



Institutional Proposal: The Franklin College Garden Project

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Summary

This proposal outlines a strategic plan for addressing one of the principle issues discussed in the May 2009 proposal for the Center for Sustainability Initiatives: food and dining services at Franklin College. Since the creation of CSI-Franklin, faculty and students have worked together to find innovative and proven solutions to this issue. Building upon the successful examples of several American institutions of higher education, we have developed a multi-phase strategic plan for a sustainable campus garden that will reduce the school’s ecological footprint, promote curriculum development and hands-on learning, engage the local community, and elevate Franklin’s status as a green campus with long term goals for responsible sustainable development.

This proposal addresses the first stage of that strategic plan: a test project that will provide the data necessary to implement an environmentally and economically sustainable pilot garden at Franklin College. The intent of this proposal is to create a garden laboratory that will operate with minimal maintenance, preserve Franklin’s aesthetic landscape, and require zero financial support from the institution. The following information is presented in this proposal:

Introduction and Summary of Benefits	2
Precedence in Institutions of Higher Education	4
Outline of the Strategic Plan	6
I. Student Involvement and Maintenance Schedule	6
II. Budgetary Considerations	8
III. Location and Design	9
IV. Timeline	12

Introduction

Recent years have witnessed a notable rise in environmentally responsible practices by institutions of higher learning. Few initiatives have been as effective, economical, and sustainable as the introduction of campus community gardens. Perhaps due to increased public awareness of the environmental, ethical, and dietary implications of our current industrialized food system, these projects have enjoyed widespread popularity on dozens of campuses. Recent popular works emerging from both sides of the Atlantic (see for instance, Petrini 2007; Kingsolver 2007; Pollan 2006; Masumoto 2007; Lappé et al 2008) have encouraged a return to local, sustainable agriculture, and popular films such as *Super Size Me* (2004), *Fast Food Nation* (2006), and *Food Inc* (2008) have left viewers with a growing distrust of their food's safety, nutritional value, and sustainability. Like their peers around the world, Franklin students are becoming increasingly concerned with the environmental and ethical implications of what they eat. In response to this, students and faculty have recently collaborated in order to develop plans for a multi-phase organic garden project with expansion dependent on the results of the initial pilot garden. The potential worth of this project is considerable, and the list below introduces a few of the key benefits of a sustainable garden project at Franklin:

Environmental Benefits:

The environmental impacts of global industrialized agriculture are far reaching, and link to broader issues of soil erosion, salinization, water scarcity, water pollution, effects on flora and fauna, effects on human health and disease, and energy use. Countless studies (see for instance Boucher 1999; Wirzba 2003; Nestle 2002; Shiva 2000; Lappé et al 1999) have revealed that eating locally and organically dramatically reduces a consumer's ecological footprint through the following:

- Reducing reliance on fossil fuels in the production and transportation of food, as well as a reduction in chemical inputs.
- Reducing pollution by eliminating fertilizers and pesticides as well as emissions linked to transportation and production.
- Reducing soil erosion, salinization, and nutrient depletion through the implementation of multi-cropping, intertillage, and sustainable water use.
- Reducing food waste and solid waste through composting.

Educational Benefits:

A campus garden project will provide multiple educational benefits to the Franklin community. Besides showcasing a visible, tangible example of sustainability to students, the garden will provide a hands-on learning environment for numerous existing and future courses. The following courses have been identified as potential benefactors of this project:

- ENV 199 - Global Food Issues
- ENV 340 - Theories and Practice of Sustainable Development
- COM 352 - Environmental Discourses
- CLCS 320 - Culture, Class, and Cuisine
- SCI 100 - Introduction to Biology: Cells and Organs
- SCI 101 - Introduction to Biology: Genetics, Evolution, and Ecology
- SCI 108 - Introduction to Environmental Science
- SCI 310 – Ecology
- POL 199—Limits to Growth Revisited

In addition to the above courses, new courses are being developed that will focus on the campus garden project while simultaneously attracting study abroad students.

Economic Benefits:

The pilot phase of this project will provide us with sufficient data to gauge exact figures, but several studies (see for instance, Bradley-Cook et al 2006; Skelly and Bradley 2007; and Jambeck et al 2008) have shown the economic benefits of an on-campus garden. Such studies have shown that, by eliminating labor and transportation costs, community gardens consistently provide fresh produce for less than traditional suppliers of dining services while reducing waste management costs through food recycling and composting.

