

Pace University

DigitalCommons@Pace

Pace Law Faculty Publications

School of Law

2011

Food, Law & the Environment: Informational and Structural Changes for A Sustainable Food System

Jason J. Czarnezki

Elisabeth Haub School of Law at Pace University

Follow this and additional works at: <https://digitalcommons.pace.edu/lawfaculty>



Part of the [Agriculture Law Commons](#), [Environmental Law Commons](#), [Food and Drug Law Commons](#), and the [Natural Resources Law Commons](#)

Recommended Citation

Jason J. Czarnezki, Food, Law & the Environment: Informational and Structural Changes for A Sustainable Food System, 31 Utah Env'tl. L. Rev. 263 (2011), <http://digitalcommons.pace.edu/lawfaculty/913/>.

This Article is brought to you for free and open access by the School of Law at DigitalCommons@Pace. It has been accepted for inclusion in Pace Law Faculty Publications by an authorized administrator of DigitalCommons@Pace. For more information, please contact dheller2@law.pace.edu.

FOOD, LAW & THE ENVIRONMENT: INFORMATIONAL AND STRUCTURAL CHANGES FOR A SUSTAINABLE FOOD SYSTEM

Jason J. Czarnezki*

INTRODUCTION

The relationships between food systems, law, and the environment are strong.¹ The ecological costs of modern industrial and large scale food production are driven by greenhouse gas emissions, fertilizers and pesticides, and food miles,² as well as agricultural law. Food choices contribute to the climate crisis, cause species loss, impair water and air quality, and accelerate land use degradation.³ For example, “An estimated 25 percent of the emissions produced by people in industrialized nations can be traced to the food they eat.”⁴

The ecological costs of the modern industrial, carbon heavy food system are well-chronicled. Chemical inputs, in the form of fertilizers and pesticides, have the potential, through runoff, to pollute groundwater and streams, cause algae blooms and oxygen depletion in waterways, contribute to soil acidification, kill beneficial insects, and potentially poison wildlife and their reproductive systems. Industrial farming techniques such as over-tilling, a lack of crop rotation, use of inorganic

* © 2011 Jason J. Czarnezki. Professor of Law, Vermont Law School; A.B., J.D., The University of Chicago. I would like to thank the students, faculty, and supporters of the Wallace Stegner Center for Land, Resources and the Environment at the University of Utah S.J. Quinney College of Law for the invitation to write this Article and for the helpful comments and questions that were provided when a draft version of this paper was presented at the Stegner Center Young Scholar Lecture. I also wish to sincerely thank my research assistants Emily Montgomery and Elisa Prescott.

¹ See, e.g., Mary Jane Angelo, *Corn, Carbon, and Conservation: Rethinking U.S. Agricultural Policy in a Changing Global Environment*, 17 GEO. MASON L. REV. 593 (2010); Jason J. Czarnezki, *The Future of Food Eco-Labeling: Organic, Carbon Footprint, and Environmental Life-Cycle Analysis*, 30 STAN. ENVTL. L. J. 3 (2011); William S. Eubanks II, *A Rotten System: Subsidizing Environmental Degradation and Poor Public Health with Our Nation's Tax Dollars*, 28 STAN. ENVTL. L. J. 213 (2009).

² “Food miles” is the term used to describe the distance food is transported from farm to table.

³ This Article focuses on the ecological costs of food. Cf. Patricia Allen and Martin Kovach, *The Capitalist Composition of Organic: The Potential of Markets in Fulfilling the Promise of Organic Agriculture*, 17 AGRIC. AND HUM. VALUES 221, 221 (2000) (“We have chosen to focus on environmental issues because improving environmental conditions in agricultural production is the most significant and consistent claim made by advocates of organic agriculture.”). But food matters in other senses as well. See Alice Waters, *Forward*, in CARLO PETRINI, *SLOW FOOD NATION*, at ix (2007) (“We soon discovered that the best tasting food came from local farmers, ranchers, and foragers, and fisherman who were committed to sound and sustainable practices.”).

⁴ Elisabeth Rosenthal, *To Cut Global Warming, Swedes Study Their Plates*, N.Y. TIMES, Oct. 23, 2009, at A6.

fertilizers and pesticides, and the agricultural practice of monoculture mine the soil of its natural nutrients, destroys soil biota and its habitat, and increases erosion. Contributing to the climate crisis, fossil fuels remain the single most important ingredient in the modern food system, not only used as fuel for transportation and production of food, but also to produce fertilizers and pesticides.

In an effort to change food choices and inform consumers of the environmental impacts of food, I have already argued for creation of an eco-label for food based on an environmental life-cycle analysis from production, to use, to distribution, building on existing organic and carbon labeling programs.⁵ But improved eco-labeling is only a start, since it only provides information to consumers on available food products that are often industrially produced and processed. It does not directly improve and increase the supply of and access to ecologically friendly food products (though it may do so indirectly due to consumer demand). Both informational regulation that helps influence consumer choice and structural changes that provide consumers with better access to better choices are necessary for a sustainable food system to develop.⁶

Thus, in addition to improving labeling schemes to support environmentally-friendly food consumption, the market of available food products must be improved. Public law and policy drives American food choices and, in turn, fosters environmental degradation. Michael Pollan, author of *The Omnivore's Dilemma*, wrote in an open letter to the next president of the United States during the 2008 campaign season,

It must be recognized that the current food system—characterized by monocultures of corn and soy in the field and cheap calories of fat, sugar and feedlot meat on the table—is not simply the product of the free market. Rather it is the product of a specific set of government policies that sponsored a shift from solar (and human) energy on the farm to fossil-fuel energy.⁷

Legal policies might better support a low-input, more local and less processed market. Already significant efforts are underway to build a more community-driven food system that would reduce food miles, decrease consumption of processed foods that contribute to greenhouse gas emissions, and lessen the

⁵ See Czarnecki, *supra* note 1. This would go beyond organic labeling under the OFPA. It would also go beyond regional food labeling. See, e.g., Amy B. Trubek & Sarah Bowen, *Creating the Taste of Place in the United States: Can We Learn from the French?*, 73 GEOJOURNAL 23 (2008).

⁶ JILL RICHARDSON, RECIPE FOR AMERICA: WHY OUR FOOD SYSTEM IS BROKEN AND WHAT WE CAN DO TO FIX IT 47 (2009) (in terms of ecological interests, defines sustainable agriculture as “resource-conserving,” “environmentally sound,” and efficient use of resources); Gill Seyfang, *Ecological Citizenship and Sustainable Consumption: Examining Local Organic Food Networks*, 22 J. RURAL STUD. 383, 383 (2006) (recognizing that sustainable consumption has an elusive definition).

⁷ Michael Pollan, *Farmer in Chief*, N.Y. TIMES MAG., Oct. 12, 2008, at MM62.

impacts of chemicals on the environment. While overarching changes in national agricultural law and policy are necessary, beginning with the Farm Bill,⁸ second-best solutions like eco-labels and creating new food markets are useful steps. Such steps are even more important given that the organic market is becoming dominated by actors of industrial agriculture, and “the organic sector is coming increasingly to resemble other sectors of commodity-driven agriculture.”⁹

This Article considers legal, theoretical, and practical steps to a more sustainable food model. Part I discusses the underlying reasons for problems in the current food system, including those manifested in law, and the perceived benefits of creating a new agricultural paradigm. Part II discusses the major agricultural and food programs that have become more common in shaping a different food system model, specifically focusing on direct marketing (for example, farmers markets and community-supported agriculture) and the organic movement as it relates to small farmers. Part III argues that in order to change modern American food consumption, two changes must take place—increased awareness and increased availability. This Article reiterates the need to increase the amount of information available to consumers and the consequences of food choices. It further argues that structural changes in the food system are necessary to increase access to sustainable foods by building on current efforts to increase direct marketing by farmers and the number of farmers that are certified, creating better food system planning through state food policy councils and municipal planners, building on existing interests in intrastate and regional efforts supporting local food and local economies, and improving management of existing alternative agricultural distribution and production systems.

I. LEGAL IMPEDIMENTS & THE NEW AGRICULTURE

The transition away from the modern industrial food system to a different agricultural model has many names—civic, alternative, and new. Professor Thomas Lyson promotes a “civic agriculture,” a term that “embodies a commitment to developing and strengthening an economically, environmentally, and socially sustainable system of agriculture and food production that relies on local resources and serves local markets and consumers.”¹⁰ An “alternative” food system would incorporate organic foods, eco-labeled foods, direct marketing, fair trade, local foods, farmers markets, and buying clubs.¹¹ And a “new agriculture” model could create opportunities to keep farm families on the land and create new

⁸ William S. Eubanks II, *Paying the Farm Bill: How One Statute Has Radically Degraded the Natural Environment and How a Newfound Emphasis on Sustainability Is the Key to Reviving the Ecosystem*, 27 THE ENVTL. FORUM 56 (2010).

⁹ Wynne Wright & Gerad Middendorf, *Fighting over Food: Change in the Agrifood System*, in THE FIGHT OVER FOOD: PRODUCERS, CONSUMERS, & ACTIVISTS CHALLENGE THE GLOBAL FOOD SYSTEM 7–8 (Wynne Wright & Gerad Middendorf eds., 2008).

¹⁰ THOMAS A. LYSON, CIVIC AGRICULTURE: RECONNECTING FARM, FOOD, AND COMMUNITY 63 (2004).

