Food Systems: An Annotated Bibliography

A Resource for Food System Research and Agricultural Development

SPECIAL NOTE: This document is a work in progress of resources to facilitate food system research. It will be periodically updated with new content. Specific numbers for each source and page numbers may change as new content is added to the document. October, 2008.

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Community Food Systems (General)


Food 21 was a Swedish program that ran from 1997-2004. The goal of the program was to come up with “environmental tools and solutions to existing non-sustainable practices along the entire food chain” (275). The authors write, “Food production is a very complex issue that depends on both scientific progress and social and political preferences” (280). The study concluded that organic production is not necessarily better when considering environmental impact and product quality. The researchers utilized transdisciplinary collaboration between researchers and stakeholders when forming indicator systems.


This project was completed for the Appalachian Sustainable Agriculture Project (ASAP) and was funded by the Southern Sustainable Agriculture Research and Education Program (SSARE.) The report is based on 20 different surveys conducted over several years, secondary data and published statistics. The study identifies a gap between the amount of locally produced food that is demanded by consumers and the amount that is currently being sold to local markets. Barriers to closing the gap between demand and supply are addressed as well as potential mechanisms for overcoming barriers. There is a distinct emphasis on moving beyond direct marketing and toward larger volume markets.


This study examines the ecological footprint of food consumption in Cardiff, the capital city of Wales. Ecological footprint is expressed by a standardized measure (global hectar
This measure helps to estimate the amount of resources needed to support a certain amount of people for a given amount of time (per year) to the amount of resources actually consumed. This study combines ecological, economic and nutritional evaluation to determine the feasibility of several food system models in Cardiff. The researchers conclude that when seeking to lower the ecological footprint of food systems, social needs such as accessibility and affordability can best be addressed by including a diversity of programs suited to representative demographic groups.

This report is intended to provide information to policy makers in the UK about the environmental impact of food systems. In addition, information related to the sustainability of food systems, including life cycle analysis (LCA) of food products is useful to consumers and the food industry. Fresh and processed, organic and conventionally produced, locally and globally-sourced foods are all considered in the analysis. Distribution methods and lifestyle choices are also cited as factors impacting the environmental effects of food systems.

Garrett and Feenstra define a “Community Food System” as “one in which sustainable food production, processing, distribution and consumption are integrated to enhance the environmental, economic, and social and nutritional health of a particular place” (2). This report offers sound guiding principles for community groups looking to establish or support an existing food system of this nature. The authors cover funding sources, organizational infrastructure, policy integration and project evaluation. The report highlights one rural and one urban food system.

In this article, Kloppenburg et al. elaborate on the definition of “food sheds.” The article emphasizes a departure from food systems that are controlled by the market alone. In response to the current globalized food system, the authors propose altruism, morality, and active communities as the catalyzing agents of change. They identify the 5 principles of sustainable food sheds as: moral economy; commensal communities; self-protection; proximity; and nature as measure.
This article attempts to assess the “true cost” of the UK market basket and the cost-saving aspects of different distribution systems. Transportation from point of sale to home is crucial information when determining the impact of different distribution systems. The authors suggest methods for reducing cost that focus on changing transportation from point of sale to home and shifting from conventional to organic production. They write, “Localization of food systems, such as we point to here, would require changes in the behavior of actors and businesses across the whole supply chain, with localized geographic areas needing different patterns of land use to supply local markets and consumers.”

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### Food Systems in Vermont and the Northeast


This guide, compiled by students at Middlebury College, provides profiles of Vermont farms and eating establishments that provide locally grown food. Recipes are also included in the listing sections. The introduction includes an overview of the consumer drivers behind the local food movement in Vermont.


This publication points out that rural communities are currently absorbing approximately 40% of Vermont’s population growth. The authors say that this is part of the reason we are losing farmland, forests and wild life habitat to development. Strengthening the connection between communities and the working landscape is one way to protect Vermont against sprawl. The report highlights a selection of farms, restaurants, stores, educational programs, conservation efforts, farmers’ markets and forestry projects that engage their communities effectively.