Marketing and Public Relations:

Franklin’s ability to market itself as a green campus relies on its constant efforts to improve its sustainability at every level. The campus garden project provides an excellent opportunity to showcase Franklin’s efforts while attracting new students, donors, and collaborators. Projects such as this are an important step in the achievement of international recognition for Franklin College as a leader in sustainable practices.

Ethical Considerations:

The complexity of the global food trade obfuscates unethical practices at every step in the commodity chain. Production, consolidation, processing, transport, and even retail sectors all bear witness to a diversity of exploitative labor practices and food safety concerns in both the developed and developing world (Boucher 1999; Wirzba 2003; Kirschenmann 2003). In addition, the transition to export-oriented agricultural production in the developing world has resulted in social upheaval in rural societies (Shiva 2000; Lappé et al; Boucher 1999;). When consumers grow their own food, they essentially cut out every step in the commodity chain while maintaining responsibility for and knowledge of their food origins while minimizing their impact on distant producers.

Precedence

A sustainable campus community garden is an essential step toward a successful green campus. Many other universities have already taken this step and their examples provide a wonderful opportunity for Franklin to learn to from their successes. The following list of institutions represents just a brief selection of campus garden initiatives throughout North America, and gives some indication of the opportunities available to the Franklin community. We encourage you to explore some of the below links. They continue to inspire and encourage our development of a comprehensive plan.

University of California at Santa Cruz:

- The 25-acre Farm and 3-acre Alan Chadwick Garden on the university campus (<http://casfs.ucsc.edu/training/index.html>)
- Used to provide practical training to students, faculty, and staff (<http://casfs.ucsc.edu/training/index.html>)
- Serves as classroom for a six-month course made up of 300 hours indoor and 700 hours in the field (<http://casfs.ucsc.edu/training/index.html>)
- Serves as classroom for a summer session program (http://casfs.ucsc.edu/training/summer_flyer_09.pdf)
- “Farm-to-College” program which supplies the campus dining halls and restaurants with organic produce (<http://casfs.ucsc.edu/farm2college/index.html>)
- Farm and Alan Chadwick Garden host community outreach programs (<http://casfs.ucsc.edu/community/index.html>)
- Farm hosts six-month international training courses to provide international students with the knowledge of organic farming to bring back to their home countries (<http://casfs.ucsc.edu/education/international/index.html>)

Stanford University:

- Campus Gardens (one next to each dining hall and some dormitories) and Stanford Community Farm (<http://casfs.ucsc.edu/education/international/index.html>)
- The Community Farm serves as an aid for student education and community outreach (<http://casfs.ucsc.edu/education/international/index.html>)
- Both the Community Farm and the Campus Gardens serve as organic food suppliers to Dining Services, providing the university with high quality, healthy, produce (<http://casfs.ucsc.edu/education/international/index.html>)
- The Community Farm includes a large fruit orchard (<http://www.stanford.edu/group/scfarm/>)

- The Farm partially hosts a sustainable agriculture course (http://www.stanford.edu/group/scfarm/farming_class.html)
- Stanford residences collect their food scraps to use as compost (http://www.stanford.edu/group/scfarm/food_loop.html)

University of Minnesota:

- The Department of Horticulture Display and Trial Garden is used for everything from showcasing to teaching to experimentation (<http://www.sustland.umn.edu/design/dtgarden.html>)
- Garden contains an outdoor classroom, a perennial garden, a water garden, a texture garden, a sustainable garden, a Minnesota garden, a kiosk, several annual and perennial trial areas, a prairie, low maintenance turf trials, a grass identification area, and Mullin's woods (<http://www.sustland.umn.edu/design/dtgarden.html>)
- The garden is seen as an outdoor laboratory for undergraduate and graduate students of the College of Agricultural, Food, and Environmental Sciences (<http://www.sustland.umn.edu/design/dtgarden.html>)
- The garden is used as a location for seminars, workshops, and tours (<http://www.sustland.umn.edu/design/dtgarden.html>)

Mount Holyoke College:

- MHC Student Garden Project provides an outdoor classroom, for students from several disciplines (<http://www.mtholyoke.edu/ce/19629.shtml>)
- Garden provides student internships working on the garden (<http://www.mtholyoke.edu/ce/19629.shtml>)
- Produce is purchased by dining services to provide students with sustainably grown, fair trade, healthy meals (<http://www.mtholyoke.edu/ce/19629.shtml>)

Strategic Plan

The success and sustainability of the campus garden project relies on several factors, including ongoing student involvement and participation, financial sustainability, layout and design, and production capacity. The initial test site for the garden project will be a small plot designed to analyze the production capacity and sustainability of the project while encouraging student involvement and laying the groundwork for a more formal relationship with FC dining services. We have been in correspondence with Peter Koley of FC dining services and have discussed options for supplying some basic ingredients to the Grotto and North Campus Dining Hall. Mr. Koley is very excited at the prospect of receiving produce and herbs from the campus garden, and has agreed to incorporate any ingredients we can make available. We are currently in the process of developing a planting schedule to meet the requests of FC dining services. Our aim is to use this first year of operation to assess the garden's production capacity and develop a framework for reliable supply to dining services.

I. Student Involvement and Maintenance Schedule

We have conducted informal inquiries among students and faculty, and we have sufficient evidence to believe that interest in the campus garden project is very high. Because the maintenance requirements for the first phase are so low, we have no concerns about acquiring sufficient labor and commitment from the Franklin community during this first academic year. The garden is most productive in summer months, however, and we are currently developing several strategies for ensuring student commitment during June, July, and the first weeks of August. Again, during this initial phase, the test site will not be labor intensive, and several students and faculty have already volunteered to monitor and maintain the garden during this coming summer (2010). However, the future of this project will depend on a structured plan for securing commitment from the student body.

As soon as we receive administrative approval for this project, we will develop an official Sustainable Agriculture Club on campus. Members would participate in garden construction and maintenance, organize fundraising events, raise awareness about the importance of sustainable agriculture, and maintain a handbook of all garden activities for future students. Officers would plan work schedules, recruit summer volunteers, and maintain steady communication with FC dining services.

The success of the initial test site will provide reliable information needed to gauge the effectiveness of future student opportunities, but we have already developed several possible strategies to be implemented beginning in the spring semester of 2011. Please

note, the following suggestions are still in the experimental stage and will depend on evidence from the first phase of the sustainable garden:

- (1) The garden may potentially provide several opportunities for Life Long Learning Scholars. In addition to maintenance, LLLS could use the garden for research projects and educate their fellow students about the importance of sustainable agriculture.
- (2) Summer internships could potentially provide a reliable source of student labor in exchange for on-campus housing. Interns could manage the garden while maintaining careful documentation of the growing season and ongoing relationship with dining services.
- (3) A three or six week summer course on sustainable agriculture could potentially integrate regular coursework with hands-on education in the garden. In addition to the telluric classroom of the campus garden, the course would incorporate visits to Slow Food farms, local farm direct markets, and WWOOF certified farms (World Wide Opportunities On Organic Farms). This course could potentially attract study abroad students interested in participating in sustainable agriculture. The marketability of such a course is perhaps apparent; it is easy to see the appeal of working and learning in Ticino during the summer months. While additional professors have informally expressed interest in teaching this course, Professor Long has already volunteered to submit a proposal in the future.

II. Budgetary Considerations

The financial considerations for the initial phase of the garden are very reasonable. The following budget scenarios do not include the supplies, seeds, soil, and other materials that have already been volunteered by faculty members and students. Students and faculty are currently working on long-term funding for future phases of the garden, including opportunities through AASHE (Association for Advancement of Sustainability in Higher Education), Migros Garden, and several independent organic retailers. We are also pursuing a relationship with several campus garden projects throughout the United States, many of whom offer funding, advice, and support to new initiatives.

We are proposing two scenarios based on the budget available, which is currently uncertain. Once funding is acquired, we will adjust our budget accordingly. The different types of gardens we propose range from minimal funding with minimal amenities to significant funding with all of the amenities provided.