¹¹ Wright & Middendorf, *supra* note 9, at 2.

farms; promote sustainable farming practices to protect the environment and support profitable farms and communities; build diverse efficient local food systems designed to address local food needs; and create opportunities for people at all levels of the food economy.¹²

The existing industrial food model, heavy on chemicals, fossil fuels, and industrial processing, has been created, in part, by laws that have also impeded the creation of new agriculture. Ironically, these laws have also provided justification for creation of new agricultural and food models.¹³ Many legal, policy, and social constraints must be overcome to create a new agricultural model: legitimate concerns about food safety and public health often result in regulatory impediments that can overwhelm small farms and processors;¹⁴ the federal government's heavy subsidization of commodity grains through the Farm Bill; the rising cost of food creating a comparative advantage for industrially produced and commodity-driven foods; the emergence of large agribusiness biotechnology, genetically-modified groups, and concentration animal feed organization; and the continued reliance on fossil fuels for food production and distribution.¹⁵

"New agriculture" attempts to overcome these obstacles in the absence of a fundamental shift in national food and agriculture policy. The new agricultural movement supports a sustainable food system: locally and/or efficiently produced, processed, and distributed foods; an economically viable market for farmers and consumers; and ecologically sound and/or organic production, processing and distribution.¹⁶ New agriculture supports a sustainable food system: increasing direct farm marketing and local food buying, and creating opportunities for new markets and foods; changing the model of institutional purchasing so state and local government can create demand for sustainable foods; and supporting eco-labeling and food education programs so consumers can act on their concerns to influence changes in food and farming practices.¹⁷

Changing what we eat and the way we eat will require significant and intentional modifications in individual behavior.¹⁸ While many individuals have

¹² Neil D. Hamilton, *Putting a Face on Our Food: How State and Local Food Policies Can Promote the New Agriculture*, 7 DRAKE J. AGRIC. L. 407 (2002).

¹³ Cf. DARRIN NORDAHL, PUBLIC PRODUCE: THE NEW URBAN AGRICULTURE, at xii (2009) (suggests a need for a "public network of food-growing opportunities" due to rising cost of produce, weather aberrations and subsequent crop loss, pathogen-infected produce, decreasing popularity of industrial organic, and demand for locally grown produce).

¹⁴ See Wright & Middendorf, *supra* note 9, at 1.

¹⁵ JOHN E. IKERD, CRISIS & OPPORTUNITY: SUSTAINABILITY IN AMERICAN AGRICULTURE 293 (2008) ("The industrial era has been fueled by *cheap* energy," specifically fossil fuels (emphasis in original)).

¹⁶ Wright & Middendorf, *supra* note 9, at 9 ("Local food systems are 'rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices and enhance social equity and democracy for all members of the community.'" (citations omitted)).

¹⁷ See Hamilton, *supra* note 12.

¹⁸ See generally JASON J. CZARNEZKI, EVERYDAY ENVIRONMENTALISM: LAW, NATURE & INDIVIDUAL BEHAVIOR (2011).

the ability, interest and resources to modify behaviors independently of cultural norms and civic structure, such choices are “unlikely to bring about wider transformative change unless diffused to a broader audience that has the power to effect change through the power of numbers.”¹⁹ This is the role of law and public policy, to impact both structure and numbers and alleviate ground-level hindrances to building a new agricultural model.

II. A BRIDGE TO NEW AGRICULTURE AVENUES

“New agriculture” attempts to overcome the obstacles of the modern industrial food model in an effort to support a more sustainable food system. Direct marketing and organic food production are perhaps the most basic forms already in place that can help in the development of a more sustainable food system, and serve as a foundation for pursuing more ambitious alternative food programs.

A. Direct Marketing: Farmers Markets & Community-Supported Agriculture

An avenue to the new agricultural model is more direct marketing programs for farmers such as farmers markets and community-supported agriculture (CSA) programs.²⁰ Both serve prominent roles in the recent revival of community-based agriculture.²¹ Both provide access to locally grown and locally processed foods, often offer organic products, and allow consumers to know or directly inquire from farmers how their food was grown, produced, and processed. In order for these direct marketing efforts to effectively promote a local organic food model, more farmers markets and CSA programs must exist, and more people must use them.

A more sustainable food model may not only benefit environmental health, but also public health.²² “Over the last forty years, two interrelated factors dominate the food/health argument: diminished access to healthy food and the rise of industrial food. Taken together, the two are believed to produce serious health

¹⁹ Wright & Middendorf, *supra* note 9, at 15. See also Laura B. DeLind, *Are Local Food and the Local Food Movement Taking Us Where We Want to Go? Or Are We Hitching Our Wagons to the Wrong Stars*, AGRIC. HUM. VALUES (Feb. 22, 2010) (on file with author) (arguing that advocating individual action can deflect responsibility and can starve social or political activism).

²⁰ Raymond A. Jussaume Jr. & Kazumi Kondoh, *Possibilities for Revitalizing Local Agriculture: Evidence from Four Counties in Washington State*, in THE FIGHT OVER FOOD: PRODUCERS, CONSUMERS, & ACTIVISTS CHALLENGE THE GLOBAL FOOD SYSTEM 236 (2008).

²¹ Wright & Middendorf, *supra* note 9, at 9.

²² Nick Rose et al., *The 100-Mile Diet: A Community Approach to Promote Sustainable Food Systems Impacts Dietary Quality*, 3 J. HUNGER & ENVTL. NUTRITION 270, 282 (2008) (suggesting further research is needed on the relationship between sustainable food diet and health effects).

problems, such as obesity and Type II diabetes.”²³ Farmers markets and CSAs provide access to healthy food and spurn the industrial food model. Already a number of organizations, like U.S. Department of Agriculture and Agricultural Marketing Service’s formation of the Farmers Market Consortium, have recognized these health and environmental benefits, and are developing initiatives to support the existence and use of farmers markets.²⁴ And USDA provides resources for farmers on its website to help farmers to take part in CSAs.²⁵

1. The Market for Direct Markets

What share of the market do farmers markets comprise? The short answer is that farmers markets have seen significant growth in recent years, but their overall market share could be greater. In a 2006 report, the USDA concluded that “the U.S. farmers market industry shows the sector continues to experience brisk growth, but that many newer farmers markets have not yet been able to generate the sales volume enjoyed by older farmers markets, raising questions as to whether current levels of industry growth can be sustained over time.”²⁶ As seen in Figure A, the number of farmers markets nationwide have increased dramatically from 1,755 farmers markets 1994 to 5,274 in 2009.²⁷

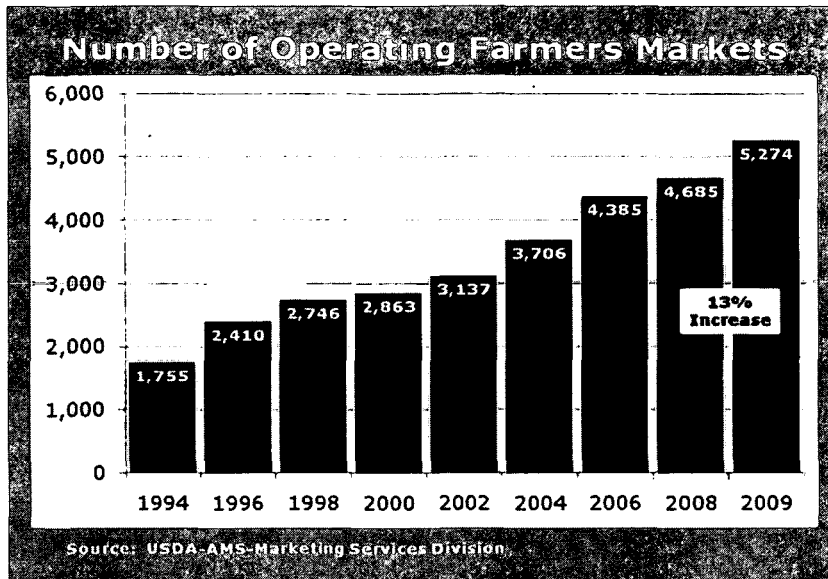
²³ Alfonso Morales & Gregg Kettles, *Healthy Food Outside: Farmers’ Markets, Taco Trucks, and Sidewalk Fruit Vendors*, 26 J. CONTEMP. HEALTH L. & POL’Y 20, 30 (2009) (citing Center for Disease Control, *The Burden of Chronic Diseases and Their Risk Factors: National and State Perspectives 2004*, 29, 44 (2004), available at <http://www.cdc.gov/nccdphp/burdenbook2004>).

²⁴ See *Farmers Markets and Local Food Marketing*, USDA, AGRICULTURAL MARKETING SERVICE, <http://www.ams.usda.gov/AMSV1.0/FarmersMarkets> (last modified Dec. 8, 2010); *About FMC*, FARMERS MARKET COALITION, <http://farmersmarketcoalition.org/joinus/> (last visited Feb. 9, 2011).

²⁵ *CSA Resources for Farmers*, USDA, NATIONAL AGRICULTURAL LIBRARY, <http://www.nal.usda.gov/afsic/pubs/csa/csafarmer.shtml> (last modified Apr. 28, 2010).

²⁶ EDWARD RAGLAND & DEBRA TROPP, USDA, NATIONAL FARMERS MARKET MANAGER SURVEY 2006 1 (2006).

²⁷ See also Morales & Kettles, *supra* note 23, at 27–28 (discussing the history and number of public markets and street vendors in the United States).

Figure A: USDA Data on the Number of Farmers Markets Nationwide

SOURCE: USDA, Agricultural Marketing Services, Farmers Markets and Local Food Marketing, *Farmers Market Growth: 1994–2009*, <http://www.ams.usda.gov/AMSv1.0/> (follow “Farmers Markets and Local Food Marketing” hyperlink; then follow “Farmers Markets” under Resources section; then follow “Farmers Markets Growth: 1994–2009” hyperlink).

Unfortunately, farmers market expansion has not yielded economic viability for the younger markets. New markets less than five-years-old make up one-quarter to one-third of all seasonal markets nationwide, and they have struggled to find both vendors and customers.²⁸ As a result, growth in the number of farmers markets has not mirrored growth in sales. From 2000 to 2005, the average annual sales growth rate was 2.5 percent, while the number of farmers markets grew by an astounding 43 percent.²⁹

²⁸ RAGLAND & TROPP, *supra* note 26. (“As a result of the massive expansion in the number of farmers markets since 2000, nearly 30 percent of all seasonal markets are less than 5 years old and most still appear to be establishing themselves economically. Managers of these young markets reported monthly sales only half the national average of all markets. They also reported fewer vendors (22 compared with a national average of 31) and fewer customers per week (430 compared with a national average of 959).”).

