



# Building a Community-Based Sustainable Food System

*Case Studies and Recommendations*





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University of Michigan  
Urban & Regional Planning  
Capstone Project  
April 2009

## Executive Summary

The current global food system, while highly efficient in production, has produced many undesirable social and environmental impacts. Producers' profit margins have significantly decreased over the last thirty years and agribusiness organizations with global networks of production, processing, and distribution now dominate the food industry. Changing economic conditions have decreased the economic viability of small and medium-sized farms, increased fossil fuel consumption, reduced the number of farm-related local business and processing facilities and made the profession of farming less attractive to younger generations. In large part, food production has been removed from our communities, diminishing our collective knowledge of our region and agrarian practices.

While the current food system offers consumers inexpensive food, the amount of processing, lengthy distribution channels, and global trade patterns favor prepared food that is calorie-rich but nutritionally deficient. Another challenge is that conventional food retail sources, such as grocery stores, are inequitably distributed throughout our communities. While middle and upper income neighborhoods have many grocery stores, cities such as Detroit, are often characterized as urban food deserts. In addition to large grocery chains and small markets, farmers markets, community supported agriculture (CSA) programs, and community gardens are emerging food suppliers within our communities that offer benefits for all and may specifically address the unmet needs of low-income residents. The food we eat has direct implications on our long-term health and the existing inequitable patterns of food retail disproportionately impact our poorest residents.

This project intentionally uses the term 'community-based' instead of local to emphasize a regional perspective and connect food production with economic and community development. Community-based food production is a viable form of import substitution that may engage diverse residents. Our definition of a community-based, sustainable food system is 'A food system in which everyone has financial and physical access to culturally appropriate, affordable, nutritious food that was grown and transported without degrading the natural environment, and in which the general population understands nutrition and the food system in general.'



Our research focuses on 15 case studies from across North America. Each case study highlights a specific sector of the food system that incorporates more sustainable practices. Some case studies illustrate innovative methods of production, others demonstrate more efficient ways to distribute food, and some are exemplary methods of processing or waste recycling. The majority of case studies convey ways to strengthen ties to the regional economy, support local businesses, offer new entrepreneurial opportunities, and engage residents. Based on the case studies, we distill short, medium, and long-term recommendations for individuals, community organizations, businesses, and municipal governments.

The focus of this research project was to discover and share best practices in community-based, sustainable food systems for application in other communities. Throughout our research, we have been thinking about Detroit, Michigan in an effort to understand how changes to the current food system could enhance the presence of healthy, affordable food and serve as an economic development tool in the city. In the final section of the report, we discuss the need to conduct a detailed community-based food assessment in Detroit. We note that in a city with 30% vacant properties, urban agriculture is a viable land use when issues of soil contamination are appropriately addressed. We also summarize some of Detroit's existing food infrastructure and highlight how other Rustbelt cities are removing legal and political barriers to urban agriculture in efforts to advance community-based, sustainable food practices and processes.



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# Our Current Food System: Production, Consumption, and Nutrition



Few of us understand the complexity of the current food system. The trip from the farm to our plates has become obscured by the rise of agribusiness production, complex processing, global trade patterns, and large retail conglomerations. In this overview, we have divided the food system into three categories – production, consumption, and nutrition – and discuss them separately. This brief introduction focuses primarily on the key processes and outcomes from which the case studies in chapter three deviate.

*Today, most American meals are greatly divorced from the system that produces, processes, and distributes them. Of the 2.2 trillion pounds of agricultural products grown in the United States in 2007, over one-quarter (600 billion pounds) was grown as livestock feed.<sup>8</sup>*

In 2007, 922,095,840 acres of farmland were cultivated in the United States and approximately half (406,424,909) of these acres were devoted to crop production. 35,771,154 acres were devoted to pastureland for animals.<sup>8</sup>

Crop	Millions of Acres Harvested (2007)	Percent of all Farmland Cultivated for Crop Production
Corn	92.2	22.69%
Soybeans	63.9	15.72%
Hay and Haylage	61.4	15.11%
Wheat for grain	50.9	12.52%
Cotton	10.5	2.58%
Sorghum for grain	6.8	1.67%
All land in orchards	5.0	1.23%
Vegetables harvested for sale	4.7	1.16%
Barley for grain	3.5	0.86%
Rice	2.8	0.69%
Sunflower seeds	2.0	0.49%
Oats for grain	1.5	0.37%
Dry edible beans, excluding limas	1.5	0.37%
Sugarbeets for sugar	1.3	0.32%
Peanuts for nuts	1.2	0.30%
Sugarcane for sugar	0.8	0.20%
Sorghum for silage or greenchop	0.5	0.12%
Tobacco	0.4	0.10%

Source: 2007 Census of Agriculture<sup>7</sup>

## Production

Food production and processing transforms crops and commodities into the food we consume. Production extends beyond growing crops to raising animals (animal husbandry) by farmers and collecting foods from the environment by hunting, fishing, and gathering.<sup>1</sup> Food processing readies these raw materials for consumption and ranges from activities as simple as washing and bagging produce, to the creation of more complex foods with additives and supplements. Processed foods now constitute 90% of our food spending, thanks in part to federal food policy that has long focused on increasing production and decreasing food costs.<sup>2</sup>

### Increasing Yields and Decreasing Crop Diversity

U.S. food production is at record levels. On average, food production has increased by an astounding 1.74% every year for the last 50 years.<sup>3</sup> In part, these gains have been achieved by specializing in a few crops. The US Farm Bill, a significant piece of legislation passed every five years, allocates money for farms and agricultural products. This legislation encourages farmers to produce a few specific crops by providing crop-specific subsidies. These subsidies create disincentives for farmers to grow other agricultural products that would diversify their output and increase the production of fruits and vegetables.<sup>4</sup> The most recent 2007 farm bill preferentially subsidized eight crops, the result of which is the high concentration in crop production as seen in the table above.<sup>5</sup> Of these dominant crops, the “supercrops” (soybeans, corn, and wheat) that are grown in the US are typically derived from the top six varieties of each species. These varieties provide high yields under optimal conditions but have long-term implications for decreasing genomic diversity.<sup>6</sup>

**From Traditional Farming Practices to Agri-business Production and Processing**

Traditional agricultural practices have shifted over time. This is partially due to changes in technology and advancements in agronomy that have increased efficiency and productivity. Less visible are the impacts of trade liberalization and deregulation, the role of transnational corporations and global commodity chains. These economic and political changes are evident in the shrinking share of food spending that is returning to the producer. In 1975, farmers earned 40 cents of every dollar spent on food. By 1998, this number fell to 20 cents.<sup>9</sup> As seen in the table at right, 80% of every dollar spent on food now goes to value-added activities such as processing, transporting, and marketing.

These decreasing returns have made smaller farms less economically viable. Many smaller farmers have been forced to choose among expanding the size of their operations, supplementing their farm income with off farm employment, or stopping farming altogether. As a result, farming was the primary occupation for less than 60% of America’s farmers in 2002.<sup>11</sup> With a lower chance for prosperity and greater investment costs for starting up large operations, it is little surprise that many young people have turned away from farming. The average age of farmers has grown steadily since the 1970s and is today in excess of 50 years of age. Just more than 5% of farmers are younger than 35.<sup>12</sup> As these aging farmers retire, many of their farms cease agricultural production.

Breakdown of Food Dollar in 1999	
Farm value (share to the farmer)	20.0
Marketing	80.0
<i>Labor</i>	39.0
<i>Packaging</i>	8.0
<i>Transportation</i>	4.0
<i>Energy</i>	3.5
<i>Profits</i>	4.0
<i>Advertising</i>	4.0
<i>Depreciation</i>	3.5
<i>Rent</i>	4.0
<i>Interest (net)</i>	2.5
<i>Repairs</i>	1.5
<i>Business taxes</i>	3.5
<i>Other costs</i>	2.5

Source: USDA, 2000<sup>10</sup>

*Many communities have lost small and medium-sized farms and processing facilities. The loss of these facilities and services, in combination with increasing land values, has reduced the presence of working farms within driving distance of many metropolitan areas.*



**Loss of Local Agricultural Landscapes**

Larger agri-business operations are more likely to survive in this economic environment, as they can generate sufficient profits by selling large volumes. Less than 2.5% of the nation’s farms captured the majority of sales in 2007.<sup>13</sup> Seventy-eight percent of farms sold less than \$50,000 worth of products, earning only 4% of total sales on 28% of the farmland.<sup>14</sup> Nearly 70% of those farms that lost money had sales of less than \$10,000 in 2007.<sup>15</sup>

As a result of these changes in farm economics and producer demographics, many communities have lost small and medium-sized processing facilities and services, such as slaughterhouses, grain mills, feed stores, large animal veterinarians, and farm equipment dealerships.<sup>16</sup> The loss of these facilities and services, in combination with increasing land values, has reduced the presence of working farms within driving distance of many metropolitan areas. Development replaced more than six million acres of agricultural land from 1992 to 1997.<sup>17</sup>

**Increasing Fossil Fuel Consumption**

The increasing scale and mechanization of production and processing in agribusiness operations have dramatically increased the input of fossil fuels. In 1940, 2.3 calories of food energy required 1 calorie of fossil fuel energy.<sup>18</sup> This statistic includes the energy required for packaging and transportation. Today, the ratio has changed dramatically. On average, 1 calorie of food energy produced today requires 10 calories of fossil fuel inputs.<sup>19</sup> This reveals the magnitude with which our current food system contributes to global climate change. Our current food system is responsible for 19% of the greenhouse gas we emit and this amount is second only to transportation, at 37%.<sup>20</sup>

# Consumption

This section focuses on consumption, distribution, food retail, and waste. In the United States, food prices have never been lower. In the late 1990s, the average household spent only 40 days of earnings per year to pay for their annual food consumption. This is far less than comparable food spending by households in the 1930s and 1970s.<sup>21</sup> In part, the increased affordability of food may explain why the average American is now eating more each day. The existing food system provides every American with an estimated 3,800 calories per day.<sup>22</sup> Additionally, the average consumer is eating away-from-home meals much more often. These meals constituted 48% of the US food bill in 1999, an increase of 9% since the late 1970s.<sup>23</sup>

Yet despite this bounty, hunger still exists in the United States. We use the term **food security** to measure food vulnerability. Despite increased levels of production and decreasing food costs, nearly 10% of all American households were considered food insecure at some point between 1996 and 1998.<sup>24</sup> As we discuss below, there is also disparity in the distribution of affordable, nutritious food within our communities.