Budget Consideration I: Basic Amenities Total CHF: 75.00

Tools: 2-Sided Hoe (Migros Do-It Garten)	(Qty: 1)	10.30
Large Shovel (Migros Do-It Garten)	(Qty: 1)	37.50
Hand Shovel (Co-op Oecoplan)	(Qty: 1)	11.50
Seeds: Garlic	(Migros) (Qty: 1)	3.10
Radishes	(Migros) (Qty: 1)	1.80
Spinach	(Migros) (Qty: 1)	2.30
Tomatoes	(Migros) (Qty: 1)	3.10
Onions	(Migros) (Qty: 1)	1.80
Watering Can:	(Qty:1)	3.20

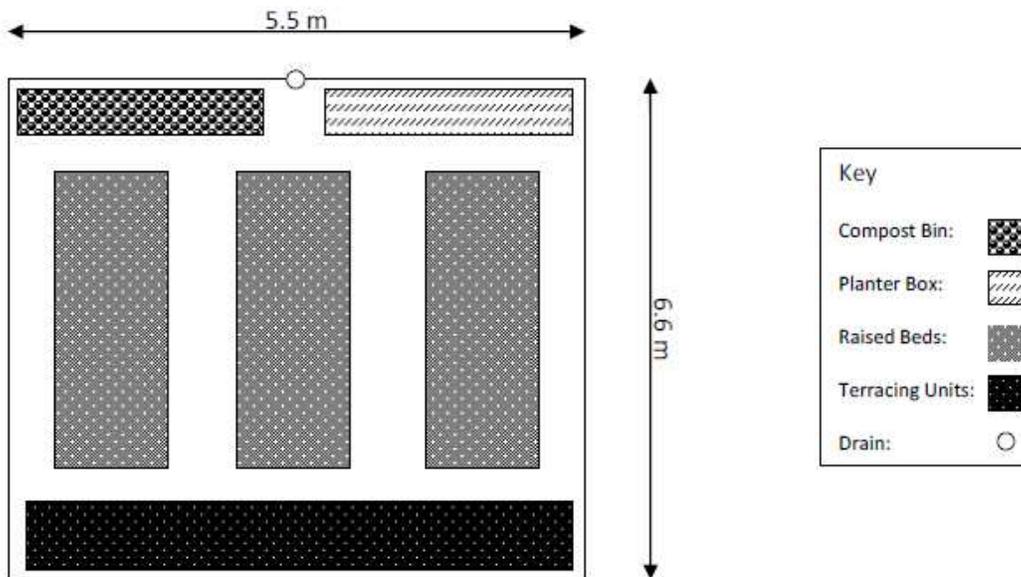
Budget Consideration II: Maximum Amenities Total CHF: 370.70

Soil: Universale 40 L (Migros Do-It Garten)	(Qty: 10) @6.30	63.00
Tools: 2-Sided Hoe	(Migros) (Qty: 2) @10.30 =	20.60
Large Shovel	(Migros) (Qty: 1)	37.50
Hand Shovel	(Co-op) (Qty: 2) @11.50 =	23.00
Seeds: Carrot	(Migros) (Qty: 2) @ 3.10 =	6.20
Radishes	(Migros) (Qty: 2) @ 1.80 =	3.60
Spinach	(Migros) (Qty: 2) @ 2.30 =	4.60
Formentino Lettuce	(Migros) (Qty: 2) @ 3.10 =	6.20
Beets	(Migros) (Qty: 2) @ 1.80 =	3.60
Onions	(Migros) (Qty: 2) @ 4.20 =	8.40
Marigolds	(Migros) (Qty: 3) @ 3.20 =	9.60
Watering Can:	(Migros) (Qty:2) @ 3.20 =	6.40
Large Standing Containers:	(Migros) (Qty:4) @ 32.00 =	128.00
Materials for Terrace Beds:	(Migros)	50.00