²⁹ *Id.* (“The large percentage of young markets explains in part why the growth in the number of farmers markets is not mirrored by a corresponding growth in sales. Total farmers market sales in 2005 are estimated to have slightly exceeded \$1 billion, compared with \$888 million in 2000, an average annual growth rate of 2.5 percent,” and noting the 43 percent growth in the number of farmers markets between 2000 and 2005).

On the positive side, farmers markets, while obviously providing local food, effectively provide a significant number of organic food options. In 2002, organic growers participated at more than four-fifths of markets studied by the USDA, and represented one-third of regularly attending farmers, highlighting “the disproportionately high use of farmers’ markets as a sales outlet by organic growers.”³⁰ These facts illustrate the important role of farmers markets as a key point of purchase, providing local food and organic food at a much greater incidence than supermarkets. It also seems that farmers markets, coupled with consumer demands, also have the ability to influence farming practices. According to one study, “customer demand for organic products has had a strong influence on some farmers who recently decided to transition to organic farming or lower-input farming practices.”³¹

Like farmers markets, CSA programs are growing in popularity. CSA is a term used to describe a group of individuals who have membership in a farm due to purchasing shares and/or volunteering on a farm. The growers/farmers and consumers/members provide mutual support, and share the risks and benefits of food production of the farm.³² Members most often buy shares in a farm in advance of the growing season to cover a farm’s costs. In return, members usually receive weekly shares of farm produce, picked up at the farm or delivered to a central spot near one’s residence. Other advantages include participation in farm activities, knowing one’s farmer, and receipt of other raw and locally-processed products such as eggs, chicken, and cheese. Members receive the benefits of farm-to-table fresh products, the bounty of great harvests, and cheaper prices. However, members also take on the risks of bad weather and a poor harvest. According to data collected by the USDA in 2007, 12,549 farms in the United States reported participating in community supported agriculture.³³ The question is how can we both increase the number of farmers markets and members participating in CSAs?

³⁰ AMY KREMEN, CATHERINE GREENE & JIM HANSON, ORGANIC PRODUCE, PRICE PREMIUMS, AND ECO-LABELING IN U.S. FARMERS’ MARKETS 4 (Economic Research Service, USDA 2004), available at <http://www.ers.usda.gov/publications/VGS/Apr04/vgs30101/vgs30101.pdf>.

³¹ *Id.* at 6.

³² *Community Supported Agriculture*, USDA, NATIONAL AGRICULTURAL LIBRARY, <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml> (last modified Apr. 28, 2010); Suzanne DeMuth, *An Excerpt from Community Supported Agriculture (CSA): An Annotated Bibliography and Resource Guide*, USDA, NATIONAL AGRICULTURAL LIBRARY (Sept. 1993), <http://www.nal.usda.gov/afsic/pubs/csa/csadef.shtml>; See also Wright & Middendorf, *supra* note 9, at 10.

³³ USDA, NATIONAL AGRICULTURAL STATISTICS SERVICE, 2007 CENSUS OF AGRICULTURE – UNITED STATES SUMMARY AND STATE DATA 49 tbl.44 (2009), available at http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf.

2. *Increasing the Number and Use of Farmers Markets and CSAs*

State departments of agriculture have, in many states, been granted significant authority to encourage the development of farmers markets within the state. States agencies have grant and financial assistance programs to create new markets and improve existing ones, with a charge to expand the state's local and organic food system and support sustainable agriculture.³⁴ But despite important goals—"to expand the public awareness and stimulate individual use of farmers markets to increase the purchase of locally grown foods, thereby reducing the negative environmental impact of food packaging and shipping while enhancing a beneficial economic and social climate in the community"—legislatures may only provide limited funds to achieve them.³⁵ States can and do provide exemptions to state labeling and packing requirements to encourage farmers market participation.³⁶ However, farmers market vendors still need to comply with health and safety standards when selling at the market,³⁷ which, while necessary, pose additional burdens. In addition, some farmers markets have required vendors to provide proof of liability insurance coverage. Despite state financial assistance and regulatory changes, no models exist for a fully local and/or regional food system.

Absent a comprehensive state food system planning policy, the real player in promoting farmers markets has been local effort, often channeled through local government. And state law often solidifies the realities of local control when it comes to farmers markets.³⁸ The existence of farmers markets is directly influenced by government policy through rules on rights of way and zoning.³⁹ Municipal governments play an especially important role given local control over these property rules that can "be modified to give fresh food marketing more space to sprout and security to grow."⁴⁰

³⁴ See, e.g., CONN GEN. STAT. § 22-6j, k (2010) (state grant program to set up farmers' markets); N.Y. AGRIC. & MARKETS LAW (Consol. 2011) § 262 et seq. (2010) (state assistance for farmers' markets including construction, reconstruction, improvement, expansion and rehabilitation as well as promotional support); PA. CONS. STAT. § 2403 (2010) (helping to develop farmers' market business plans, predevelopment costs, promotions, marketing, management operation); 10 VT. STAT. ANN. §330 (West 2010) (supporting farm-to-plate investment program, farmers' markets, and CSAs); GA. CODE ANN. § 2-10-57 (2010) and MINN. STAT. §17.114 (2009) (giving state agencies authority to regulate and promote farmers' markets and support sustainable agriculture); 505 ILL. COMP. STAT. 84/15 (2011) (Illinois Local and Organic Food and Farm Plan with the goal to expand farmers' markets and state local and organic food system).

³⁵ ARK. CODE ANN. § 20-83-102 (2010).

³⁶ See CAL. FOOD & AGRIC. CODE § 47002 (Deering 2010).

³⁷ See, e.g., CAL. HEALTH & SAFETY CODE § 114371 (Deering 2009).

³⁸ See, e.g., CAL. FOOD & AGRIC. CODE § 47004(b) (Deering 2009) ("Certified farmers' markets are locations established in accordance with local ordinances . . ."; NEV. REV. STAT. ANN §268.092 (Lexis-Nexis 2009).

³⁹ Morales & Kettles, *supra* note 23, at 40–41.

⁴⁰ *Id.* at 22.

In addition to encouraging efforts to increase the total number of farmers markets, farmers markets must be made more economically viable. Without more economically successful existing markets, it will prove difficult to increase the local organic share in the future. In 2004, farmers market sales accounted for less than 2 percent of the U.S. sales overall.⁴¹ In order to increase the economic viability of farmers markets, two items must increase: the number of people who use farmers markets and how much they buy. These two items are directly related. The goal of increasing these two items seem to be best met by having the markets in convenient locations, offering products in consumer demand (like more organic offerings) and developing programs that encourage regular grocery shopping at a farmers market.

First, “[c]ustomer participation depends primarily on a market’s location, since most customers tend to shop at markets close to where they live.”⁴² Thus, local zoning and land use regulation not only operates to offer initial existence to farmers markets, but also their location and size, allowing markets to expand and move to better locations as demand increases and seasons change. Local zoning and ordinances can close streets, re-design parking rules, expand allowable public spaces for farmers markets, and put markets in highly trafficked areas where people live and work. A primary reason that people do not use farmers markets is because there is no market close to their daily life.⁴³ Perhaps the greatest challenge, however, to increasing consumer demand and finding a successful location is that the dominant American residential landscape is now suburban, sprawling further from downtown, and filled with low-density residential developments.⁴⁴ This norm may make it difficult to put markets in a high-density residential hub except in urban neighborhoods and compact small towns with vibrant city centers.

Second, while state legislation supports marketing campaigns to increase consumer volume,⁴⁵ farmers markets must also offer products in consumer demand. As discussed above, most markets have a significant number of organic products available, but apparently demand is so great that markets are looking for more organic farmers to join their ranks.⁴⁶ Farmers markets are already expanding their content with processed foods, and towns are encouraging winter farmers markets that often sell canned goods and stored root vegetables. For CSA programs, many farms are certified organic, and, to increase membership, have

⁴¹ KREMEN, GREENE, & HANSON, *supra* note 30, at 2.

⁴² *Id.* at 2. See also RICHARDSON, *supra* note 6, at 78 (stating that “the best markets are located in a convenient, central place, with ample parking and perhaps even bike racks,” have good hours, and continue through the winter months).

⁴³ See, e.g., RAMU GOVINDASAMY ET AL., FARMERS’ MARKETS: CONSUMER TRENDS, PREFERENCES, AND CHARACTERISTICS 4 (1998), available at http://njveg.rutgers.edu/assets/pdfs/mktg/fm_consumer_trends_june1998.pdf.

⁴⁴ DOLORES HAYDEN, BUILDING SUBURBIA: GREEN FIELDS AND URBAN GROWTH, 1820–2000, at 3 (2003); see generally KENNETH T. JACKSON, CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES (1987).

⁴⁵ See, e.g., CONN GEN. STAT. § 22-38a (2010); 3 PA. CONS. STAT. § 2403 (2010).

⁴⁶ KREMEN, GREENE, & HANSON, *supra* note 30, at 11.

expanded to allow produce pickup in urban neighborhoods and town centers, in addition to the farms themselves.

Third, public policy at the state and federal level must develop programs that encourage regular grocery shopping at farmers markets. While this goal is in part driven by location and product selection, farmers markets must also allow for a variety of payment methods and cater to customers who receive government assistance for food. Many farmers markets are setting up credit and debit card stations to buy "market cash" that can be used.

The 2008 Farm Bill increased the commitment to federal food assistance programs by more than \$10 billion over a ten year period.⁴⁷ In 2009, the Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program, provided over \$50 million in total benefits to Americans.⁴⁸ Given these dollar figures, farmers markets should be accessible to these program users. However, government food programs like SNAP and Women, Infants, and Children (WIC) have infrastructure that favors supermarkets, convenience stores, and other permanent indoor retailers due to electronic benefits, transfer system requirements, and government required training.⁴⁹

Efforts are in the initial stages to extend the benefits of these programs to farmers markets. For example, the federal Farmers Market Promotion Program and Senior Farmers' Market Nutrition Program are allocating 10 percent of their budgets to develop electronic benefits transfer projects at farmers markets, support administrative costs, and provide low-income seniors with coupons that can be exchanged for eligible foods at farmers markets, roadside stands, and community supported agriculture programs.⁵⁰ WIC Farmers' Market Nutrition Programs, designed by Congress in 1992, have been established in many states, enabling WIC participants to use their benefits at farmers markets.⁵¹

⁴⁷ *A Short History of SNAP*, USDA, FOOD AND NUTRITION SERVICE, <http://www.fns.usda.gov/snap/rules/Legislation/about.htm> (last modified Apr. 30, 2009).