## Increasing Distribution Channels

Increasing fossil fuel consumption in our food system is a function of an expanding supply chain. Food travels around the world, allowing us to eat foods that are out of season in our local area and dramatically increasing our appetites for exotic foods. On average, supermarkets now carry 400 different types of fresh produce.<sup>25</sup> A 2007 study from the National Resource Defense Fund notes that the typical American prepared meal contains ingredients from five countries.<sup>26</sup> On average, food purchased at conventional grocery stores traveled more than 1,500 **food miles** to reach the shelf.<sup>27</sup> Navel oranges from Australia can travel 8,655 **food miles** prior to consumption. Eating local foods reduces fossil fuel consumption by reducing the distance we transport food.

## Urban Food Deserts

One of the greatest problems in our current food system is the failure to provide low-income urban communities with access to healthy, affordable food. Several cross-sectional studies of American communities have concluded that low-income and predominantly African American neighborhoods are more likely to have poor access to healthy foods than their wealthier or white counterparts. This is very evident in Detroit. A 2007 report found that more than half of the city's residents live in a **food desert**, without easy access to affordable, healthy food.<sup>28</sup> Chain grocery stores are uncommon in neighborhoods, and residents lack the transportation to access stores in the surrounding areas. Far more common are convenience stores or party/liquor stores selling only "fringe food," which is highly processed and packaged and sold alongside other merchandise.<sup>29</sup> For many Detroiters, fringe food is the most, or only, accessible option.

One cause of this problem is the outside retailers' perception that the neighborhoods lack purchasing power. Statistics on urban demand challenge these perceptions, however. For example, Detroiters spend nearly \$1 billion on food annually. But, due to the lack of retail within the city limits, they spent more than 20% of this amount outside the city limits.<sup>30</sup> Residents without private transportation or convenient access to public transit can only choose among their neighborhood's limited and often less healthy options.

Some smaller Detroit retailers cite a practical reason for failing to provide fresh produce. Michigan disburses food assistance benefits to eligible low-income residents by transferring funds to debit cards, called Bridge Cards. These funds refresh monthly, so most food spending occurs around this same time each month, and fresh food is prone to spoil in the weeks between.

## Conventional and Emerging Alternative Food Retail Outlets

Most consumers acquire the majority of their food at grocery stores or chain restaurants. Yet farmers' markets, **Community Supported Agriculture** (CSA) programs, food cooperatives and community gardens are all increasing in popularity and presence. These less conventional sources of food are important components of alternative food networks and they help to address the challenge of providing urban residents with healthy, affordable food. The following information summarizes these different types of food sources.

### Large Retail Grocers

Large retail grocery stores range from regional to national chains and have large operating budgets and opportunities for expansion. The Kroger grocery chain, one of the nation's largest, operated 3,662 grocery stores nationwide and employed over 320,000 people in 2007. The average Kroger store generated \$16.4 million in sales, earning the company \$2.3 billion in profit that year.<sup>31</sup> While sales volumes are large, profit margins in grocery stores tend to be small. Large grocers enjoy several advantages that function as barriers to smaller, locally-owned retail grocery stores. These include:

*Access to start-up capacity* – Small, independent grocers report that start-up costs are a major barrier to entry in the retail market. Retailers must take on a variety of up-front fixed costs including rent, interior fit-out (e.g. installing shelving, cold-storage and registers), hiring employees, and compliance with rules and regulations before they can open their doors to consumers. Large grocers can draw upon corporate resources, negotiate lower borrowing rates and endure longer start-up losses on the way to profitability.

*Ability to offer lower prices* – Large grocers can also spread their costs across more units and, thereby, offer lower prices on individual items. Large chains may also receive bulk price discounts that smaller retailers aren't eligible for.

*Corporate services* – Corporate grocery chains can provide a variety of benefits to their satellite stores. Generic brands are a major source of revenue for large retail grocers and they are able to provide these products without incurring a major cost increase. For example, Kroger-brand goods account for 43% of that chain's sales.<sup>32</sup> Large grocers can also offer customer loyalty programs that use discount cards to encourage repeat business and track spending habits. They can utilize the parent corporation's distribution infrastructure, which allows greater control over the delivery of products to stores. Finally, large grocers can use the parent corporation's centralized business support services, including research and development, legal, human resources, and marketing services.

*Additional conveniences* – In addition to food, many of the large grocers also sell non-food products and services on-site. This includes gas stations, pharmacies and non-food merchandise. These conveniences are incentives to choosing large retailers over their smaller competitors for those shoppers wishing to make only one stop.



### Small Retail Markets and Alternative Food Suppliers

Smaller retail markets can improve food access and quality in neighborhoods with few or no large grocery stores. While the economic advantages of large grocery stores are disadvantages to the smaller markets, small grocers do have distinct advantages. They can offer more personalized service and a greater sense of community. Their smaller pool of employees and customers allow for the development of personal relationships. Corporate grocery store chains recognize the small retail market niche and some are now repackaging their offerings into smaller retail settings. Trader Joe's, for example, is designing new, smaller stores that may offer a more social shopping experience.<sup>33</sup> Walmart is developing a new line of smaller, neighborhood food markets under the Marketside label.<sup>34</sup>

Farmers' markets, **Community Supported Agriculture (CSA)** programs and community gardens are three emerging food sources that can increase the presence of healthy, affordable food in urban centers. A United States Department of Agriculture survey in 2007 found 4,385 farmers' markets operating nationwide. This was a 7% increase over the number of farmers' markets in 2005.<sup>35</sup> In that year, the average farmers' market generated sales of \$245,000, which translated into average per-vendor sales of \$7,108.<sup>36</sup> Because they directly connect the producers and consumers, producers receive higher prices for their products compared with selling to a wholesale buyer. The consumer benefits by 'seeing' who produces their food and may purchase fresher products. However, some question whether farmers' markets are beneficial primarily to the middle class. Farmers' markets can help lower-income residents in urban **food deserts** depending on their location and whether consumers may use state-issued food assistance cards.

**CSAs** are local efforts to support farm operations. Community residents purchase shares in a farm or garden to cover anticipated costs. In return, shareholders receive a portion of the farm's produce – often on a weekly or bi-weekly basis during the growing season. In temperate climates, some **CSAs** offer shareholders frozen fruits and vegetables during the winter months. Beyond providing nutritious, local food, **CSA** shareholders reconnect with the seasons and experience how poor weather conditions or pests impact harvests. **CSAs** originated in Europe and have been growing in popularity in the United States in the last 25 years. Some **CSAs** contribute to **food security** programs and may focus their service on vulnerable populations, such as low-income seniors. In 2005, a USDA database listed 1,080 **CSAs** in operation nationwide.<sup>37</sup> The USDA estimated that if each **CSA** served between 50 and 500 subscribers, more than 270,000 US households would receive fresh produce during their local growing season from a **CSA**.<sup>38</sup>

Community gardening is another emerging alternative source of healthy, affordable food in urban centers. The American Community Gardening Association (ACGA) estimates that there are 18,000 community gardens in cities throughout North America.<sup>39</sup> Oversight of these gardens varies by location. In some communities, volunteer organizations associated with churches, food banks, and neighborhood organizations manage the operation. In other cities, municipal parks and recreation departments play this role. These gardens have individual and neighborhood benefits that extend beyond food production and include building social capital, engaging and educating children, and reusing vacant land. However, in many urban centers, the issue of soil safety is of primary concern, which chapter 5 addresses with a brief discussion of soil remediation techniques.