III. Location and Design

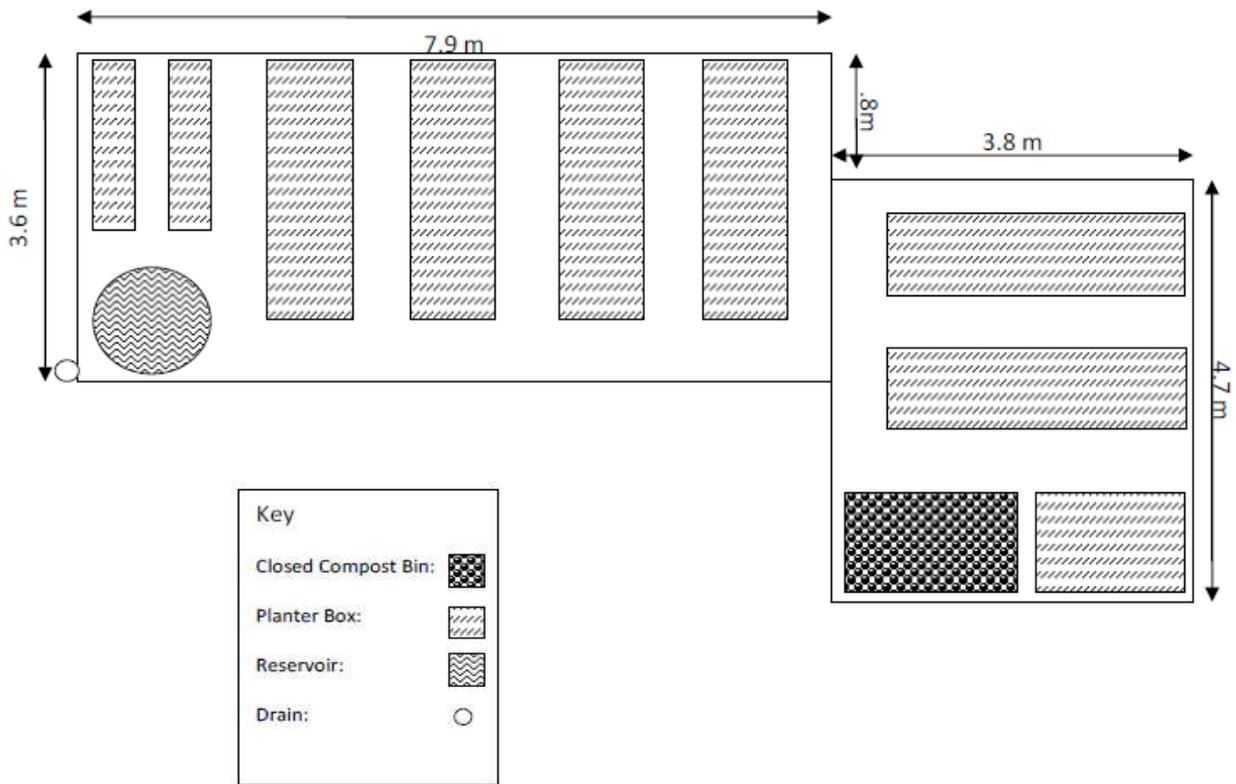
We have considered multiple sites and have selected three candidates. Each of these sites include sustainable plans and designs that are both functional and (through the use of complimentary flower planting) aesthetically appealing. While they are displayed below in order of preference, the first site is heavily favored by both students and faculty for Phase I.

Proposed Site 1: The Roof of the North Campus Science Lab and Guesthouse as well as Part of the Terraced Hillside.