⁴⁸ USDA, SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM PARTICIPATION AND COSTS (Jan. 31, 2011), available at <http://www.fns.usda.gov/pd/SNAPsummary.htm>.

⁴⁹ Morales & Kettles, *supra* note 23, at 22–23.

⁵⁰ USDA, AGRICULTURAL MARKETING SERVICE, 2009 FARMERS MARKET PROGRAM PROMOTION GUIDELINES 9 (2009), available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5075760>; *Senior Farmers' Market Nutrition Program (SFMNP)*, USDA, FOOD AND NUTRITION SERVICE, <http://www.fns.usda.gov/wic/SeniorFMNP/SeniorFMNPOverview.htm> (last updated July 7, 2010).

⁵¹ Morales & Kettles, *supra* note 23, at 40–41 (citing Albemarle State Policy Center, *A Report on State Action to Promote, Nutrition, Increase Physical Activity and Prevent Obesity*, BALANCE, 2007, at 107, available at <http://www.rwjf.org/files/research/eoybalance2007.pdf>); see also CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (CDFA), CERTIFIED FARMERS' MARKET ADVISORY COMMITTEE (CFMAC), MEETING MINUTES, (Oct. 29, 2008), available at www.cdfa.ca.gov/is/docs/CFMAC_Minutes102908.pdf; NEIL HAMILTON, *THE LEGAL GUIDE FOR DIRECT FARM MARKETING* 39 (1999)); *WIC Farmers' Market Nutrition Program*, USDA, FOOD AND NUTRITION SERVICE, <http://www.fns.usda.gov/wic/FMNP/FMNPfaqs.htm#1> (last updated June 25, 2010). Many states have farmers market nutrition programs that implement the federal

CSA programs face greater roadblocks in the face of modern economics and payment systems. CSA farms do not take credit cards, prefer payment in full at the start of the growing season in spring, and have limited methods to attract low-income customers. Data show that families with greater household income are more likely to purchase directly from farmers,⁵² but CSA farms have been entrepreneurial in finding other means to bring in new customers such as sliding-scale membership fees based on income, working shares (i.e., volunteering on the farm in exchange for produce), and member share donations.

Finally, in the book *Public Produce: The New Urban Agriculture*, Darrin Nordahl argues for a greater public “market” than can be provided solely by farmers markets. In advocating municipal agriculture, Nordahl argues that with the increased popularity of farmers markets and community-supported-agriculture, “the time is ripe to explore how we can expand this network of local food options to meet the growing demand of consumers by bringing agriculture back into our cities” through ideas such as public gardens, foraging in public places, and using vacant and government-owned space for community gardens.⁵³

A theme that consistently arises in supporting sustainable agriculture is the significance of local control. Local governments influence zoning, permitting, and health and safety regulations that impact not only the approval and site of farmers markets, but also the extent of publicly available produce. “One of the easiest ways for municipal government to support a system of public produce is to simply *allow it*.”⁵⁴ For example, many municipalities have street tree ordinance bans on planting of fruit and nut trees on public streets, and sometimes local zoning prohibits small agricultural practices downtown.⁵⁵ However, the justifications of maintenance and aesthetics for not allowing food-bearing plants in public spaces may be misconceptions,⁵⁶ and localities (like Seattle and Providence) have inserted permissible language for urban agriculture through comprehensive master planning documents to effectively manage open space.⁵⁷

program (WIC Famers’ Market Nutrition Act of 1992); *see, e.g.*, ARIZ. REV. STAT. §36-700 (2010); CAL. HEALTH & SAFETY CODE § 123279 (2010); CONN GEN. STAT. §§ 22-6g to 6q (2010); IOWA CODE § 175B (2010); KY. REV. STAT. § 260.031 (2010).

⁵² Raymond A. Jussaume Jr. & Kazumi Kondoh, *Possibilities for Revitalizing Local Agriculture: Evidence from Four Counties in Washington State*, in *THE FIGHT OVER FOOD: PRODUCERS, CONSUMERS, & ACTIVISTS CHALLENGE THE GLOBAL FOOD SYSTEM* 239 (2008) (in a study of Washington counties, showing the “greater the household income, the more likely an individual is to shop directly from a farmer”).

⁵³ NORDAHL, *supra* note 13, at 4.

⁵⁴ *Id.* at 53 (emphasis in original).

⁵⁵ *Id.* at 54, 56, 133 (“Municipalities should encourage, rather than forbid, home and business owners to plant edibles in the right-of-way.”).

⁵⁶ *Id.* at 91.

⁵⁷ *Id.* at 57–58.

B. Organic and Small Farmers

One of the most noticeable changes in the modern American food system over the last decade is the movement towards organic production and certification following passage of the Organic Food Production Act (OFPA).⁵⁸ The organic food market is flourishing, and, as a result, the modern organic production and distribution system is now dominated by large-scale “industrial organic” or “big organic” producers.”⁵⁹ “The rise of commercial and industrial conventions is clear in organic distribution and consumption—where the fastest growth is in mainstream retailing, based on large-volume, regimented, supply-systems—and in organic production and trade—where the fastest growth is in large-scale corporate entrants pursuing organics as a high-value niche market.”⁶⁰

Organic food has almost quadrupled its market share in the last decade,⁶¹ and sales of organic food sales have grown from \$1 billion in 1990 to over \$20 billion today.⁶² With large scale production, even if organic, comes increased greenhouse gas emissions and questionable agricultural methods. For this reason, “industrial organics” have been described as “certified organic foods sold by major corporations that are technically organic but not always sustainable.”⁶³ Organic production on small farms and in regional farming networks yields food produced and processed in a chemical free environment that is in demand, perhaps without a large carbon footprint, and with more sustainable agricultural practices. Yet, many small farmers find it difficult to take advantage of the value-added organic label.

1. The U.S. Organic Foods Production Act and the National Organic Program

Under OFPA and the National Organic Program (NOP),⁶⁴ the U.S. government creates production, handling, and labeling standards for organic

⁵⁸ Organic Foods Production Act of 1990, 7 U.S.C. § 6501 (1990).

⁵⁹ Kate L. Harrison, *Organic Plus: Regulating Beyond the Current Organic Standards*, 25 PACE ENVTL. L. REV. 211, 212 (2008) (citing James Temple, *The ‘O’ Word: Some Organic Farmers Opt Out of Federal System*, CONTRA COSTA TIMES, Oct. 29, 2006, at 6B; *Earthbound Farm Gains Efficiencies with Supply Chain Execution Solutions from HighJump Software*, BUSINESS WIRE, June 14, 2005, at 1).

⁶⁰ Laura T. Reynolds, *The Globalization of Organic Agro-Food Networks*, 32 WORLD DEVELOPMENT 725, 738 (2004).

⁶¹ ORGANIC TRADE ASS’N, EXECUTIVE SUMMARY: ORGANIC TRADE ASSOCIATION’S 2007 MANUFACTURER SURVEY (2007), available at <http://www.ota.com/pics/documents/2007ExecutiveSummary.pdf> (stating that organic food sales accounted for 0.8% of total food sales in 1997, and 2.8 percent in 2006).

⁶² ORGANIC TRADE ASS’N, THE ORGANIC INDUSTRY, available at <http://www.ota.com/pics/documents/Mini%20fact%201-08%20confirming.pdf>.

⁶³ RICHARDSON, *supra* note 6, at 11.

⁶⁴ NOP is organized under the Organic Foods Production Act of 1990, and under 7 C.F.R. pt. 205. See *National Organic Program*, USDA, AGRICULTURAL MARKETING SERVICE, <http://www.ams.usda.gov/AMSV1.0/nop> (last modified Mar. 10, 2011).

agricultural products. Individuals buy organic products to promote sustainable and chemical-free agriculture, as well as to keep their bodies free of synthetics and pesticides. OFPA establishes a national organic certification program where agricultural products may be labeled as organic if produced and handled without the use of synthetic substances.⁶⁵ The program prohibits using synthetic fertilizers, growth hormones and antibiotics in livestock, and adding synthetic ingredients during processing.⁶⁶

Agricultural practices must follow an organic plan approved by an accredited certifying agent and the producer and handler of the product.⁶⁷ OFPA creates process-based standards but does not implement standards or require tests for actual chemical contents in food, nor assessment of overall land use practices. Thus, “certified organic” labeling informs consumers about the food production process, but does not directly describe food quality or a lack of land degradation, though organic food still is likely to have fewer chemicals than conventional counterparts.⁶⁸

Small “farmers who gross less than \$5,000 annually and only sell directly to consumers (for example, via farmers markets and family farm stands) can avoid the certification process by simply signing a declaration of compliance” that they comply with organic standards.⁶⁹ However, if these farmers sell any of their products through conventional distribution channels, they may use the term “organic” but may not use the term “certified organic” or the USDA organic label on products without also obtaining official certification, a process that can be expensive and time-consuming.⁷⁰

2. *The Challenges and Resources for Small Farmers*

No doubt small farmers may have trouble coming up with the funds to receive organic certification, and may also lack the resources to fully promote and market

⁶⁵ Organic Foods Production Act of 1990, 7 U.S.C. § 6501 (1990).

⁶⁶ *Id.* §§ 6508(b)(1), 6509(c)(3), 6510.

⁶⁷ *Id.* §§ 6504–6505.