*Photographed Above: Pike Place Market in Seattle, where locally-grown produce is available for purchase. Farmers' Markets offer more personalized service and a greater sense of community. Producers receive higher prices for their products because of they are able to directly connect with consumers.*

### Increasing Food Waste

One study found that 27%, or 96 billion pounds, of the food grown in the United States in 1995 did not reach consumers.<sup>40</sup> Some of this loss happens at the farm, where food may be lost to severe weather, poor management or insects, mold, and spoilage during storage.<sup>41</sup> Once it leaves the farm, food may be lost to poor handling, packaging failure, or may be discarded during quality inspection.<sup>42</sup> Food may also spoil while waiting on retail shelves. Consumers, however, are the largest source of food waste. In 2007, consumers wasted about 26% of the edible food supply, or 91 billion pounds of food.<sup>43</sup> The EPA estimated that nearly 13% of municipal solid waste, or 32 million tons, was edible food waste in that year.<sup>44</sup> Recovering only 5% of the food lost in 1995 could have feed four million people for a day.<sup>45</sup>

## Nutrition and Health Implications

Nutrition goes beyond consuming food to fuel our bodies and concerns our health care system and well-being. Michael Pollan (2008) notes that efforts to address increasing healthcare costs require our acknowledgment that food quantity does not necessarily mean food quality.<sup>46</sup> Many people consume high calorie, low nutrition foods. The average American now consumes almost one thousand more calories per day than in the 1950s,<sup>47</sup> and many of those calories now come from refined grains, sugars and fats,<sup>48</sup> meat, and away-from-home meals.<sup>49</sup> This coincides with lifestyle changes characterized by lower levels of physical activity. The result is a public health crisis that falls disproportionately on those unable to access healthy, affordable food. The incidences of obesity, Type 2 diabetes, heart disease, and other diet-related illnesses are reaching epidemic levels, particularly among vulnerable groups.<sup>50</sup> These populations are “statistically more likely to suffer or die prematurely from a diet-related disease, holding other key factors constant.”<sup>51</sup> Overall, four of the top 10 causes of death in the United States – heart disease, stroke, Type 2 diabetes and cancer – are linked to diet. In the following review of nutrition and health statistics, we have highlighted how Detroit residents compare to national averages.

### Obesity

Over the last two decades, obesity has emerged as one of the most common preventable illnesses. By 2000, a majority of Americans were overweight and more than a quarter of adults were obese.<sup>52</sup> In 1990, fewer than 10 states had an incidence of obesity in excess of 10% and none had an incidence greater than 15%.<sup>53</sup> By 1998, no state had an incidence of less than 10%.<sup>54</sup> By 2007, only one state (Colorado) had an incidence less than 20%, and most had an incidence equal to or greater than 25%.

### Obesity in Detroit

Obesity is particularly prevalent in Detroit. As of 2007, Detroit ranked as the 5<sup>th</sup> most obese city in the country<sup>56</sup> with 37.8% of the population overweight.<sup>57</sup>

### Diabetes

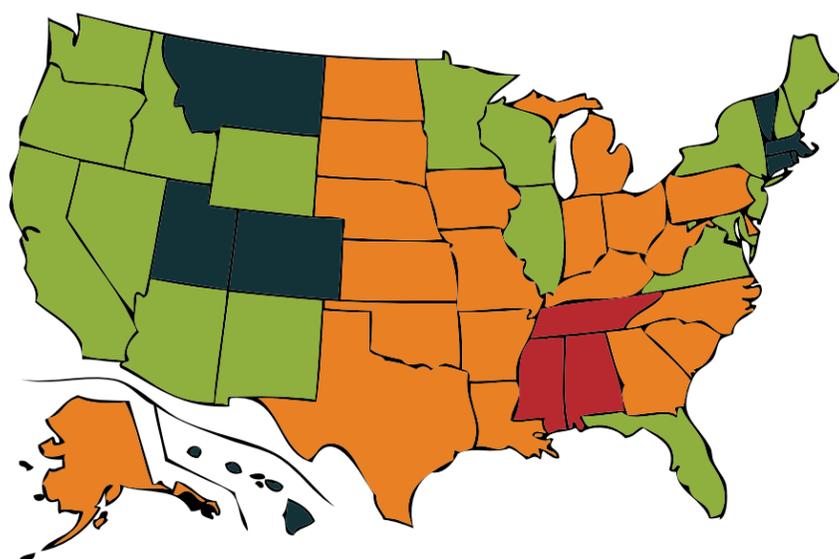
Diabetes can lead to a number of health complications including kidney disease, blindness, and peripheral vascular disease, and in some cases may require the amputation of lower extremities.<sup>58</sup> Type 2 diabetes can have a genetic component, but is often the result of an unhealthy diet and obesity. According to the American Diabetes Association, more than 21 million Americans suffer from Type 2 diabetes.<sup>59</sup> The implications are disproportionately concentrated among racial minorities. African Americans and Latinos experience a 50% to 100% higher rate of diabetes-related illnesses.<sup>60</sup> Several studies report that these are populations that tend to eat a diet higher in fat and sugar, exercise less, are more overweight, and have higher glucose levels than white Americans.<sup>61</sup>

### Diabetes in Detroit

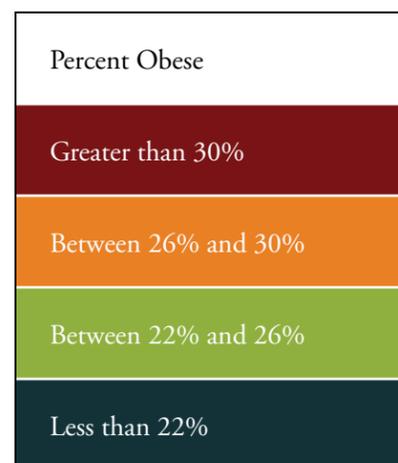
Michigan has the 9<sup>th</sup> highest prevalence of diabetes (7.1%) among all states and the 4<sup>th</sup> highest rate of complications from being overweight (nearly 40%).<sup>62</sup> In 2007, nearly 10% of Detroit’s Hispanics and 14% of its African Americans had physician-diagnosed Type 2 diabetes.<sup>63</sup> Those diagnosed with diabetes in particular should consume healthier food, but this is harder to find in Detroit than its more affluent suburban communities.<sup>64</sup>

### Other Diet-Related Diseases

A number of other health problems are linked to poor nutrition, lack of exercise, and obesity. These problems include heart disease, cardiovascular disease, high blood pressure, hypertension, and stroke. Without access to healthy, affordable food people with a hereditary predisposition to cardiovascular disease are at risk for developing early onset complications. The following tables illustrate that these diet-related problems fall disproportionately on the poor, and the less educated.



Map. Incidence of Obesity by State<sup>55</sup>



Disease Prevalence By Selected Characteristic	Income Level	All Types	Coronary	Hypertension	Stroke
	Less than \$20,000	16%	10%	29%	4%
	\$20,000–\$34,999	13%	7%	24%	3%
	\$35,000–\$54,999	9%	5%	23%	1%
	\$55,000–\$74,999	9%	4%	21%	1%
	\$75,000 or more	7%	3%	18%	1%
	Educational Attainment	All Types	Coronary	Hypertension	Stroke
	Less than a high school diploma	17%	12%	32%	5%
	High School/GED	13%	7%	30%	3%
	Some College	11%	6%	26%	2%
	Bachelors Degree	8%	4%	19%	2%

Source: The Center for Disease Control National Health Statistics database<sup>67</sup>

### Other Diet-Related Diseases in Detroit

Residents of Detroit are more likely to die from heart disease than those in the rest of the state or nation.<sup>65</sup> According a 2005 study of environmental health perspectives in Detroit, residents of Detroit experienced age-adjusted risks of death due to heart disease that were considerably higher than either the Michigan or the national rates.<sup>66</sup> A variety of environmental factors contribute to these higher mortality rates, such as poor nutrition, lack of exercise, and smoking. Although a high-fat diet is often attributed to personal choice, the lack of access to nutritious options in their neighborhoods create a disadvantage for these communities.



## Existing System - Conclusion

The current global food system, while highly efficient in production, has produced many undesirable impacts. Producers' profit margins have fallen significantly over the last 30 years and agri-business organizations have come to dominate the food industry. The change in farm economics has decreased the economic viability of small and medium-sized farms, increased our reliance on fossil fuels, reduced the number of farm-related local business and processing facilities, and made the profession of farming less attractive to younger generations. While the current system offers consumers inexpensive food, the amount of processing, lengthy distribution channels, and global trade patterns favor prepared food that is calorie-rich but nutritionally deficient. Another challenge is that conventional food retail sources, such as grocery stores, are inequitably distributed throughout our communities. While middle and upper-income neighborhoods have many grocery stores, urban centers in cities such as Detroit are often characterized as urban **food deserts**. The food we eat has direct implications on our long-term health, and these inequitable patterns of food retail further disadvantage the poorest residents. Farmers markets, **Community Supported Agriculture** (CSAs) programs, and community gardens are emerging food suppliers within our communities that offer benefits for all and may specifically address the unmet needs of low-income residents.

The following section explains how we define the elements of a community-based, sustainable food system and how innovative practices may positively contribute to the economic stability of low-income neighborhoods.

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## What is a Community-Based, Sustainable Food System?

Referring to the food system as a community-based movement provides a regional context that overcomes some of the definitional challenges of the term “local.” In this project, we define community-based as a geographical region or a metropolitan area that consists of various municipal government bodies. Spatially linked, these municipalities share a common economic base, allowing residents to move freely between work, shopping, and recreation.<sup>1</sup> A community-based system means that the community is not just provided food products but community members may actively participate in producing, processing, distributing, and consuming the food. The term, community-based, also reminds us that what is possible in one region may not necessarily be possible in another due to differences in climate,

population demographics, political processes, and community interests.

In many cases, community-based food systems may be more sustainable than food from our current food system. However, a community-based food system is not inherently more sustainable.<sup>3</sup> Food produced, processed, distributed, and consumed regionally, will probably travel fewer **food miles**, may be produced by residents within our communities, may repurpose vacant land, and contribute more economic capital into the regional economy. “A community-level approach allows for the design of policies and practices that are sensitive to the opportunities and constraints inherent to particular places.”<sup>4</sup> As such, it is necessary to focus recommendations and solutions on a specific area, and calculations of

sustainability based upon a life-cycle assessment of inputs and outputs, which will favor production in some biophysical locations over others. Our definition of a community-based, sustainable food system is consistent with the American Planning Association’s definition:

“A food system in which everyone has financial and physical access to culturally appropriate, affordable, nutritious food that was grown and transported without degrading the natural environment, and in which the general population understands nutrition and the food system in general.”<sup>5</sup>

*Photo at left: Home gardening and farming allows families to grow for themselves. Community gardens provide residents with a space to grow their food, reducing their reliance upon outside sources.*

### Why not call it “local food?”

While many of the alternative food practices that we examine involve elements of local production, we have purposefully omitted this term because of the possible confusion caused by its strict definition.