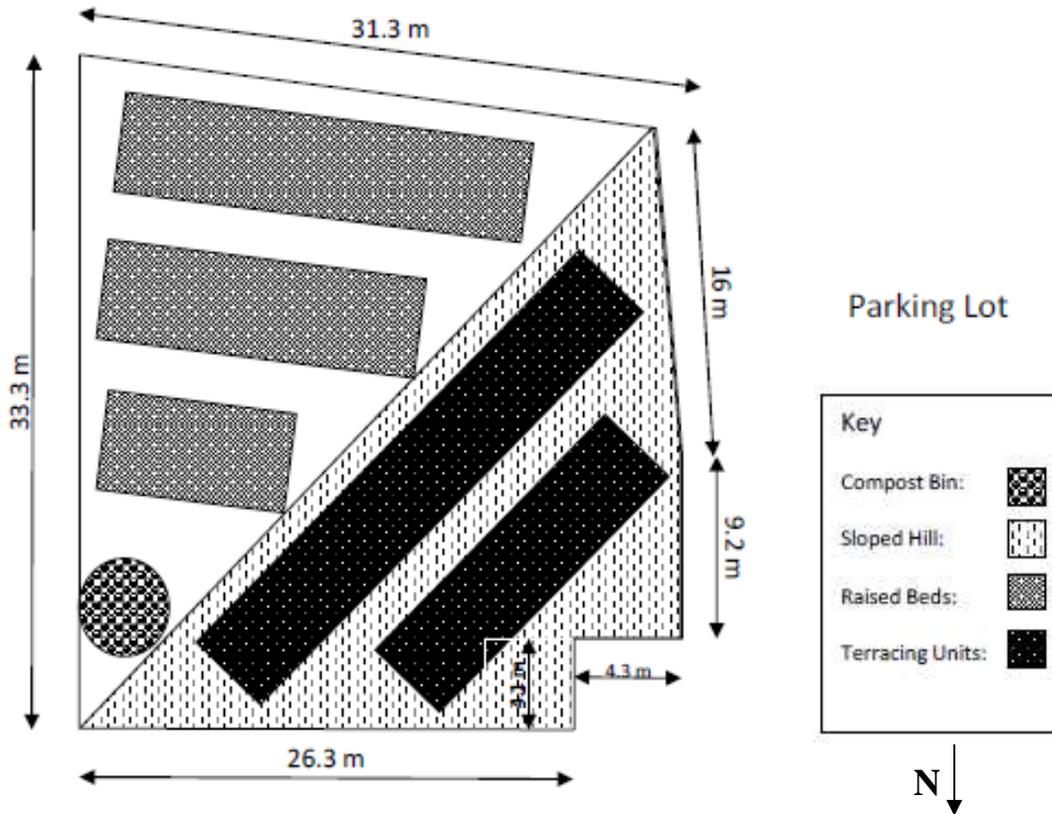
This site is an excellent area that is easily accessible to student and faculty workers, as well as to potential on-campus tours for individuals interested in the project. It is currently unused and of close proximity to the North Campus Dining Hall. It allows excellent access to sunlight and water resources for water harvesting. It also will not interfere with any existing activities and is not easily visible during initial construction stage or if left fallow. Students and faculty involved in the project think this an ideal site for a test plot.

Proposed Site 2: The Second Floor Terrace of the North Campus Villa



This site is accessible to faculty, as well as to potential on-campus tours for individuals interested in the project. Students will need assistant for access during breaks in the school year. It is also currently unused and of close proximity to the North Campus Dining Hall. Access to the area can be strictly controlled, thereby preventing any interference from pests or vandals. This site allows excellent access to sunlight, and water resources are available for water harvesting if access to the exterior storm drain is provided. It also will not interfere with any existing activities and careful design considerations will be taken in order to ensure that this will be an aesthetic asset for the North Campus community.

Proposed Site 3: Lawn behind Main Auditorium and Grace Library



This site is easily accessible to student and faculty workers, as well as to potential on-campus tours for individuals interested in the project. There is ample room of the test garden to expand in later phases. The creek downhill from this area is a reliable water source. It is also currently unused and of close proximity to the Main Campus Grotto. This site allows moderate access to sunlight. It also will not interfere with any existing activities.

IV. Timeline

- Apr. (week IV) 2010 Official foundation of the Sustainable Agriculture Club. Begin work on seed cultivation and material collection
- May (week I/II) 2010 Begin construction on site: prepare terraced and raised beds and bring in additional soil.
- May (week III) 2010 Plant all seedlings and officially break ground with campus event inviting the Franklin community.
- Summer 2010 Maintenance and harvesting as well as early documentation of progress. Rotating schedule of six student volunteers (Meije Gernez, Tyler Olsen, Simone Benz, Skyler Yost, Ryan Fisher, Ally Davis). Part time supervision of students will be provided by Joshua Long.
- Fall 2010 Begin supplying FC dining services with regular production as well as all preserved produce from the summer. Organize a completely local meal at dining services with produce from the campus garden and nearby Ticino suppliers. Begin educational program about sustainable agriculture to engage the Franklin community and encourage student volunteer work in the garden.
- Winter Break Cover crop planting. No labor required throughout most of December, all of January, February.
- Spring 2011 Submission of proposal for Phase II, a formal sustainable garden that will fully integrate the concepts researched during the first phase of the project. Evidence from the pilot project will be needed in order to provide details, but it is expected that garden expansion and the beginning of a formalized relationship with campus dining services will begin.

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Bibliography

Boucher, Douglas M., ed. 1999. *The Paradox of Plenty: Hunger in a Bountiful World*. Oakland, CA: Food First Books.

Bradley-Cook, Julia and Calvin Dane, Sarah Fowler, Meredith Groves, Anna Isis-Brown, Kip Kelley, Molly Lewis, Avi Pogel, Phoebe Souza, Eli Zigas. 2006. "Local Food and Grinnell College Dining Services: A Report from the Group Independent Study." Institutional Document, Grinnell College.