⁶⁸ Michelle T. Friedland, *You Call That Organic? – The USDA’s Misleading Food Regulations*, 13 N.Y.U. ENVTL. L. J. 379, 398-99 (2005). However, “because food produced in accordance with the NOP regulations will not be intentionally sprayed with pesticides or intentionally grown or raised using genetically engineered seed or other inputs, the likelihood of the presence of pesticide residue or genetically engineered content will clearly be lower than in foods intentionally produced with pesticides and genetic engineering techniques. But organic food will not be free of such contamination. Evidence clearly indicates that both pesticides and genetically engineered plant materials often drift beyond their intended applications, and organic food, like any food, may be accidentally contaminated.” *Id.* at 399–400.

⁶⁹ Harrison, *supra* note 58, at 219 (citing Andrew J. Nicholas, *As the Organic Industry Gets Its House in Order, the Time Has Come for National Standards on Genetically Modified Foods*, 15 LOY. CONSUMER L. REV. 277, 285 (2003)).

⁷⁰ *Id.*

their chemical-free and sustainably grown products.⁷¹ In recognition of the costs of organic certification for small farmers, sliding scales for payment and subsidization are the norm.⁷² Organic certification fees, based on total sales, usually are below \$1000, except for large processors with far greater sales.⁷³ Costs are actually 75 percent less after government reimbursement if a state participates in the federal cost-share assistance program *infra*. But perhaps due to sliding scale differences (and thus fee differences), it has been claimed that organic certifiers largely ignore issues pertaining to small-scale farmers, placing a greater emphasis on enlisting larger producers.⁷⁴

Existing resources help with organic certification for small farmers by providing cost sharing programs. The Agricultural Management Assistance Organic Certification Cost Share Program, established in 2001, authorizes cost share assistance to producers of organic agricultural products in a number of states, and was funded \$1.45 million in 2010.⁷⁵ The National Organic Certification Cost Share Program, re-established as a part of the 2008 Farm Bill, authorizes cost share assistance to producers and handlers of organic agricultural products in each state. (Nearly every state participates.) The states will reimburse each eligible producer or handler up to 75 percent of its organic certification costs, not to exceed \$750.⁷⁶ In fiscal year 2008, Congress allocated on a one-time basis \$22 million for this program to be allocated to States until the funds are exhausted.⁷⁷ Significant fee

⁷¹ RICHARDSON, *supra* note 6, at 63–64 (“Because it costs money and takes time to achieve organic certification, some farmers choose not to get certified, even if they may meet or exceed USDA organic standards.”).

⁷² See generally Ariana R. Levinson, *Lawyers as Problem-Solvers, One Meal at a Time: A Review of Barbara Kingsolver’s Animal, Vegetable, Miracle*, 15 WIDENER L. REV. 289 (2009).

⁷³ See, e.g., *Vermont Organic Farmers, LLC – Timeline and Fees for Certification*, NORTHEAST ORGANIC FARMING ASSOCIATION OF VERMONT, <http://nofavt.org/programs/organic-certification/application-deadline-and-fees> (last visited Jan. 18, 2011); Oregon Tilth, *Certified Organic Fee Schedule* (2011), available at <http://tilth.org/files/certification/OTCOFeeSchedule.pdf>.

⁷⁴ Denis A. O’Connell, *Shade-Grown Coffee Plantations in Northern Latin America: A Refuge for More than Just Birds & Biodiversity*, 22 UCLA J. ENVTL. L. & POL’Y 131 (2003/2004) (citing Russell Greenberg, Criteria Working Group Thought Paper 4 (2001)).

⁷⁵ USDA AGRICULTURAL MARKETING SERVICE (AMS), NATIONAL ORGANIC PROGRAM COST SHARE PROGRAMS 2010 REPORT TO CONGRESS 1, available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5084541&acct=nopg eninfo> (last visited Jan. 18, 2011) [hereinafter USDA AMS].

⁷⁶ Press Release, USDA, *USDA Amends National Organic Certification Cost Assistance Program* (Nov. 7, 2008), available at <http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateU&navID=Newsroom&page=Newsroom&resultType=Details&dDocName=STELPRDC5073574&dID=103098&wf=false&description=USDA+Amends+National+Organic+Certification+Cost+Assistance+Program&to>.

⁷⁷ USDA AMS, *supra* note 74. To prevent duplicate assistance payments, producers participating in the AMA program are not eligible to participate in the producer portion of the National program.

subsidizations exist, at least in the short term. While the costs of organic certification are expensive, they are not prohibitive, but the costs of monitoring and record-keeping may be the real barriers to entry. For example, applicants for certification must keep accurate post-certification records for five years concerning the production, harvesting, and handling of agricultural products that are to be sold as organic.⁷⁸ In addition to making organic certification more affordable for small farmers, states are also providing property tax rebates for farmers who convert from conventional to organic farming practices, and attempting to lower the tax burden on small farmers.⁷⁹

III. WHAT NEW AGRICULTURAL OPTIONS SHOULD BE PURSUED?

Recent legal scholarship suggests that environmental policy will focus more on individual behavior.⁸⁰ This individual behavior includes impacts of food choices on the environment.⁸¹ In order to change modern American food consumption, two changes must take place—increased awareness and increased availability.⁸² Law and policy need to (1) increase available information about the consequences of food choices, and (2) make structural changes in the food system that increase

⁷⁸ USDA AGRICULTURAL MARKETING SERVICE, NATIONAL ORGANIC PROGRAM: CERTIFICATION (Apr. 2008), available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3004346&acct=nogeninfo>.

⁷⁹ See, e.g., GA. CODE ANN. § 48-5-41 (2006); Woodbury County, Iowa, *Organics Conversion Policy*, Policy for Rural Economic Revitalization Res. (June 2005), available at <http://www.farmlandinfo.org/documents/35783/WoodburyCtyIAOrganicsPolicy.pdf>.

⁸⁰ See, e.g., CZARNEZKI, *supra* note 18; Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Towards a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117 (2009); Michael Vandenberg, *The Individual as Polluter*, 35 ELR 10723 (2005); Michael P. Vandenberg, *Order without Social Norms: How Personal Norm Activation Can Protect the Environment*, 99 N.W. UNIV. L. REV. 1101 (2005).

⁸¹ See CZARNEZKI, *supra* note 18.

⁸² In addition to the two topics of this Article, other changes must occur. As stated earlier, massive overhaul of the Farm Bill is likely necessary. And a final prong, which I haven't written about to this point, will involve farmers, farming, and actual agricultural practices. Cf. IKERD, *supra* note 15, at 284 ("They [farmers] are rediscovering the fundamental roots of agriculture; they are reconnecting to the land and to each other; and in the process are redefining farming."). For a discussion of many potential characteristics of a sustainable food system, see Jack Kloppenburg, Jr. et al., *Tasting Food, Tasting Sustainability: Defining the Attributes of an Alternative Food System with Competent, Ordinary People*, 59 HUMAN ORG. 177 (2000). However, some research suggests that current sustainable farming practices may not be driven by environmental concerns, but instead an interest in preserving farmland and local family farms. Theresa Selfa et al., *Envisioning Agricultural Sustainability from Field to Plate: Comparing Producer and Consumer Attitudes and Practices Toward "Environmentally Friendly" Food and Farming in Washington State, USA*, 24 J. RURAL STUDIES 262, 273–74 (2008).

access to sustainable foods.⁸³ “As the availability and awareness of alternatives to industrial mass-produced food become more common, demand for something fundamentally different and better will continue to grow.”⁸⁴ This is a key assertion and an argument in favor of information regulation and structural change.

A. Increasing Information

In his book *The Making of Environmental Law*, Professor Richard Lazarus writes, “The increased cognitive severance for consumers between environmental cause and effect exacerbates the potential environmental impact of . . . increased consumption.”⁸⁵ This fact holds true for food consumption. Perhaps the biggest impediment to developing a more sustainable food system is a lack of food literacy. There is a large disconnect between the food we eat and knowledge of where it comes from and how it is grown.⁸⁶ Writes John Ikerd, “Nowhere in the United States is this social disconnectedness more evident than in our systems of food and farming. . . . Most consumers, particularly younger consumers, have no sense of where their food actually comes from or who produces it.”⁸⁷

Organic labeling alone, while a good first step, remains insufficient as the term “organic,” which considers chemical input practices, does not denote sustainable because the label does not consider carbon emissions and land degradation, among other ecological concerns.⁸⁸ But information can play a useful role, especially where people are genuinely interested in a subject. The popular press and media have found success in discussing food (for example, the books of Michael Pollan), the local food movement is strong, organic food has risen in popularity, and “[t]he debate over the organic standards generated more public response than any other rule ever proposed by the USDA.”⁸⁹

In an effort to change food choices and inform consumers of the environmental impacts of food, my previous work has already argued for better informational regulation, creation of an eco-label for food based environmental life-cycle analysis from production to use to distribution, and building on existing

⁸³ See James E. McWilliams, *Why Can't We All Just Sit Down and Eat Nicely Together?*, posting to *Food Fight: Do Locavores Really Need Math Lessons?*, GRIST (Aug. 25, 2010, 2:45 PM), <http://www.grist.org/article/food-fight-do-locavores-really-need-math-lessons/> (“not everyone has the choice to opt out and hit the farmers market. For many reasons, local food choices aren't a reality for most consumers,” thus illustrating the need for structural changes).

⁸⁴ IKERD, *supra* note 15, at 288.

⁸⁵ RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 220 (2004).

⁸⁶ NORDAHL, *supra* note 13, at 11.

⁸⁷ IKERD, *supra* note 15, at 277.

⁸⁸ RICHARDSON, *supra* note 6, at 11 (stating that “sustainable always means organic, but organic does not always mean sustainable”); Allen & Kovach, *supra* note 3, at 230 (“Organic labeling is simply not enough to create an agrifood system that provides real value.”).