Local has four components:<sup>2</sup>

1. Locally sourced resources or inputs into food and manufactured goods
2. Production of goods by locally owned businesses
3. Sales through locally owned organizations
4. Consumption by a population that shares a geographical locale with the producers and retailers

## The Role of Food in Community Economic Development through Import Substitution:

Over time, our collective wisdom of what constitutes a sound economic base for our cities and regions has shifted. Thirty years ago, economic development strategies focused on attracting non-local business, primarily manufacturing, to a particular location by offering attractive incentives. Sometimes referred to as 'smokestack chasing,' communities aggressively competed with each other to offer valuable incentive packages. However, one problem with this approach was that established local businesses were not eligible for these packages, and sometimes this actually encouraged existing local businesses to move. Another weakness concerned the long-term viability of this strategy. When the incentive packages were finished, many non-local businesses sought to relocate again in an effort to gain new incentive packages from another community.

The second wave of economic development thinking focused on retaining existing firms and encouraging the development of smaller, related businesses in an effort to build a regional cluster of like enterprises. The focus of these businesses was often on high-tech manufacturing. The development of this regional cluster required the confluence of government support, university research, and industrial innovation.<sup>6</sup> This idea underlies the concept of the global city or the 'technopole'. However, in successful technopoles, the economic benefits have not been distributed across workers by class. Research has found that increasing economic polarization forms as the gap between high-skill and low-skill jobs widens.<sup>7</sup> Equally problematic is the fact that not all cities are able to build regional clusters, as they may lack the incentive packages, the permissive governmental policies, the university presence, or the existing industrial capacity. Common to both the first and second waves of economic development initiatives was the focus on exporting goods and services beyond the region of creation in an effort to produce economic growth.

The third wave of economic development thinking focuses on the concept of import substitution. This more recent idea links a community's long-term economic viability with the development of locally-owned, locally-oriented businesses. From this perspective, businesses target efforts to reduce economic leakage. Economic leakage is the amount of money that leaves a region through the purchase of non-local goods and services. Alternative community-based, sustainable food practices have the potential to increase a region's economic base by retaining food spending within the local economy.

*Photos at left and at right: The Perry Learning Garden, in Ypsilanti, Michigan, gives students the opportunity to develop entrepreneurial skills that they will use in the future. Children at the school grow and process produce from the garden, selling these locally-made goods to the community. Students can keep and spend their earnings.*



# Indicators of Community-Based Sustainability

In an effort to select and evaluate innovative community-based sustainable food case studies, we have used Maclaren's criteria for sustainable community indicators as guidelines for selecting our case study examples.

## Maclaren's Criteria for Sustainable Communities:<sup>8</sup>

1. Intergenerational Equity
2. Intragenerational Equity – social equity, geographical equity, equity in governance
3. Protection of the natural environment – living within our carrying capacity
4. Minimal use of non-renewable resources
5. Economic vitality and diversity
6. Community self-reliance
7. Individual well-being
8. Satisfaction of basic human needs

Good indicators for assessing sustainable communities should include the following characteristics: first, they should integrate several of the criteria cited above, so that one action that promotes economic vitality and economic diversity may also result in the protection of the natural environment. Second, they should be forward-looking and establish reference points, targets, and thresholds. They should also address issues of distributional justice, such as who within our communities would benefit from these innovations and favor innovations that target lower-income neighborhoods. Bellows and Hamm have identified three categories for meaningful sustainable food indicators at a global perspective: fair labor trade, equity and democracy, and environmental stewardship.<sup>9</sup> Given our community-based focus, we have divided our indicators into three different categories: social sustainability, environmental sustainability, and economic sustainability.



*Sustainable communities should include the following characteristics: first, they should all advance economic, social, and environmental sustainability and should be complementary. Second, they should be forward-looking. They should also address issues of distributional justice, such as who within our communities would benefit from these innovations and favor innovations that target lower-income neighborhoods.*



## Social Sustainability

Social sustainability refers to the idea that all members of a society should have equal and fair access to healthy food. They should also have opportunities to engage with the food system through educational programs, with a specific focus on youth participation. Efforts to increase the accessibility and affordability of nutritious food promotes social sustainability, as does providing ethnic food options, and making consumer-producer interactions possible and numerous.

### Social Sustainability Indicators

- Engage Youth
- Provide Education
- Make Nutritious Food Affordable
- Make Nutritious Food Accessible
- Increase Ethnic Food Options
- Foster Consumer-Producer Interactions

## Environmental Sustainability

The current food system places enormous strains on the environment. A more environmentally sustainable food system would require fewer transportation energy and fossil fuel inputs. In accordance with the community-based discussion above, it would also be climate-appropriate. Food production could reuse vacant land, increase vegetative cover, provide opportunities for soil remediation through crop rotation, and increase urban biodiversity by replacing turf grass with a broader array of plants. An environmentally sustainable food system would also recycle waste and restore nutrients in the soil.

### Environmental Sustainability Indicators

- Reduce Transportation Energy
- Reuse Vacant Land
- Mitigate Soil Contamination
- Increase Biodiversity
- Recycle Waste



## Economic Sustainability

### Economic Sustainability Indicators

- Provide Business Opportunity
- Create Jobs
- Develop Workforce and/or Entrepreneurialism
- Sustain Farmland
- Build Local Food Infrastructure

The economic viability of communities is crucial to their ability to sustain themselves. The community food system can contribute to a community's economic sustainability by providing business opportunities, and job and business skill development. Engaging in agriculture and producing more food locally can help preserve and sustain farmland, and increase community self-reliance. Building local infrastructure in order to produce and distribute food within a particular region also contributes to economic development.





## Endnotes

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# Case Study Matrix

	Page Number	Sustainability Indicators														
		Social						Environmental				Economic				
		Engage Youth	Provide Education	Make Nutritious Food Affordable	Make Nutritious Food Accessible	Increase Ethnic Food Options	Foster Consumer-Producer Interactions	Reduce Transportation Energy	Reuse Vacant Land	Mitigate Soil Contamination	Increase Biodiversity	Recycle Waste	Provide Business Opportunity	Create Jobs	Develop Workforce and/or Entrepreneurialism	Sustain Farmland
Added Value	34	★	★		★		☆	★	★	☆	☆			★		
Calder Dairy & Farm	38				☆	☆	☆				★	★			★	★
Dave's Markets	42			☆	☆	★						☆				
Earthworks Urban Farm	44	☆	☆		☆	☆	☆	★	☆							
Eat Local Eat Natural	48				☆	☆	★					★				★
Four Square Society	52		☆		★		☆	☆		☆						
Intervale Center	56	★	☆	★	☆	☆	☆	☆	★	☆	★	★	★	★	★	☆
Island Grown Farmers Cooperative	62				☆		☆				☆	☆			☆	★
Nuestras Raíces	66	☆	☆	☆	☆	★	☆			☆			★	★		☆
Peaches and Greens	72	★	★	☆	★	☆	☆	☆						★		☆
Rainbow Grocery	74			★	★	☆	☆			☆						★
Taos Food Center	78					★	☆					★	★	★		★
Thomason Family Farm	82				★		☆			★	★					
Toronto Food Policy Council	86			★	☆	☆						☆		☆		
YOUR DeKalb Farmers' Market	90		☆	★		☆					★	☆		★		★

Exemplary Model ★

Good Model ☆



## Case Studies

Community organizations, local businesses, and governmental entities throughout North America have successfully implemented elements of a community-based, sustainable food system in their own community. The following section highlights just a few of these exemplary case studies. The matrix, at left, indicates which organizations meet the specific social, economic, and environmental sustainability indicators we identified and helps guide the reader to those case studies that best meet their needs and interests. The map, above, shows the locations of all 15 case studies.





Location	Red Hook, Brooklyn, NY
Sector	Production
Operational Structure	501(c)3 Non-Profit
Sustainability Factors	Engage Youth, Provide Education, Make Nutritious Food More Accessible, Reuse Vacant Land, Mitigate Soil Contamination

## Added Value

### Overview

Added Value is an urban farm located in the heart of Brooklyn, New York. The farm covers a three-acre abandoned school lot and grows produce in raised beds. Added Value supports a full-year youth leadership initiative program, runs two local farmers markets, and supplies produce to two local restaurants and an active **Community Supported Agriculture program (CSA)**.

### History

Brooklyn residents Ian Marvy and Michael Horwitz established Added Value in 2001. The farm sits on a three-acre abandoned schoolyard in Red Hook, Brooklyn just outside of Manhattan. Marvy and Horwitz previously worked with first time youth offenders and their families, and decided that instead of working with teens after they committed crimes, they would start a program that proactively kept teens occupied, engaged, and empowered. They started a program working with teens to build a small half-acre urban farm in raised beds on top of the asphalt. In 2002, with the help of fellowship funding, Added Value was able to add a farmers market to the program, soon providing over 200 local residents each week with access to fresh produce [the local grocery store closed in 2001]. The Added Value farm has expanded and now covers almost three acres of the lot, hosts bi-weekly farmers markets, operates a **CSA**, employs full time workers and educators, and has provided training and experience to over 85 teens through their Youth Empowerment Initiatives.