The Vermont Sustainable Agriculture Council’s mission is to “identify needs, set goals, select priorities, and make annual recommendations regarding sustainable agriculture
research, demonstration, education and financing.” In the 2006 report, the Council has identified 2 main areas of research: first, an economic analysis that would enhance understanding around local food systems and Vermont agriculture; and second, an investigation of how best to support on-farm energy production and nutrient management practices. The Committee also arrives at eight “Priorities for Action to Support Sustainable Agriculture” in Vermont. The report provides an update of events around Local Food Systems, a report of the Farm Viability Enhancement program, an update on on-farm energy production and report on the state of Vermont Agriculture from both qualitative and quantitative perspectives.


Timmons begins this thesis by identifying the need for research around local food consumption in Vermont. Though there has been an increase in consumer interest in locally produced food as observed through volume of direct sales, there is no common method used for tracking sales. Timmons’ work first describes the state of the local food movement in Vermont, and then uses a regression model to estimate the rate of local food consumption on a county by county level. It is determined that the development of the local foods market in Vermont has potential to increase social welfare and sustainability, if it can be studied and understood more thoroughly.


In order to identify opportunities and constraints for local food consumption in Vermont, David Timmons interviewed 12 key individuals. The subjects of these interviews were managers of coops in Montpelier, Burlington and Brattleboro; managers of farmers markets in Norwich, Montpelier, Burlington and Brattleboro; owners of two distribution companies; a director of a non-profit, a farmer and an institutional buyer. The questions focused on whether or not demand or supply for local foods is greater in the state of Vermont, what the barriers were to more food being source locally and what the most promising opportunities for the local food market may be. Timmons concludes that the future growth of the local food market depends on the willingness of consumers to pay a slightly higher price for a higher quality product.

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**Market Development**

This newsletter argues that nontraditional or specialized value added production has the potential to benefit select entrepreneurs and their communities but does not provide enough income or job generation to have significant economic impact on the development of rural areas. The authors provide a rough sketch of traditional business principles such as evaluating the feasibility of entering the market and possible entry barriers.


This announcement is intended to encourage the application of international fair trade principles to the domestic sphere. Key values to develop economically and socially sustainable agriculture sector in the United States include: appropriately scaled farming, worker and producer independence, democratic ownership, fair labor standards and fair and stable pricing. The working group includes representatives from the following organizations and businesses: Equal Exchange, Farmer Direct Co-op/Fair Deal, Organic Valley/CROPP cooperative and the Rural Advancement Foundation International & the Social Justice in Agriculture Project.


This bulletin is published by Health Care without Harm in an effort to raise awareness around unique opportunities for hospitals to not only treat nutrition related illness, but to also address the underlying problem. In order to improve the health of the communities they serve, groups like Kaiser Permanente, Duke University Medical Center and Allen Memorial Hospital in Iowa have started farmers’ markets on hospital grounds. A few of the many benefits of this activity include increased employee moral, better patient satisfaction and improved community relations. This fact sheet provides resources and ideas for starting farmers’ markets and relationships with CSA farms appropriate for hospitals.


This manual is designed to help farmers formulate a direct marketing plan specifically for internet markets. Klotz includes reasons why it makes sense to market on the web, how to develop a marketing plan and research the market and how to build and market a web site.

This survey was conducted to gather information about CSA production levels, returns, costs, labor, crop production methods and pest control. The study concludes that CSA farmers often do not factor in their own labor when conducting a cost analysis. If they paid themselves a living wage, the cost per share would increase from an average of $464 to approximately $585 for 400 lbs of produce. The equivalent amount of produce sold retail would equal approximately $1000 (if organic) and $700 (if conventional.) Lass and Sanneh suggest that it is unsustainable for farm operators to continue managing CSAs without paying themselves a living wage.


Adaptability is a critical characteristic for food markets to have in the interest of long-term sustainability. (534). So is community participation. The emergence of CSAs and other face-to-face agricultural marketing is a result of the negative reaction people have to the globalization of food systems. Food markets that are increasingly embedded socially have a higher rate of adaptability, increased rate of communication between consumers and producers (which allows for a greater complexity of relationships) and more opportunities for referencing local value systems and trust (549-550). There is a place for large institutions, but because of capital mobility, the effectiveness of these institutions should be evaluated carefully.


In this article Stagl examines the strengths and shortcomings of farmers’ markets, subscription farming and food cooperatives in revitalizing local economies. There is a particular emphasis on the ways CSAs are limited in response to consumer need.