⁸⁹ Allen & Kovach, *supra* note 3, at 229.

organic and carbon labeling programs.⁹⁰ Government-sponsored effective environmental labeling of food is an important step towards building a more sustainable food system. In addition, public “educational programs are needed to reacquaint us with food.”⁹¹ Program ideas include municipal demonstration and schoolyard gardens,⁹² and food education in the primary school curriculum.⁹³

Research shows that diet, especially protein sources, significantly influences environmental impacts, likely more than eating local.⁹⁴ U.S. newspaper coverage of food systems’ effects on climate change has increased, but still has not reflected the increasing significant evidence of the importance of these effects.⁹⁵ This further illustrates the importance of public education about the environmental impacts of food choices, and further suggests that new dietary guidelines based on public health and the environment may be useful.⁹⁶

B. Structural Change—Theory

As discussed *supra* in Part II, two major structural initiatives in the food systems are already being pursued—direct marketing through farmers markets and increased interest in organic foods. Possibilities for other structural initiatives abound. However, before addressing the merits of these possibilities, it is worth noting, at the outset, the significance of local control in implementing structural changes in a more sustainable food system. “It is in state legislatures and city councils, county boards, and planning commissions, and the day-to-day to-and-from that is community life that decisions affecting our food systems are increasingly being made.”⁹⁷

⁹⁰ Czarnezki, *supra* note 1.

⁹¹ NORDAHL, *supra* note 13, at 11.

⁹² RICHARDSON, *supra* note 6, at 89 (advocating school gardens as a way to educate kids about food).

⁹³ NORDAHL, *supra* note 13, at 118, 129–131.

⁹⁴ Christopher L. Weber & H. Scott Matthews, *Food-Miles and the Relative Climate Impacts of Food Choices in the United States*, 42 ENVTL. SCI. & TECH. 3508, 3512 (2008); JAMES E. MCWILLIAMS, JUST FOOD: WHERE LOCAVORES GET IT WRONG AND HOW WE CAN TRULY EAT RESPONSIBLY 118–19 (2010) (discussing the high environmental costs of meat consumption, and making the bold statement that “every environmental problem related to contemporary agriculture that I’ve investigated ends up having its deepest roots in meat production. Monocropping, excessive applications of nitrogen fertilizer, addiction to insecticides, rainforest depletion, land degradation, topsoil runoff, declining water supplies, even global warming—all these problems would be considerably less severe if global consumers treated meat like caviar, that is, as something to be eaten rarely, if ever”).

⁹⁵ Roni A. Neff, Iris L. Chan & Katherine Clegg Smith, *Yesterday’s Dinner, Tomorrow’s Weather, Today’s News? US Newspaper Coverage of Food System Contributions to Climate Change*, PUBLIC HEALTH NUTRITION (2008).

⁹⁶ Czarnezki, *supra* note 1, at 13 (discussing Sweden’s new dietary guidelines which consider both environmental and public health).

⁹⁷ MARK WINNE, CLOSING THE FOOD GAP: RESETTling THE TABLE IN THE LAND OF PLENTY 167–69 (2009).

Not only do localities control permitting and zoning for the likes of farmers markets and community gardens,⁹⁸ but local communities provide the base of support and implementation for the local and slow food movements, farm-to-table, and farm-to-school. However, it is difficult to determine how state and local programs might change food systems structures in a manner that effectively improves the ecological consequences of food choice.⁹⁹ This is an empirical inquiry, made more difficult by the fact that there are so many shades of grey in environmental law as it relates to agricultural policy. Comments James E. McWilliams, author of *Just Food: Where Locavores Get It Wrong and How We Can Truly Eat Responsibly*, “[o]ur accepted dichotomies—conventional/organic, small/industrial, free range/confined, local/global, etc.—are useful in getting articles published, but they only make sense at the extremes. Most of agricultural life, however, happens between the extremes . . .”¹⁰⁰

First, environmental, agricultural and food policy does not start from scratch. Corn is already grown in the Midwest, huge industrial farms already exist, and some climates and soils are most productive for some agricultural products, so there may be consequences like economic inefficiencies, energy waste, and new land degradation if operations are moved. Efficiency and food choices must be framed in light of the existing landscape, and scientific inquiry should dictate policy in its determination of which existing structures in the food system have the greatest and least impacts on the environment and climate change.¹⁰¹

Second, the best potential changes, or combination thereof, in food systems are not particularly clear. As some question, is the “solution for people to produce, prepare, and consume sustainably grown local food”?¹⁰² Maybe, and maybe only in some circumstances, but not all. “Actually, networks of interdependent community-based systems in the future might serve the total food market more easily, efficiently, and effectively than can a giant, hierarchically managed,

⁹⁸ See, e.g., SHADY COVE OR. CODE § 110.08(F) Growers’ market in commercial zones (1997); Annemarie Mannion, *Green Acres in the Big City: Increase in Urban Agriculture Leads to New Ordinances*, AM. CITY AND COUNTY (July 1, 2009, 12:00 PM), <http://americancityandcounty.com/admin/urban-agriculture-ordinances-200907/> (discussing municipal efforts such as Miami new zoning ordinances that include laws regulating community gardens, roof top gardens, greenhouses and backyard gardens, and Milwaukee’s efforts to lease five vacant lots in a central city neighborhood for use as community gardens).

⁹⁹ Cf. Mary Story et al., *Creating Healthy Food and Eating Environments: Policy and Environmental Approaches*, 29 ANN. REV. PUB. HEALTH 253 (2007).

¹⁰⁰ McWilliams, *supra* note 83.

¹⁰¹ In addition, while these environmental considerations matter, we cannot lose sight of other concerns such as hunger and class difference. Hunger and starvation may provide persuasive rationale for the industrial food model in some contexts. WINNE, *supra* note 95, at 125–33. Winne’s chapter subtitle says it all—“The Poor Get Diabetes; The Rich Get Local and Organic.”

¹⁰² Erik Phillips-Nania, *Local Food Currency: An Economic Tool for Community Health*, 12 VT. J. ENVTL. L. (forthcoming 2011).

corporately controlled, and centrally planned global food chain.”¹⁰³ Again, maybe, but then why does so much consolidation already exist? The findings of Weber and Matthews in *Food-Miles and the Relative Climate Impacts of Food Choices in the United States* suggest that making a dietary change would better lower an average household’s food-related carbon footprint than buying local.¹⁰⁴ If one is skeptical about food miles, perhaps we need a combination of multiple changes. The key question, which no one answers, is an empirical one: What food systems should be promoted, to what extent, and why?

Absent this information, words of caution, or, at worst, hostility, are levied against new trends in food and agricultural policy. A recent Op-Ed in the *New York Times*, entitled “Math Lessons for Locavores” is illustrative.¹⁰⁵ The opinion piece proclaims that,

Words like “sustainability” and “food miles” are thrown around without any clear understanding of the larger picture of energy and land use. . . . The result has been all kinds of absurdities. For instance, it is sinful in New York City to buy a tomato grown in a California field because of the energy spent to truck it across the country; it is virtuous to buy one in a lavishly heated greenhouse in, say, the Hudson Valley.¹⁰⁶

But in an equally heated response to this op-ed, McWilliams states that we are left with a problem. “[T]here are many theoretical advantages to consolidating the food system—food can be cheaper, more accessible, more reliably diverse, and less dependent on extensive land and labor—but the underlying realities—perverse incentives, trade agreements, and subsidies—too often prevent these advantages from being realized.”¹⁰⁷ Anna Lappé, author of *Diet for a Hot Planet*, responds in similar fashion and dismissing the “comparative advantage” argument that advocates raising crops in “places where they grow best and with the most efficient technologies.”¹⁰⁸ She rejects this view, not because reasonable people and even locavores disagree with it since most would agree that “choices farmers make

¹⁰³ IKERD, *supra* note 15, at 289.

¹⁰⁴ Weber & Matthews, *supra* note 92. Buying local will reduce greenhouse gas emissions by 4 to 5 percent, but shifting one day per week of protein from meat or dairy to vegetables, or even another protein source (fish, chicken, eggs) has the same effect as buying all household food from local providers. A *completely* local diet saves the equivalent of 1,000 miles per year driven, but a *one day per week* protein shift from red meat to chicken, fish, or eggs saves 760 miles per year, and a *one day per week* shift to veggies saves 1,160 miles per year. *Id.* at 3512–13.

¹⁰⁵ Stephen Budiansky, Op-Ed, *Math Lessons for Locavores*, N.Y. TIMES, Aug. 19, 2010, at A21.

¹⁰⁶ *Id.*

¹⁰⁷ McWilliams, *supra* note 83.

¹⁰⁸ Anna Lappé, *The Real Problems Locavores Are Wrestling With*, posting to *Food Fight: Do Locavores Really Need Math Lessons?*, GRIST (Aug. 22, 2010, 10:45 AM), <http://www.grist.org/article/food-fight-do-locavores-really-need-math-lessons/P4#lappe>.

about what foods to grow, and what time of year to grow them, should be informed by place.”¹⁰⁹ Instead, the problem is the cause of the existing comparative advantage, those same economic and regulatory realities suggested by McWilliams. Thus, a local, organic and less processed food system is a response to these structural barriers.

At minimum, any critique of new agricultural models reflects the importance of a more holistic food model whether by informational tools like an eco-label and public education or food system infrastructure like public markets and increasing access to sustainable and organic food; local food alone is not enough. That said, local food models are clearly on the rise through community food system initiatives including farm-to-table and farm-to-school programs that create opportunities for local farms to sell directly to restaurants and schools.¹¹⁰ In addition to farm-to-table, retailers and local restaurants are putting more information about their food on menus and signs, including whether the products and ingredients are organic and locally grown, and have embraced a slow food movement that spurns processed ingredients and embraces local farming. Local communities are developing locavore challenges to encourage more sustainable diets,¹¹¹ and “WWOOFing” is becoming the rage for college student summers. (WWOOF stands for Willing Workers on Organic Farms.) And state laws are in existence that encourage or mandate locally-produced and locally-processed food purchases for state institutions and schools.¹¹²

But we are still left with this open question: Given the need for a variety of structural changes to create a more holistic and sustainable food models, which efforts should be pursued initially? First, I have already argued that information devices like eco-labeling and public education are necessary to affect consumer food choices.