### Inputs

In order to create a sustainable urban farm, it is essential to create a strong soil base for growing beds. Added Value was able to acquire most of its soil for free from the New York Department of Parks and Recreation, and is fortunate to receive a steady donation of compost, woodchips, and mulch to sustain the beds. The Added Value youth have also started a **vermiculture** (worm) program to compost farm waste and provide fertilizer for the farm.

The Added Value farm, and Red Hook Farmers Market, receives most of its labor through its innovative Added Value Leadership Institute program, targeting teens ages 14-19. Each year, this one-year program accepts 8-10 high school students who participate in an intensive eight-week training session in the summer and then continue their work through end of the academic year. In return for a stipend, teens work on the farm, staff the farmers' market, participate in local and national learning opportunities, and through the Digital Horizons program, gain media literacy and multimedia skills with which they keep relevant blogs and help update and run the Added Value website. Successful and enthusiastic Added Value youth have the opportunity to apply for a Youth Leadership position, and continue their work at a higher level the following year.

### Outputs

#### Food

Added Value distributes its produce through various channels. The organization first supplies its two weekly farmers' markets, which run from late spring through late fall. Red Hook Senior Center hosts the Wednesday market, and displays produce from both the urban farm and a family farm in New Jersey. The Saturday market, formerly located on the Added Value urban farm, is now located in downtown Red Hook and sells produce from the community farm, fruit and produce from the surrounding areas, and locally raised meat and dairy products from nearby sustainable farmers. Within its first season, the farmers' market had an attendance of over 200 customers a week, and farmers were earning an average of \$1000 each. These numbers have only grown in the past eight years. This market is also the pick-up point for the Added Value **CSA**, the second distribution channel. The third channel is Added Value's mutually beneficial partnership with two local restaurants; this partnership provides income for the farm, and allows the restaurants to serve the freshest, most sustainable produce possible. Finally, Added Value has donated at least \$15,000 worth of produce to help support families and individuals in need.

#### Empowered Youth

The goal of Added Value is to promote the sustainable development of Red Hook by nurturing a new generation of young leaders. Upon completion of the Added Value Leadership Initiative year, teens emerge with the concrete skills, knowledge, and education to carry them forward on whatever path they choose to pursue. Expected to pass along their knowledge, the teens attend and present at conferences around the world, work to educate younger children, and update blog posts about their experiences on the urban farm.

In addition to working with teens, Added Value also runs a Farm-to-School program that teaches elementary school children about urban farming and other food-related issues. Added Value employs two full-time educators to run this program, which consists of everything from a one-time visit to the classroom, to a school fieldtrip to the farm, or even the opportunity for schools to adopt and cultivate dedicated beds in the community farm.



*Farm educators use signs to direct students and volunteers in their work on the farm.*





*The Added Value farm is built on an empty paved lot in an industrial area of Brooklyn, NY.*



*Right: When not in use for growing, the hoop house doubles as a center of operations for the CSA.*



### Business Process

Added Value attributes much of its success to its Community Advisory Council, a group made up of stakeholders from local, regional, and national organizations that support Added Value and its various initiatives. This diverse board provides Added Value with a broad perspective as well as access to many different sources of funding.

### Challenges & Solutions

Red Hook, Brooklyn is a quickly gentrifying neighborhood. When Added Value began, Red Hook was an older, lower-income neighborhood in need of economic development and a morale boost. Through their work with the local community, Added Value helped to provide both of these things. Now, Red Hook is in the line of growth and gentrification extending out from New York City, and Added Value must decide how to grow and change with the neighborhood. As a first step, Added Value has partnered with two local restaurants, a model that can be repeated as new restaurants open in the neighborhood. Added Value also strives to be a neighborhood advocate, working to prevent new development from displacing the existing residents.

When Added Value formed in 2001, the founders thought they would be raising a new generation of farmers. Over time, they discovered that this was simply not a realistic goal for Brooklyn youth. Nevertheless, they have come to realize that working on the farm and at the market has given the Added Value youth a much better understanding of not only farming and proper nutrition, but also a strong sense of self-confidence in whatever they take on. These skills and knowledge advance the youth in both their educational and work lives.

### Lessons Learned

*It is possible to conduct large-scale urban farming in a blighted neighborhood on a paved lot* – Added Value had to conduct little to no remediation of their lot before they began farming. They were able to construct raised beds on top of the asphalt, either by creating a wooden frame or by simply pouring nutrient-rich soil directly on the pavement. This method keeps costs to a minimum, especially if soil, mulch, and compost is available through donations.

*There is always a market for fresh, local produce* – The Added Value Community Farm sits in a diverse neighborhood that, at the time Added Value began, could have been considered a **food desert**. Even today, the neighborhood lacks fresh produce options, and consequently the Added Value farmers’ markets and **CSA** are wildly successful, providing a plentiful bounty of produce to the neighborhood. It also puts money back into Added Value and into the pockets of their youth participants.

*Growing can be empowering* – As the over 85 graduates of Added Value’s youth initiative can attest, participating in the growing, harvesting, and sales processes of the food system has given them the confidence and knowledge to advance in both their personal, educational, and work lives. Although they only work with 8-10 teenagers a year, this intensive one-on-one contact allows the teens to be involved in every step of the process, and provides Added Value with dedicated, self-motivated workers. In addition, Added Value is able to simplify its business process and avoid potential tax complications by paying the teens a stipend instead of a salary.

### Resources for Further Information

[www.Added-Value.org](http://www.Added-Value.org)



Location	Carleton, Michigan
Sector	Production
Organizational Structure	Private, Family-Owned Business
Sustainability Factors	Recycle Waste, Provide Business Opportunity, Sustain Farmland, Build Local Food Infrastructure

## Calder Dairy & Farm

### Overview

Until recently, Michigan had over 600 small, independent dairies, but today Calder Dairy & Farm is one of only 14 that survive. Relative to the industry standard, this family-owned business remains intentionally small, selling distinctive products exclusively to customers in Southeast Michigan. It demonstrates a few important lessons for other farmers and dairies looking to achieve sustainability and profit while selling only to the surrounding community.



### History

William Calder opened his small dairy in 1946. At the time he did not own any cows, and instead bought, processed, and sold milk from local dairy farmers. In 1967, he bought a farm and 15-20 cows and began producing his own milk for the operation. Throughout its history, Calder Dairy has sold exclusively to regional customers and never into the commodity stream.



*Clockwise from top left: A view of the Calder Cows; By welcoming visitors, Calder builds trusting relationships with its customers; The cows choose to spend most of their time indoors during the Winter; Silos store the animal feed that is grown on-site.*

### Inputs

Calder Dairy & Farm consists of a 500-acre farm in rural Carleton, Michigan and a dairy in metropolitan Detroit. The farm supplies nearly all of the milk that the dairy processes and sells under the Calder label. The remaining milk is purchased from a neighboring farm to meet occasional spikes in demand.

The business employs more than 50 people, about half on the farm and the rest either at the dairy or driving delivery trucks. A core group of long time employees anchors the staff, which also includes seasonal student employees.

The farm spans 500 acres, which is large enough to grow all of the hay and corn required to feed the farm's 120 cows. At its current size, the farm is at maximum capacity, yet still modest in size compared to most dairy farms, some of which manage thousands of cows.

Calder cows live in several freestall barns, which allow free movement and access to pasture during warmer months. Two 1,000-gallon refrigerated holding tanks collect the milk before it makes the 30-mile trip to the dairy in Calder's 2,300-gallon tanker truck.

The farm operation is not completely organic, although its operations are more sustainable than most. Workers use non-industrial grade pesticide on the fields during growing season, and replenish the soil during off years with a rotation of soybeans and natural fertilizers from the cows' own manure. The cows receive no **rBST** hormonal injections.

### Outputs

On average, milking machines draw 60 lbs. of milk per cow each day. This amounts to a few million gallons of milk each year. The dairy in Lincoln Park, Michigan processes this milk both for sale and into a variety of **value-added products**, including yogurt, half-and-half, buttermilk, whipping cream, sour cream, cottage cheese, and nearly 40 flavors of ice cream. The dairy sells these items on-site at both locations, and distributes them on Calder Dairy trucks to wholesale buyers and 2000 home delivery customers. All of these customers are located in Southeast Michigan to maintain the local emphasis of the dairy. The wholesale buyers include local restaurants, grocers, specialty food shops, and schools.

All of the cows' manure is collected in an on-site storage lagoon. Twice each year, the dairy distributes this rich organic material onto the fields – in place of manufactured fertilizer– to increase soil fertility. Without on-site farming, many large dairy operations are unable to recycle this waste. It collects in large, toxic lagoons that may leak into and pollute ground water before the waste can be shipped off-site for more secure storage.



From top left: Cows are free to roam in and out of the barn; Ice cream machines create a value-added product which captures more of the food dollar; Calder views its relationships with regulators as an opportunity to ensure health and safety.

### Business Process

While most dairy farms sell milk into the commodity stream, Calder Dairy has made a conscious decision to produce and market a differentiated product. It has successfully built a brand that caters to several growing niches: the desire for a local, healthy product produced transparently by a small, family-owned business. The distinct milk jars with colorful caps symbolize these values.