Campus Garden Guide. realfoodchallenge.org/files/College_Garden_Guide.pdf (accessed 22 February 2010).

Center for Agroecology and Sustainable Food Systems. University of Santa Cruz. <http://casfs.ucsc.edu/> (accessed 22 February 2010).

Food First Institute for Food & Development Policy. 2010. <http://www.foodfirst.org/> (accessed January 6, 2010).

Hinrichs, C. Clare. 2000. "Embeddedness and local food systems: notes on two types of direct agricultural markets." *Journal of Rural Studies* 16 (3): 295–303.

Jambeck, Jenna R. and Elisabeth W. Farreil and Sara M. Cleaves. 2006. Food Scraps to Composting...and Back to Food. *BioCycle* 4.

Kingsolver, Barbara, with Steven L. Hopp and Camille Kingsolver. 2007. *Animal, Vegetable, Miracle: A Year of Food Life*. New York: HarperCollins.

Kirschenmann, Frederick. 2003. "The Current State of Agriculture: Does it Have a Future?" in *The Essential Agrarian Reader*, ed Wirzba, Norman: (101-120). Lexington KY: University of Kentucky Press.

The Land Institute. 2010. <http://www.landinstitute.org/> (accessed 6 March, 2010).

Lappé, Francis Moore, Joseph Collins, Peter Rosset, and Luis Esparza. 1999. *World Hunger: Twelve Myths*. New York: Grove Press.

Lau, Stephens & Feng Yang. 2009. "Introducing Healing Gardens into a Compact University Campus: Design Natural Space to Create Healthy and Sustainable Campuses." *Landscape Research* 34 (1): 55–81.

Leopold Center for Sustainable Agriculture. 2009. News and Events. <http://www.leopold.iastate.edu/news/news.htm> (accessed March 9, 2010).

Masumoto, David Mass 2009. *Wisdom of the Last Farmer: Harvesting Legacies from the Land*. New York: Simon and Schuster.

- Mount Holyoke Student Garden Project. <http://www.mtholyoke.edu/ce/19629.shtml> (accessed 9 March 2010).
- National Gardening Association Website. 2010. <http://www.garden.org/home> (accessed 4 March, 2010).
- Nestle, Marion. 2002. *Food Politics: How the Food Industry Influences Nutrition and Health*. Berkeley, CA: University of California Press.
- Oberlin College, Oberlin Agroforestry Development Plan. [http://www.oberlin.edu/faculty/petersen/ENVS316/LabField/SARE proposal for Jones Farm Forest development 2003.doc](http://www.oberlin.edu/faculty/petersen/ENVS316/LabField/SARE%20proposal%20for%20Jones%20Farm%20Forest%20development%202003.doc) (accessed 22 February, 2010).
- Petrini, Carlo. 2007. *Slow Food Nation: Why our Food Should Be Good, Clean, and Fair*. New York: Random House
- Pollan, Michael. 2006. *The Omnivore's Dilemma: A Natural History of Four Meals*. New York: Penguin Press.
- _____. 2008. *In Defense of Food: An Eater's Manifesto*. New York: Penguin Press.
- Schlosser, Eric. 2001. *Fast Food Nation: The Dark Side of the All-American Meal*. New York: Houghton Mifflin.
- Shiva, Vandana. 2000. *Stolen Harvest: The Hijacking of the Global Food Supply*. Cambridge, MA: South End Press.
- Skelly, Sonja M. and Jennifer Campbell Bradley. 2007. "The Growing Phenomenon of School Gardens," *Applied Environmental Education and Communication* 6: 97–104.
- Stanford University Community Farm. <http://www.stanford.edu/group/scfarm/> (accessed 4 March 2010).
- Sustainable Urban Landscape Information Series. University of Minnesota. (accessed 20 February 2010).
- Wirzba, Norman, ed. 2003. *The Essential Agrarian Reader*. Lexington KY: University of Kentucky Press.
- Wolf, Marianne McGarry, Arianne Spittler, and James Ahern. 2005. "A Profile of Farmers' Market Consumers and the Perceived Advantages of Produce Sold at Farmers' Markets." *Journal of Food Distribution Research* 36(1): 192-201.