Second, regulatory structures must be changed as they are geared towards large agribusiness, undercutting the ability of smaller producers and processors to survive. Due to public health and safety concerns, even-small scale processing requires the use of commercial kitchens, and, except for very small scale operations, farmers must have their animals slaughtered at USDA-approved off-site meat processing facilities.¹¹³ Similarly, organic certification may hurt small-scale players. Writes Reynolds,

¹⁰⁹ *Id.*

¹¹⁰ See *Community Supported Agriculture*, USDA, NATIONAL AGRICULTURAL LIBRARY, <http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml> (last updated Apr. 28, 2010).

¹¹¹ Angelo, *supra* note 1, at n.6. (“The term ‘locavore,’ coined by Jessica Prentice on the occasion of World Environment Day 2005, describes a person who eats food grown or produced locally or within a prescribed distance. The locavore movement promotes the practice of eating locally-produced food and purchasing food from farmers’ markets because buying locally grown food is less energy intensive and more environmentally friendly than purchasing food from large centralized supermarkets.”).

¹¹² Hamilton, *supra* note 12, at 425–27 (citing legislation in Minnesota and California); see also MASS. GEN. LAWS ch. 69 § 6A(b) (2010).

¹¹³ Cf. RICHARDSON, *supra* note 6, at 98.

In short, certification represents a powerful new form of network governance which is rooted in social, legal, and bureaucratic institutions, yet serves in many ways to accentuate traditional economic inequalities between firms and countries. . . . Powerful corporate retailers and branders also benefit from organic certification, since chain of custody and documentation requirements facilitate their participation in mainstream markets.¹¹⁴

Admittedly, modern food economics may work against small producers and processors since their size may cause them trouble with product reliability and availability, as well as keeping food costs low and predictable.¹¹⁵

Third, structural changes should reach both production and distribution channels. Processing and production account for the greatest portion of fossil fuel usage and greenhouse gases in the food system, on the account of the rise of industrial foods and moving cooking out of the kitchen to the factory.¹¹⁶ To many this fact suggests a limitation to the locavore movement. I would instead argue that local structures, like farmers markets and CSAs, allow more options for consumers to buy goods that are raw, organic and unprocessed. Similarly, food education and informational labeling would increase purchase of less-processed goods, often found on the edges of the grocery store floor. And an industrial local food market¹¹⁷ may be problematic if a dominant corporation could dictate market parameters like quantities, growing conditions, and eventually put smaller farmers out of business by dictating price.¹¹⁸

But, local food movements matter because transportation costs matter, and the environmental costs of food transportation will matter more over time as food distribution systems rely more heavily on air transit. Transport of food by air has the highest carbon dioxide emissions per ton, and is the fastest growing mode of food transport.¹¹⁹ In a German study of energy requirements for domestic apples as compared with imported New Zealand apples, the domestic apples, whose primary energy need is cold storage, required 27 percent less energy than the imported New Zealand apples which required energy for shipping and ground transport.¹²⁰ Structural change must embrace a more holistic and sustainable food model that

¹¹⁴ Raynolds, *supra* note 59, at 738.

¹¹⁵ Cf. RICHARDSON, *supra* note 6, at 93–94.

¹¹⁶ MCWILLIAMS, *supra* note 94, at 25 (stating that “production and processing account for 45.6 percent of the fossil fuel usage”).

¹¹⁷ Stephanie Clifford, *Wal-Mart Plans to Buy More Local Produce*, N.Y. TIMES, Oct. 14, 2010, at B1.

¹¹⁸ DeLind, *supra* note 19.

¹¹⁹ DEP’T FOR ENV’T, FOOD, & RURAL AFFAIRS, THE VALIDITY OF FOOD MILES AS AN INDICATOR OF SUSTAINABLE DEVELOPMENT, 2005, ED50254, at ii (U.K.).

¹²⁰ Michael M. Blanke & Bernard Burdick, *Food (miles) for Thought: Energy Balance for Locally-Grown Versus Imported Apple Fruit*, 12 ENVTL. SCI. & POLLUTION RES. 125 (2005).

considers all attributes—distribution distance (i.e., food miles) and type,¹²¹ chemical inputs (i.e., low-input, organic),¹²² and level of processing.¹²³

C. Structural Change—Practice

The complexities of the modern food system influence the possibilities for potential structural change within the food system. We already have an existing food system that serves as the baseline from which any change will occur. Legal regulation favors large agribusiness. And we need a more holistic food model that takes account of all phases of production and distribution, and various ideals of sustainable food (local, low-input/organic, and less processed). But the question remains, what structural changes to pursue in light of these more abstract conclusions?

Admittedly, this Article focuses on more incremental structural changes to help individuals who usually partake in the industrial food model to be part of a more local, less processed, and more organic food system. While I recognize the need for a massive overhaul in the American food system in the interests of public and environmental health, food and national security, and an affordable and healthy food economy, I advocate three structural initiatives, combined with information efforts and structural efforts already discussed (for example, eco-labels, public education, farmers markets, CSAs, and organic certification for small farmers), to help spark this effort. These structural incentives are:

- (1) Create better food system planning through state food policy councils and municipal planners;
- (2) Build on existing interests in intrastate and regional efforts supporting local food and local economies;

¹²¹ “Transporting food by container ship or rail is relatively energy efficient. Shipping it by air or 25-year-old pickup is not.” Andrew Martin, *If It’s Fresh and Local, Is It Always Greener?*, N.Y. TIMES, Dec. 9, 2007, at B11.

¹²² Dick Cobb et al., *Integrating the Environmental and Economic Consequences of Converting to Organic Agriculture: Evidence from a Case Study*, 16 LAND USE POL’Y 207, 207 (1999) (“The study showed that there were demonstrable differences in overall environmental conditions in the comparison of organic and non-organic farming, with field evidence of increased species diversity, and an eventual improvement in the profitability of the organic farming regime.”); see also D.G. Hole et al., *Does Organic Farming Benefit Biodiversity?*, 122 BIOLOGICAL CONSERVATION, 113, 123 (2005) (arguing that organic farming can play a significant role in increasing biodiversity).

¹²³ Seyfang, *supra* note 6, at 386. (citing Jules Pretty, *Some Benefits and Drawbacks for Local Food Systems* (2001), available at http://www.sustainweb.org/pdf/afn_m1_p2.pdf.) (finding “that environmental externalities add 3.0% to the cost of local-organic food, and 16.3% to the cost of conventional-global food”).

(3) Improve management of existing alternative agricultural distribution and production systems.

First, branches of government, through state legislative enactment and gubernatorial executive orders,¹²⁴ have and should create food policy councils (FPCs), implementing early arguments that FPCs must be formally institutionalized to be effective.¹²⁵ FPCs have been created to examine the operation of state and local food systems, provide ideas and policy recommendations for how they can be improved, and support food system programs.¹²⁶ FPCs at the state and local level can also influence institutional purchases, and address concerns about food security, hunger, farmland preservation, and food labeling.¹²⁷ And farm-to-school programs are clearly one of the most common and popular FPC and legislative program,¹²⁸ with regional foodsheds and food hubs on the horizon.

While FPCs are a nice start in state governments, there is a lack of consideration given to food systems in local and regional planning. Unlike land use, housing, transportation, and the environment, and more recently health, education, and energy, “[t]he food system . . . is notable by its absence from the writings of planning scholars, from the plans prepared by planning practitioners, and from the classrooms in which planning students are taught.”¹²⁹ As I have argued earlier, and due to the only recent interest in food systems, it is unclear what initiatives should be pursued by FPCs and planners. In this respect, both FPCs and planners can play a role in data acquisition and analysis to evaluate local

¹²⁴ Governor of Iowa, Exec. Order No. 16, 22 Iowa Admin. Bull. 1550, Apr. 19, 2000 (creating Iowa Food Policy Council); Governor of Ohio, Exec. Order 2007 – 27S, Aug. 7, 2007 (creating the Ohio Food Policy Advisory Council). Food policy councils can exist at the state and municipal level. *See, e.g.,* SAN FRANCISCO FOOD SYSTEMS, <http://www.sffoodsystems.org> (last visited Feb. 10, 2011); *City of Hartford Advisory Commission on Food Policy*, CITY OF HARTFORD, <http://www.hartford.gov/government/FoodCommission/default.htm> (last visited Feb. 10, 2011); CONNECTICUT FOOD POLICY COUNCIL, <http://www.foodpc.state.ct.us> (last visited Feb. 10, 2011); Oklahoma Food Policy Council, <http://www.kerrcenter.com/ofpc/index.htm> (last visited Feb. 10, 2011). For a full list of food policy councils see *Food Policy*, DRAKE UNIVERSITY LAW SCHOOL, <http://www.law.drake.edu/academics/agLaw/?pageID=agFoodPolicy> (last modified Jan. 28, 2011).

¹²⁵ Kenneth A. Dahlberg, *Food Policy Councils: The Experience of Five Cities and One County* (June 11, 1994), available at <http://unix.cc.wmich.edu/~dahlberg/F4.pdf>.

¹²⁶ Hamilton, *supra* note 12, at 420; ALETHEA HARPER ET AL., *FOOD POLICY COUNCILS: LESSONS LEARNED 2* (2009).

¹²⁷ Hamilton, *supra* note 12, at 420.

¹²⁸ Nearly two-dozen states have legislation for farm-to-school programs, as do individual school districts and municipalities. *See generally* HARPER ET AL., *supra* note 125.