### Challenges & Solutions

*Regulation* – Rather than seeing health and safety regulations as a challenge to running an effective business, Calder Dairy views these as the source of a productive partnership with the government. The regulators, who make frequent visits to the dairy and farm, help to ensure high quality operations and a safe, trustworthy product.

*Transportation costs* – The rising price of fuel forced Calder Dairy to raise its own prices last year. Fuel cost also limits the businesses' geographic reach. Instead of growing the business geographically, Calder is growing by providing more **value-added products** and services to the delivery trucks. This includes non-dairy products, such as cookies and jams, from other regional producers.

### Lessons Learned

*Local market potential* – The success of Calder Dairy & Farm suggests that customers are eager to buy locally-produced food. The local option is a viable alternative to selling an undifferentiated product into the commodity market. This requires creative thinking and a distinct set of marketing strategies.

*Adding value for profit* – Calder Dairy has been able to grow and prosper, in large part by providing more **value-added products** and services. This includes its large line of dairy-derived products and the home delivery service. In addition, the farm is open every day for visitors to tour the facilities, pet the animals, talk with employees, and buy Calder products. The open farm generates increased sales, and customers gain trust in their farmer. In an effort that also helps to build the local food community, Calder has been selling products from other Southeast Michigan food businesses alongside its own products, both on its delivery routes and on-site.

*Operating a closed-loop system* – Calder Dairy & Farm is a mostly **closed-loop system**. Corn and hay grown on the farm feeds the cows. The Calder Dairy processes the milk from these cows before it leaves the system for sale on Calder delivery trucks, or at the Calder storefronts (one each on the farm and at the dairy). Back on the farm, the cows' waste returns to the field as fertilizer to help grow more of the feed that begins the cycle. Few additives enter the system aside from nutritional supplement for the feed, veterinary medicine and services, and commercial-grade herbicide, which is far less potent and potentially toxic than industrial-grade herbicide. A system such as this, that produces its own inputs and reuses its waste products, is more environmentally and economically sustainable. Calder land and cows are healthy and the business leaks less revenue spending on inputs.

*Differentiate the product/build a brand* – Calder Dairy sells its milk in distinct glass bottles with colorful caps, harking back to the days of milk bottles on the doorstep. In one glance, this communicates a set of values and agricultural practices unique to Calder Dairy, which customers seek. Opening the farm to visitors helps to build customer relationships, while Calder-branded delivery trucks spread the word.

### Final Thoughts

Calder Dairy is taking concrete steps to help build a local community-based food system. It sells other, non-dairy, local food products on the delivery trucks and through its two retail storefronts. In 2008, it also hosted a one-day food show at the farm to showcase local food businesses. Businesses formed partnerships and customers discovered new, local products.

### Resources for Further Information

[www.calderdairy.com](http://www.calderdairy.com)

734-654-2622 (farm)

313-381-8858 (dairy)



Location	Cleveland, Ohio
Sector	Distribution
Type	Business
Operational Structure	Private Business
Sustainability Factors	Increase Ethnic Food Options

# Dave's Markets

## Overview

For over 80 years Dave's Markets have catered to individual Northeast Ohio communities in 13 area locations. It is one of the few remaining local chain grocery stores in Cleveland and continues to thrive and expand today. Each Dave's features a full grocery, deli, and fresh produce mart and many of the stores cater to specific ethnic populations.



## History

Dave's has always been a family owned and operated organization. In the early 1920s, Alex Saltzman had a small horse-drawn fruit and vegetable cart on the downtown Cleveland streets. He decided to expand the business and opened up his first market on the corner of 33rd and Payne Aves., a location that is still in business. Alex's son Dave soon took over market operations and continued to develop the business. When Dave's son Burt joined the business, he took the initiative to create stores that serve specific Cleveland communities and offer specialty food items based on customer demand. Burt continues to work in the original store location. His sons, Dan and Steve, act as the company's President and Vice President, respectively.

## Inputs

There are over 1,600 employees working at the 13 Northeast Ohio Dave's locations. Grocery start-up costs are about \$6-7 million per store and most of the stores range in size from 20,000-40,000 square feet. Each store has a full service grocery that requires a multitude of food distributors and wholesalers to provide the various grocery components. Dave's purchases many of its grocery items from Giant Eagle, another local Cleveland grocery chain who is also a distributor. Dave's also features a variety of "Ohio Grown" produce.

## Outputs

Dave's Markets function as full service grocery stores and specialize in providing fresh and ethnically appropriate foods.

## Business Process

As a smaller grocer, Dave's is founded on improving the quality offered within existing stores rather than just focusing on opening more stores. In order to stand against the competition, Dave's advertises as a family-owned business. As the economy has slowed, some local Cleveland stores, such as Tops Grocery, closed due to a decrease in sales. Dave's saw these closed stores as an opportunity to expand their business in a sustainable manner and recently purchased four of the closed Tops locations.

## Challenges & Solutions

*Raising start-up capital for small grocers* – There is a high capital cost associated with opening a full-service grocery store, and smaller grocers often have difficulty raising enough money to start and maintain their business. Dave's has established a close relationship with its loaning bank and have gained the lender's confidence in their ability to succeed. They keep the businesses contained and open a new store only when there is sufficient capital and market opportunity to expand.

*Creating a unique niche in the market* – There are a variety of marketing tools that grocery retail outlets employ to attract customers, including fuel perk cards, customer discount cards, and coupons. In order to compete, Dave's Markets has opened specialty grocery stores that cater to various ethnicities within the community. Dave's recently opened up Dave's Mercado to cater to Cleveland's growing Latino population and provides a large kosher foods selection to its Orthodox Jewish population in Cleveland Heights. By catering to the needs of their customers, Dave's has established itself as a staple within the Cleveland community.

*Competing with large chains* – Large grocery retailers have the capacity to buy large quantities of grocery items at lower costs and to mitigate fixed-costs. Smaller grocers are unable to compete with generic brand items, lower prices, and various reward programs. Customers who take public transportation to Dave's can receive a reimbursement for their travel.

## Lessons Learned

*Dedication to the local community* – In addition to catering to the needs of local consumers, Dave's Markets hires most of their employees from within the community and offers full-time benefits. Dave's also participates in many community events and engages in charity efforts throughout the community. Each year, Dave's provides free flu shots to the surrounding communities. Retired owner, Burt Saltzman is also very active in local philanthropy projects and makes monetary and food donations to many Cleveland based charities.

*Study and understand the community* – Grocery retail is an industry that is constantly developing and a retailer must know how to cater to its community members, particularly in inner-city communities. Offering reward programs to low-income customers and specializing in ethnic cuisine are ways to build long-term relationships with community members and retain clientele.

*Build upon being local by offering locally-grown products* – In order to compete with larger chains and other local retailers, Dave's sells local and organically-grown produce. This campaign to sell locally-grown and organic items was a direct response to customer requests.

## Resources for Further Information

[www.davesmarkets.com](http://www.davesmarkets.com)  
216-763-3200



Location	Detroit, Michigan
Sector	Production
Organizational Structure	Non-Profit Organization
Sustainability Factors	Reuse Vacant Land, Develop Workforce and/or Entrepreneurialism

## Earthworks Urban Farm



*Greenhouses are used to start seedlings at the end of Winter*

### Overview

Earthworks Urban Farm, a program of the Capuchin Soup Kitchen in Detroit, MI, is a place of community service, education, and environmental connection for the surrounding community. Earthworks seeks to be a working example of social justice and **food security** in action, educating the community about their food and its origins. The farm uses the majority of its harvested produce to supply fresh fruits and vegetables to the Capuchin Soup Kitchen, which is adjacent to two of the farm's fields.

Earthworks does not exist to be a hand-out to poor residents of Detroit, but rather a hand-up to all those community members wishing to enjoy healthy, local, and fresh produce. The organization hopes that outreach efforts will inspire self-motivated gardeners throughout the community and surrounding the farm, and that those gardeners will spread their knowledge to others, branching out and creating their own urban farms throughout the City of Detroit.

### History

Earthworks Urban Farm was started in 1997 when Capuchin Friar Rick Samyn started a garden connected to the Capuchin Soup Kitchen. The mission of the Capuchin Franciscan order of Catholic Brothers is to be in harmony with nature, which traditionally includes the cultivation and harvesting of food, and the care and feeding of those in need. Earthworks Urban Farm addresses this mission through its goal to "address the systemic causes of poverty, broken relationships, and a wounded Earth" in Detroit. The farm also works with other food related non-profit organizations, including Gleaners Community Food Bank.

### Inputs

Earthworks Urban Farm is a program of the Capuchin Soup Kitchen, overseen by the Capuchins of the Province of Saint Joseph. The Capuchins, with the assistance of private donations and volunteer labor, sponsor the farming operation. Through these efforts, Earthworks successfully farms three lots in its immediate vicinity, as well as setting up a greenhouse atop capped contaminated soil on the soup kitchen's property.

### Outputs

In accordance with their goal of helping those in need, Earthworks, in concert with the Wayne County Department of Health, has created Project FRESH. Project FRESH works in conjunction with the **WIC (Women, Infants and Children) assistance program** to integrate fresh produce into the diets of low-income families by providing special coupons, accepted at local farm stands, to those most in need. To further promote this initiative and address Detroiters' severe lack of transportation options, Earthworks brings their farmers' market to the neighborhoods through weekly events at local health clinics. Approximately 750 people participating in **WIC** currently receive project FRESH coupons.

Youth education is another important output of Earthworks Farm. In collaboration with a local Lutheran church, the farm supports Growing Healthy Kids, a youth enrichment program that is facilitated by four adult volunteers each week. Growing Healthy Kids seeks to educate youth about the benefits and fun of growing, cooking, and eating local and homegrown foods. Roughly 20 children participate in this program regularly.

