. Lampkin. 2009. "Policy for organic farming: rationale and concepts." *Food Policy.* *http://www.sciencedirect.com/science/article/pii/S0306919209000323*

4/9 *The global organic market & international trade*

Aschemann, J., U. Hamm, S. Naspetti, R. Zanoli. 2007. "The Organic Market." In *Organic Farming: An International History.* Edited by Lockeretz. CABI Publishing.

Courville, S., Kristiansen, P., Taji, A., & Reganold, J. (2006). Organic standards and certification. *Organic agriculture: a global perspective*, 201-219.

Global Organic Trade Guide. http://www.globalorganictrade.com/ (map of trade agreement regulations by country).

IFOAM. 2011. "How governments can regulate imports of organic products based on the concepts of harmonization and equivalence." *Policy Brief.* http://www.ifoam.org/sites/default/files/page/files/policy_brief_imports_web.pdf

Willer, H., J. Lernoud, and R. Home. 2013. "The World of Organic Agriculture 2013: A Summary." http://www.organic-world.net/fileadmin/documents/yearbook/2013/web-fibl-ifoam-2013-25-34.pdf

Topic 4: Debates in organic

4/16 *Is the feed the world vs save the environment debate meaningful?*

Auerbach, R. 2013. "Transforming African Agriculture: organics and AGRA." *Organic Agriculture: African Experience in Resilience and Stability." FAO report.* pp 16-26. http://www.fao.org/docrep/018/i3294e/i3294e.pdf

Badgley, C., Moghtader, J., Quintero, E., Zakem, E., Chappell, M. J., Aviles-Vazquez, K., ... & Perfecto, I. (2007). Organic agriculture and the global food supply. *Renewable agriculture and food systems*, *22*(2), 86-108. http://www.organicvalley.coop/fileadmin/pdf/organics_can_feed_world.pdf

Clay, J. (2011). Freeze the footprint of food. *Nature*, *475*(7356), 287-289. http://www.impactreporters.eu/wp-content/uploads/2011/08/opinionclay2.pdf

Holt-Giménez, E., Shattuck, A., Altieri, M., Herren, H., & Gliessman, S. (2012). We Already Grow Enough Food for 10 Billion People… and Still Can't End Hunger. *Journal of Sustainable Agriculture*, *36*(6), 595-598. **DOI:** 10.1080/10440046.2012.695331. http://www.tandfonline.com/doi/abs/10.1080/10440046.2012.695331

de Ponti, T., Rijk, B., & van Ittersum, M. K. (2012). The crop yield gap between organic and conventional agriculture. *Agricultural Systems*, *108*, 1-9. http://models.pps.wur.nl/sites/models.pps.wur.nl/files/AGSY1644.pdf

Seufert, V., Ramankutty, N., & Foley, J. A. (2012). Comparing the yields of organic and conventional agriculture. *Nature*, *485*(7397), 229-232. http://serenoregis.org/wp-content/uploads/2012/06/nature11069.pdf

4/23 *Big vs small organic: does it matter?*

Dimitri, Carolyn. 2010. "Organic agriculture: An industrial or agrarian revolution?" *Agricultural and Resource Economics Review.* Vol. 39. Issue 3. pp 384-395. *http://ageconsearch.umn.edu/bitstream/95615/2/dimitri%20-%20current.pdf*

Kummer, C. 2003. "Big organic, small organic." *Atlantic Magazine.* http://www.theatlantic.com/magazine/archive/2003/10/big-organic-small-organic/2799/

Jaffee, S. and P. Howard. 2010. "Corporate cooption of organic and fair trade standards." *Agriculture and Human Values.* *http://www.fairtradewire.com/wp-content/uploads/2010/09/Jaffee-Howard-2010-Cooptation-AHV1.pdf*

Guthman, J. 2004. "The trouble with 'Organic Lite' in California: a rejoinder to the 'conventionalisation' debate." *Sociologia Ruralis*, 44 (3) (2004), pp. 301–316. DOI: 10.1111/j.1467-9523.2004.00277.x http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9523.2004.00277.x/abstract

Strom, S. 2012. "Has 'Organic' been oversized?" *The New York Times.* http://www.nytimes.com/2012/07/08/business/organic-food-purists-worry-about-big-companies-influence.html?_r=0

4/30 *Coexistence of GM and organic: is it possible?*

Greene, C., & Smith, K. (2010). Can Genetically Engineered and Organic Crops Coexist?. *Choices Magazine*. http://farmdoc.illinois.edu/policy/choices/20102/2010214/2010214.pdf

Lu, B. R. (2008). Transgene escape from GM crops and potential biosafety consequences: an environmental perspective. *International Centre for Genetic Engineering and Biotechnology (ICGEB), Collection of Biosafety Reviews*, *4*, 66-141. http://www.icgeb.org/~bsafesrv/pdffiles/Bao-Rong.pdf

Stokstad, E. (2011). Can Biotech and Organic Farmers Get Along?. *Science*, *332*(6026), 166-169. http://oregonstate.edu/orb/sites/default/files/Biotech_and_Organic_Science_2011.pdf

USDA Advisory Committee on Biotechnology and 21st Century Agriculture (AC21). 2012. Enhancing Coexistence. http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=AC21Main.xml

Public comments. 2012. http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=AC21Main.xml

5/7 *Compost class: placeholder*