¹²⁹ Kameshwari Pothukuchi & Jerome L. Kaufman, *The Food System: A Stranger to the Planning Field*, 66 J. AM. PLANNING ASSOC. 113 (2000), available at <http://www.cityfarmer.org/foodplan.html>.

and regional food systems. And perhaps most importantly, FPCs may be in the best position to implement the very recommendations of this Article—increase visibility and access to regional and local food; support food and nutrition programs; support intrastate purchasing practices; and implement awareness campaigns.¹³⁰

Second, in-state food systems and state purchasing power are perceived as a means to improve intrastate economic conditions, and this perception can be exploited to create a more sustainable food system. State laws are already requiring that state government and government-sponsored entities purchase locally grown food and in-state dairy products.¹³¹ For example, in Illinois, the new Farm-to-School database will create an electronic database on the Department of Agriculture Web site that allows the state to connect with local farmers to purchase fresh produce.¹³² Oregon has enacted a law allowing public agencies to purchase in-state agricultural products even if they are 10 percent more expensive than out-of-state products.¹³³ These state institutional purchase programs, requiring the purchases of intrastate food products, also dovetail nicely with local identity labeling programs to promote and market in-state produce and products.¹³⁴

Third, improvement in management and marketing of existing alternative agricultural distribution and production systems is needed to ensure that these systems do not collapse and remain viable, as well as improve access. While I already discussed above efforts to increase access to farmers markets for lower income customers,¹³⁵ better farmers market management is needed. While the

¹³⁰ Cf. FOOD POLICY RECOMMENDATIONS, PORTLAND-MULTNOMAH FOOD POLICY COUNCIL (2003), available at http://web.multco.us/sites/default/files/sustainability/documents/fpc_2003_full_report.pdf.

¹³¹ See, e.g., Vt. Act No. 38 (H. 522) (2007-08) (developing a system of local food and dairy purchasing within state government and government-sponsored entities). See also Brannon P. Denning, Samantha Graff, & Heather Wooten, *Laws to Require Purchase of Locally Grown Food and Constitutional Limits on State and Local Government: Suggestions for Policymakers and Advocates*, 1 J. AGRIC., FOOD SYSTEMS, & COMMUNITY DEV. 139, 146 (2010) (suggesting use of the “market-participant exception” to the dormant commerce clause to allow for government’s direct local food purchasing or agreements with local food service contractors).

¹³² Ted Gregory, *Quinn Signs Laws Promoting Local Food*, CHI. TRIB., July 17, 2010, http://articles.chicagotribune.com/2010-07-17/news/ct-met-farmers-market-20100717_1_link-cards-food-stamp-recipients-john-sondgeroth.

¹³³ Derrick Braaten & Marne Coit, *Legal Issues in Local Food Systems*, 15 DRAKE J. AGRIC. L. 9, 32 (2010) (citing H.B. 2763, 75th Legis. Assem., Reg. Sess. (Or. 2009)).

¹³⁴ See, e.g., MINN. STAT. ANN. § 17.102 (2010) (governing “Minnesota Grown” labeling licenses).

¹³⁵ Selfa, *supra* note 80, at 274 (“Thus, scholars and activists with an interest in promoting sustainable food networks could focus on facilitating ways for producers and consumers to engage in actions that reflect their interests in consuming sustainably produced food and preserving farmland and local ecologies. Perhaps more emphasis could be given to developing and expanding programs, such as WIC and senior farmers’ markets

overall number of farmers markets is increasing, “nearly half of new markets close in the first 4 years.”¹³⁶ Professional market managers are needed for marketing and strategic decisions, and government resources can be allocated for their hire.¹³⁷

Specifically, managers are needed to help expand the consumer base (as opposed to just vendor numbers) by dealing with practical concerns like space constraints, parking, and creating better relationships with community members and local government as a way to improve promotion and funding.¹³⁸ The “farmers’ market system has reached a level that demands higher levels of management, greater coordination and more effective governance.”¹³⁹ Going forward, farmers market managers will have to explore permanent structures to increase consumer volume, and state and local governments, if they desire to re-orient our food system, will have to play a new role in supporting local food markets through marketing and financial incentives.¹⁴⁰ “With farmer participation stretched thin . . . it is vital that other entities (e.g., non-governmental or governmental organizations) take lead roles in organizing and operating markets.”¹⁴¹

CONCLUSION

There is growing interest in learning about the environmental impacts of our food choices, and in modifying individual behaviors and choices that have adverse ecological effects. “Integrating sustainable consumption and production principles into everyday patterns of behavior is a major policy challenge for governments seeking long-term sustainability, yet there is an acknowledged need for tools and instruments to put this into practice.”¹⁴²

nutrition programs, which provide greater access to sustainably produced food for lower income consumers.”).

¹³⁶ GARRY STEPHENSON, LARRY LEV, & LINDA BREWER, OREGON STATE EXTENSION SERVICE, SPECIAL REPORT NO. 1082-E, UNDERSTANDING THE LINK BETWEEN FARMERS’ MARKET SIZE AND MANAGEMENT ORGANIZATION 15 (2007), available at <http://extension.oregonstate.edu/catalog/pdf/sr/sr1082-e.pdf>.

¹³⁷ See *id.*

¹³⁸ Lydia Oberholtzer & Shelly Grow, *Producer-Only Farmers’ Markets in the Mid-Atlantic Region: A Survey of Market Managers*, HENRY DAVID WALLACE CTR. FOR AGRIC. & ENV’T POL’Y, at 6 (2003).

¹³⁹ *Id.* at 20.

¹⁴⁰ Carolyn Dimitri, Edward C. Jaenicke, & Lydia Oberholtzer, *Local Marketing of Organic Food by Certified Organic Processors, Manufacturers, and Distributors*, 26 J. AGRIBUSINESS 157 (2008) (successful strategies for improving the food system include “local governments’ promotion of local organic marketing, such as supporting local farmers markets, restaurants that rely on local products, and the sales of locally grown food in supermarkets . . . A different approach might be for governments to provide incentives for retailers to carry locally grown food.”).

¹⁴¹ Oberholtzer & Grow, *supra* note 138, at 19.

¹⁴² Seyfang, *supra* note 6, at 383.

In order to create a more sustainable food system, these tools must include information and structural change. As I've noted in my past work, law and public policy should increase available consumer information about the consequences of food choices, and, the focus of this Article, make structural changes in the food system that increases access and helps form a more sustainable food system. Information, through eco-labeling and food education programs, will help play a role in changing consumer preferences. And the knowledge gained through creating these informational tools, like environmental life-cycle analysis, will help "identify the most energy-draining stages of consumption."¹⁴³

So far, common structural avenues for promoting an organic local food system are farmers markets, community-supported agriculture, and encouraging organic certification. Progress has been made at both the federal and state levels to find financial and technological avenues to increase producer and consumer access to these programs. Moving forward, structural change must include better food system planning, increased government support for local food and regional economies, and improved management of alternative agricultural distribution and production systems. Admittedly, these are small steps, but better information and improved structural systems to increase access to better food may shift individual norms.

Finally, I must address a final point that continues to perplex this author as well as others—price. Any local, low-input food system cannot be considered successful if locals cannot afford local food, and many individuals do not have access to healthy fruits, vegetables and grains. To date, scholars and food policy writers (myself included) have inadequately dealt with the issue of price. For example, while I advocate creation of a food eco-labeling so people know ecological costs of processed foods,¹⁴⁴ already individuals cannot afford organically labeled food. "Essentially, we have a system where wealthy farmers feed the poor crap and poor farmers feed the wealthy high-quality food."¹⁴⁵ I take this to mean that agribusiness, supported by governmental policy, offers up processed industrial foods with commodity grains, and small rural farmers have moved to organic produce and artisanal processed goods.¹⁴⁶ This illustrates that

¹⁴³ MCWILLIAMS, *supra* note 94, at 24.

¹⁴⁴ Czarnecki, *supra* note 1, at 2.

¹⁴⁵ Lisa Miller, *Divided We Eat*, NEWSWEEK (Nov. 22, 2010), <http://www.newsweek.com/2010/11/22/what-food-says-about-class-in-america.html> (quoting Michael Pollan). See also Thomas Macias, *Working Toward a Just, Equitable, and Local Food System: The Social Impact of Community Based Agriculture*, 80 SOC. SCI. Q. 1086, 1088 (2008) ("Without a program to promote access to and knowledge about healthy food for the general public, there is a good chance food quality will be satisfied with the relatively well-off having the best access and the rest of society left with food created primarily for mass production and easy distribution, product quality being a secondary concern."); Adam Drewnowski & SE Specter, *Poverty and Obesity: The Role of Energy Density and Energy Costs*, 79 AM. J. CLIN. NUTR. 6 (2004).

¹⁴⁶ BEN HEWITT, THE TOWN THAT FOOD SAVED: HOW ONE COMMUNITY FOUND VITALITY IN LOCAL FOOD 89 (2009) (addressing concerns that local food is becoming a

importance of implementing policy that allows low-income individuals to use public assistance programs at farmers' markets and other similar programs.¹⁴⁷

One certainly sees that high-calorie mass produced foods are increasing in price at lower rates than healthier foods, and many healthy foods (for example, good produce) are not available in many poor urban neighborhoods. Both in the United States and abroad, the "current pricing system externalizes social and environmental costs and benefits, and this, together with current subsidy systems for intensive pesticide-dependent monoculture, results in local organic produce costing more than conventionally grown imported food."¹⁴⁸

In addition, it is true that having an organic locavore diet is becoming a sign of being of higher socio-economic status, and, thus, we must not lose sight of social justice concerns like hunger and food insecurity.¹⁴⁹ I do not believe, however, we should undervalue the importance of information, as discussed *infra*, and food literacy (for example, knowing where your food comes from, how to cook, and what is healthy), or underestimate the power of marketing for unhealthy industrial food. What remains, however, is a challenge for making the economics of a sustainable food system work, and understanding the value of healthy and ecologically sound food choices. How can society afford healthy local low-input food, and why are we spending so much less of our income on food?

"gentrified green, boutique scene"). See also Michael Pollan, *Why Eating Well Is 'Elitist,'* N.Y. TIMES, May 11, 2006, <http://pollan.blogs.nytimes.com/2006/05/11/why-eating-well-is-elitist/> ("It is very simply a function of government policy: our farm policies subsidize the most energy-dense and least healthy calories in the supermarket.").

¹⁴⁷ See Macias, *supra* note 145, at 1096, 1098.

¹⁴⁸ Seyfang, *supra* note 6, at 90.

¹⁴⁹ See Mark Winne, *Local, Organic Food for Every Budget*, HARTFORD COURANT, Aug. 18, 2003, at A7 ("[b]ut the hot pursuit of local, organic produce stands in sharp contrast to the growth in food insecurity and hunger.").