Finally, as part of Earthworks' mission to empower the community with the tools, resources, and personal motivation for change, Earthworks provides community members with the supplies to start their own urban gardens. Earthworks grows over 100,000 vegetable seedlings for distribution to local families, community gardens, and school gardens through the Garden Resource Program Collaborative.

*Jam made from farm-grown grapes becomes a value-added product and instrument of community outreach.*





*Left: Seedlings thrive in a simple greenhouse while it is still freezing outside.*

*Above: Beehives contribute to the farm's diversity.*

*Right: The surrounding neighborhood is woven within the fabric of Earthworks. Vacant residential lots become fertile ground.*



### Business Process

Earthworks Farm finances the majority of its operations through a combination of private and corporate donations to the Capuchin Soup Kitchen. Any income generated by the sale of value-added products produced by the farm, such as the jarred jams and honey, goes to covering production costs. Earthworks is run by a small group of fulltime staff, and depends on the assistance of the 10-20 volunteers who participate in their bi-weekly volunteer days.

### Challenges & Solutions

*Outreach* – One of the biggest challenges facing Earthworks staff is ensuring that the Farm truly addresses the needs of the community and meaningfully involves community members. In order to address the challenges faced by the farm and neighborhood, Earthworks has started working on a number of outreach efforts, including providing space for neighborhood residents to grow their own food and working to inspire those aspiring to grow their own food to sell at market. Earthworks is also supporting a fledgling Mobile Market program, which functions like a bookmobile or ice cream truck to supplying fresh produce to underserved neighborhoods. In addition, the farm has begun researching a Healthy Cornerstores project to provide healthy, fresh food in existing corner stores.

### Lessons Learned

*Build educational programs to improve self-sufficiency* – The Earthworks Urban Farm has become an example of how a community can contribute to the food system, and become self-reliant based on educational programs. The programs foster independence and an understanding of the necessity of a community-based food system.

*Make alternative food sources more accessible* – Earthworks advocates for accessibility for alternative food sources such as farmers' markets. This includes the promotion of WIC acceptance and food stamps at farmers' markets, and fresh food sales at local clinics.

*Grow on the land available* – Earthworks has utilized the land available to it on nearby vacant lots to create a successful urban farming venture. Supported by the simple season-extending technology of their two hoopouses, Earthworks is able to grow a large amount of fresh food for the community and for their soup kitchen.

### Resources for Further Information

[www.cskdetroit.org/EWG](http://www.cskdetroit.org/EWG)



Location	Ann Arbor, Michigan
Sector	Distributing
Operational Structure	For-Profit Private Organization
Sustainability Factors	Reduce Transportation Energy, Provide Business Opportunity, Build Local Food Infrastructure

## Eat Local Eat Natural

### Overview

Eat Local Eat Natural is attempting to improve the existing food distribution system by minimizing the distribution step of the food chain. By eliminating a stop on the producer to consumer chain, Eat Local Eat Natural is able to deliver the absolute freshest product from the farm to the table.

In addition to eliminating distribution time, Eat Local Eat Natural also selects the highest quality foods to distribute. They believe not only in delivering the freshest product possible, but that the food should be produced using methods that are environmentally sustainable and healthy for both the animal and consumer. In order to meet their goal of providing exclusively local food, Eat Local Eat Natural currently delivers only proteins (meat, poultry, and dairy products) because they are available year round, as opposed to produce, which is limited by the Michigan growing season.

Eat Local Eat Natural is a small, privately-owned company. The company employs fewer than five full time employees, and has only one refrigerated delivery truck. The company's small size enables them to maintain a close relationship with both their suppliers, the farmers, and their customers, the over 25 restaurants who receive weekly deliveries from Eat Local Eat Natural. These relationships are essential to the company's goal of encouraging consumption of fresh, locally-raised products.

### History

Eat Local Eat Natural is a new organization, founded by three local Michigan residents in 2008. While the organization itself might be young, the experience of its workers brings decades of food knowledge to the table, and Eat Local Eat Natural is mixing real world experience with modern aspects of the local food movement.

### Inputs

As a small company, Eat Local Eat Natural does not require a great deal of funding. The start-up capital for the company was provided by one of the founders, who sold his coloring book business to fund a project he felt truly passionate about. The first initiative of Eat Local Eat Natural's three founders was to establish an intimate relationship with all of the farmers they would be working with. They knew that in order to accomplish their goal of bringing "beyond organic" food to their customers, they would have to get to know the farmers to ensure that they could provide a consistent supply of not only organic, but also sustainably raised meat and dairy products.

Because Eat Local Eat Natural's mission is to bring food directly from the farmer to the consumer, in this case local restaurants, the company does not require any warehouse or storage space; the few employees operate out of a small office and their one refrigerated truck. In addition, Eat Local Eat Natural's narrow definition of local – from within a 150-mile radius – keeps gas requirements and therefore emissions to a minimum. As a for-profit, Eat Local Eat Natural is a self-sustaining entity, and supports itself through the small fee they charge for their meat and dairy delivery service.



### Outputs

Although Eat Local Eat Natural does not produce anything, they do provide a very important and quantifiable service: access to fresh, local meat, poultry and dairy products. Eat Local Eat Natural makes it easy for restaurants to purchase and serve these foods, and helps encourage the local food movement in the region it serves.

In addition, the protein Eat Local Eat Natural supplies can be considered an output as they help to move the product from the producer to the end user. By delivering the meat and poultry to the consumer, Eat Local Eat Natural allows the farmer to avoid shipping their animals to United States Department of Agriculture (USDA) slaughterhouses. This benefits the animals, which are often poorly treated en route to the slaughterhouses, the farmers, who are able to save money by avoiding the middleman, and the environment, because there are no emissions from large transport trucks traveling the long distances to the USDA approved slaughterhouses.



### Business Process

Eat Local Eat Natural is seeking to change the way farmers and consumers look at the food distribution system. The organization differs from a usual distributor in that they have absolutely no warehouse space at all. Eat Local Eat Natural's business plan takes foods from the farm directly to the consumer.

There are numerous benefits to direct delivery. First, this minimizes the time that food sits between production and consumption. The only way the food they deliver could be fresher, is if it were consumed at the farm. Second, Eat Local Eat Natural believes in supporting local farmers and producers, and connecting them with a local market. This means that all products are transported within a relatively small geographic area, helping the local economy, creating jobs for local employees, and ensuring that the flow of money in a strained Michigan economy remains in state. Finally, the decreased travel distance minimizes Eat Local Eat Natural's environmental footprint through reduced carbon emission.

Because Eat Local Eat Natural only has one driver and no warehousing, their delivery truck often stops at the same clients multiple times each week. This allows Eat Local Eat Natural to build a solid connection with their producers; this open communication enhances the quality of service for everyone involved, and allows for immediate response to any questions or issues that may arise.

### Challenges & Solutions

*Limited Growing Season* – Eat Local Eat Natural is committed to local sustainable agriculture, thus they only work with farmers operating within a 150-mile radius of Ann Arbor, MI. Though very bountiful, this region has a limited growing season and can only provide fresh produce for part of the year. Eat Local Eat Natural would like to include local produce in their delivery business, but the winter months provide a currently insurmountable challenge. As growing and season-extension technology improves, Eat Local Eat Natural hopes to expand to produce delivery, but for now they are focusing only on products they can supply year round.

### Lessons Learned

*Limit steps between production and consumption* – The key takeaway from Eat Local Eat Natural is that there is no reason for a lag between the production and consumption phases giving food time to sit. Doing so reduces its quality. Eat Local Eat Natural's plan offers the freshest product possible.

*Commit to local business* – Eat Local Eat Natural also demonstrates a commitment to local businesses. Their successful partnership with local enterprises and the networking between local producers and consumers which results provides a valuable asset to the local economy.

### Resources for Further Information

[www.eatlocaleatnatural.com](http://www.eatlocaleatnatural.com)

(734) 996-9000



Location	Ypsilanti, Michigan
Sector	Production
Operational Structure	Operated by Growing Hope, a 501(c)3 Non-Profit
Sustainability Factors	Make Nutritious Food Accessible

## Four Square Society



### Overview

Four Square Society is the brainchild of the non-profit group Growing Hope in Ypsilanti, Michigan. The program has three main aspects: first, the program seeks to encourage intense urban agriculture in a four-by-four-foot plot of land; second, the program educates the public about the benefits of growing food in urban areas; and third, the program acts to collect and quantify data about what participants grow in their four-by-four plots, helping to create a database on the potential yield of intensive urban farming. Although informal data collection has been ongoing for four years, the formal program is currently in its second year, and continues to grow in scope and reach.

The program goals are to give urban farmers a sense of satisfaction from quantifying what they produce in their plots, and to build a network for urban farmers to share information and experiences. Additionally, the information from tracking the yield from the four-by-four plots, combined with qualitative information from an online blog, will be invaluable in the future to support urban agriculture, to encourage and inspire new farmers, and to educate the public on the benefits of urban agriculture.