According to Stagl, local food markets contribute to sustainability by requiring less transport, fulfilling consumer demands, providing opportunities for consumers to learn about sustainability, generating trust between consumers and producers, offering a variety of products and incorporating new consumer groups into the local market (152). The limitations of local food markets are their limited access to rural (and I’d add urban) populations, short growing seasons and possible short-term economic failure. Additional barriers that keep consumers from participating in CSAs include the lack of information and the inability of the CSA model to fulfill some consumer preferences. CSAs are also vulnerable to competition by supermarkets that offer and advertise local food (156).
Consumer Preferences and Nutrition


This report is the result of a 500 household consumer survey in Wisconsin. The intentions of those conducting the survey were to: (1) assess the current and potential market for local food; (2) to assess the current and potential market for local, pasture-raised chickens; and (3) to assess the current and potential market for organic and all-natural foods in this specific area. Topics addressed include attitudes and opinions around local food, organic and all-natural food and meat purchasing behavior. The survey indicates that most consumers highly value food attributes, including taste, quality, healthfulness and price. A majority of consumers also expressed a preference for supporting local agriculture. Over half of the respondents reported purchasing locally produced meat, while lack of access was cited as a barrier to greater levels of purchasing. Willingness to pay, purchasing venue and annual income of consumers are addressed as factors that impact purchasing behavior in this survey.


This paper reports the findings of a survey conducted to “gain an understanding of Northeastern consumers' consumption of fruits and vegetables, perceptions of and preference for local produce, seasonal eating patterns (including familiarity with winter produce items) and attitudes toward agricultural issues.” The secondary purpose of the study was to collect information around potential topics of consumer education for the compilation of a regional food guide to the Northeast. Respondents reported that they were overwhelmingly in favor of maintaining farm economies in the Northeast and that they would be willing to pay more for locally produced goods if it helped local farmers stay in business. Most respondents did not identify place of origin as being a highly important factor in food selection, which represents a significant barrier to the further development of local food systems.

Regulations and Rules


The guide is intended for use by farm service providers for farm start-up, farm viability planning and farm transfer issues. Topics covered include the legal structure of farm
businesses, farm transfer and estate planning, farmland tenure and leasing, agriculture and land use regulations and farm labor regulations. It is important to note this source is not a substitute for legal advice. Because regulations do change, be sure to verify current state and federal regulations.


This book serves as a guide to issues and regulations around marketing associations. Topics include business fundamentals and marketing, joint producer marketing enterprises, legal business organizations, financing, risk management, contract law and federal laws regulating agricultural sales. It is important to note that this source is not a substitute for legal advice. Because regulations do change, be sure to verify current regulations.


This resource is intended for producers and processors. It provides exact requirements for processing, packaging and inspection when selling to institutional buyers. It is important to check the most up to date regulations before making any large investment decisions.

### Other Topics


This study identifies differences in consumer and producer desires at farmers’ markets held in cities of varying size in Norway. The study found through consumer and producer surveys that producers were more concerned than consumers that everyone understand how the food was grown and processed. Both groups believed that *how* food was produced was more important than *where* it was produced. The authors identify direct marketing as an effective method for reducing the physical and social distance between consumers and farmers.

This report is the product of extensive surveys given to individuals who are enrolled in the Use Value Appraisal Program. A lister survey, an agricultural survey and a forest survey were used in order to determine the following: the effectiveness of the program, if there is any electronic filing support that could be offered to participants, to get feedback as to what can be improved with the program, and explore how changes to eligibility would be beneficial. End recommendations were to develop work plans by program that establish target goals and benchmarks, set priorities and list future actions. The report also recommends ways in which goals can be efficiently achieved, including privatization and consolidation of districts and staffing.


The authors completed a study of 6 Iowa-based producers who ship to local and regional markets. This study emphasizes that small and mid sized producers should be aware of transaction costs (also called logistics costs) and should change their distribution practices if need be. Transaction costs “include cash payments and amortized costs associated with post-production handling, packaging, storage, inventory carrying and transportation functions” (3). Recommendations include: (1) Producers should calculate what they spend per unit for transportation, as it is useful to know what it costs to run semis, trucks and vans; (2) Producers should calculate what they spend to serve each customer; (3) Producers should be aware of the cost-saving advantages associated with economies of scale; (4) Producers should use or become distribution specialists; (5) Producers should work with regional retailers; and (6) Producers should join together for locally specific shelf space (for product identification purposes.)