### History

Four Square Society has evolved since its conceptualization in 2007. Growing Hope, the parent organization, recognized the dearth of quantifiable data on the yield of urban agriculture, and the Four Square program grew from the question: “What can you grow in a small space?” A four-by-four-foot square seemed to be a reasonable size for farming in an urban area, and the Four Square Society grew from there. The program was designed for people who are excited about growing food in small and urban spaces, and encourages participants to grow food for their dinner table, for donation, or for sale. Participants in the program make a commitment to track the amount of food produced in their four-by-four-foot plots, reporting this information back to Growing Hope, and in exchange, they receive support and encouragement from Growing Hope and other participants. Members in the program have access to online resources, in addition to blogs and email lists, where they can share stories, pictures, and survey information with Growing Hope and other gardeners.

The true success of the program has come from its broad appeal. Four Square Society became the program’s name for both its charm and the sense of group connectivity felt by members of the “society.” A four-by-four-foot plot is also an appealing size – it is large enough to give participants some selectiveness about what they choose to grow, and it is small enough so that it does not become overwhelming. Most residents in urban areas have access to a four-by-four-square-foot space, and if this space is not conventional “ground,” Growing Hope sells planting bed kits inexpensively to participants. Although still in its infancy, the program shows true potential, and could yield invaluable information about the impact intensive urban farming can have on a family’s sustenance and wallet.

### Inputs & Outputs

Four Square Society would not be successful without the support of its parent organization, Growing Hope. Growing Hope is sustained through a combination of part-time, grant-funded workers, and volunteers that donate variable amounts of time and energy. The program itself is structured primarily online, where participants have access to electronic resources, email, and the program’s blog. This has been both an advantage and a barrier to the program, offering members the flexibility of the internet while restricting members who have limited access. However, because most program resources are available electronically, the program is less resource-intensive for Growing Hope workers and volunteers.

The program involves constant outreach to encourage and educate participants. Additionally, the Four Square Society requires workers and volunteers to collect and process data, and to formulate the surveys – both quantitative yield surveys and qualitative informational surveys – that provide data from the program at the end of each season. As a result the program requires administrative resources, which has proved a consistency problem for Growing Hope, an organization that depends upon a constant influx and turnover of grant workers and volunteers to operate.

Overall, the program has resulted in a growing network of urban farmers, a slowly growing database of yield information, and information to help encourage and support urban agriculture as a movement. Participants are primarily local, but the program also reaches a few people from other states (mainly because the program is internet-based). While in the short-term the information produced by the program will be used primarily by Growing Hope, the simplicity of the program makes it easily applicable elsewhere, which could result in additional data on intensive urban farming for the global urban agriculture movement.

*Produce from the four-by-four-foot plots is quantified by scale or volume, and is reported to Growing Hope. Photo Courtesy Karen Spangler, Growing Hope*

*Photo opposite page: Volunteers coordinate to build raised beds. Photo Courtesy Karen Spangler, Growing Hope*



### Business Process

Four Square Society is primarily an internet-based operation administered by Growing Hope, which also publicizes the program locally. The administrative requirements include the time to create program resources – such as information packages, data collection sheets, surveys and newsletters – and time to organize and process collected surveys. While Growing Hope operates on minimal resources, and relies upon grant funding to employ part-time workers, Four Square still requires some outside financing.

There is a mechanism that could potentially expand in the future to raise funds. Growing Hope creates bed kits from simple hardware-store supplies, and sells them at the local Farmers' Market to participants. The kits are inexpensive to buy and equally inexpensive for Growing Hope to create, yielding a net gain on the sale. Additionally, Growing Hope creates kitchen-garden kits, which supply growers with the seeds necessary to fill their plots with a variety of produce, and container gardens. These are also sold at a net gain, allowing Growing Hope to establish a small fund to support the program. Although it is currently insufficient to cover all program costs, there is opportunity to expand this function so that the program becomes self-sustaining.

### Challenges & Solutions

Once the program became officially formalized in 2008, organizers began to address the most significant barrier to the program: participant follow-through with tracking and reporting. The program recognized early on the difficulty participants had with logging the yield on their garden – many participants collect whatever is ripe in the garden in the middle of preparing their meals – and quantifying this information created an extra step in the process. The program intends to evolve to a point where each participant receives a kitchen-scale to quickly weigh the gardens' yields, but at the moment there are insufficient resources to make this a reality. In the meantime, Four Square has gotten creative, giving participants an easier way to quantify without a scale, using common household items (a gallon milk jug with the top cut off, a ziplock bag, a pint container from the market) to measure yield by volume, not weight. The prerogative of the program is to make data collection as simple and easy as possible for members, and with limited resources, volumetric measurements are a good solution.

Another challenge to Four Square Society is worker and volunteer turnover. An Undergraduate Research Opportunity Program (UROP) student has typically managed Four Square Society, and although Growing Hope's partnership with this program has been consistent, the high rate of turnover makes consistency on an individual level a problem, and administrative follow-through often suffers as a result. In 2008, one of the workers created a manual to help guide each intern and volunteer through the entire process of administering the program, from the beginning of the season to the end, and so far this has proved a good solution to the problem.

A final challenge to the program is the administrative resources that it requires. As a primarily internet-based program, the necessary resources to keep the program going are limited, but it still requires staff time and energy to create the necessary materials for members. For now, the burden of keeping the program energized lies with Growing Hope, which provides members with an online blog and news emails to encourage members to keep participating.



### Lessons Learned

Four Square Society has been successful as a result of a few key factors. First, the program has the support of its parent organization, which has the resources to maintain the program despite the fact that it is not yet self-sustaining.

Second, the program has the potential to become self-sustaining through the sales of bed kits, but currently prefers to make the program as accessible as possible, which means keeping it low-cost or free to members.

Third, the program is driven by the desire to remedy the current lack of quantifiable information on intense urban agriculture, encouraging both members and administrators to invest in the program for the future payoff.

Finally, the program has successfully encouraged both new and experienced growers to participate, extending the reach of urban agriculture in Ypsilanti and beyond. The program has paired beginners with “garden mentors,” who share their knowledge and expertise, overcoming a potential barrier to beginners. The program itself has strong potential, and in the future will result not only in quantifiable data on intensive urban agriculture, but also in the information and resources necessary to encourage urban agriculture more broadly.

### Resources for further information

[www.growinghope.net/foursquaresociety](http://www.growinghope.net/foursquaresociety) (Program)

[www.growinghope.net](http://www.growinghope.net) (Growing Hope)

[www.foursquaresociety.blogspot.com](http://www.foursquaresociety.blogspot.com) (Blog)



Location	Berlington, Vermont
Sector	Processing & End of Life (?)
Organizational Structure	501(c)3 Non-Profit
Sustainability Factors	Engage Youth, Make Nutritious Food Affordable, Mitigate Soil Contamination, Recycle Waste, Provide Business Opportunity, Create Jobs

## The Intervale Center

### Overview

The Intervale Center is Northwestern Vermont's local Food Hub. This 350-acre farm-scape is located within walking distance of downtown Burlington, Vermont. The Intervale Center was founded in 1986, with the initial goal of restoring soil health by composting and increasing Burlington's farming potential by transforming the local food system. Commitment to achieving these goals, matched with the Center's dedication to supporting local farmers, has made Intervale increasingly successful over the last 20 years. It is the mission of the Intervale Center to develop farm and land-based enterprises that generate economic and social opportunity while protecting natural resources. The Intervale Center consists of many programs and enterprises that seek to fulfill this mission, including the Healthy City Youth Farm, Composting Enterprise, Agricultural Development Services, Conservation Nursery, the Calkins Farmstead and the Food Enterprise Center. The numerous thriving programs supported by the Intervale Center make it a model for organizations around the country looking to adopt best management practices in the field of sustainable agriculture. This case study will focus on two innovative programs, Healthy City Program and Agricultural Development Services.



### History

The Intervale Center is a 350-acre area of land with centuries of agricultural history situated in a valley between two mountains in downtown Burlington. For decades, this land suffered the abuses of chemical heavy non-organic farming and was the "unofficial" dumping ground for Burlington's waste and sewage sludge through the mid-1980s. In an effort to begin cleanup and restore the land, Burlington resident Will Raap approached then Mayor of Burlington Bernie Sanders with a proposal to reclaim and restore the property. This proposal became the Intervale Center, which was officially founded in 1986.

Initially, the goal of the Intervale Center was to restore the soils through composting and simple site cleanup. The Center began as a Saturday drop-off program for yard waste, but soon grew to become Vermont's first community composting center. The Intervale Center established walking trails, cleared space for canoe access, and planted display gardens to encourage community engagement. In 1989, only three years after Rapp started the Intervale Center, a small one-acre farm within the property established Vermont's first **Community Supported Agriculture (CSA)** program, which supplied fresh produce to 20 families.

Since 1989, the organizations has continued to replenish the soil, increase local farming, spread awareness and education about the food system, and create a network of farming services dedicated to sustaining new and existing farms within the area and throughout Vermont. In addition to their agricultural goals, the Center also works with Native American Abenaki populations to preserve their heritage and protect significant archaeological resources in the area.

### Program One: Healthy City Program

Started in 2002, the mission of the Healthy City Program is to create a community of teens and adults dedicated to growing healthy food for themselves, their families, and low-income individuals in the Burlington area. The goals of the program are to 1) foster connections between youth, the land, and the community; 2) to increase access to locally-grown fresh food in schools and under-served areas of Burlington; and 3) to provide alternative education, skills training and paid summer work opportunities for at-risk youth aged 13-16. In order to fulfill its mission, the Healthy City program runs three programs: the Gleaning Project, to donate unsellable yet fresh and edible produce to local food banks and needy families; the Burlington School Food Project, a collaboration between the Intervale Center and eight other local organizations to host educational field trips on the farms and to provide fresh local produce to Burlington schools; and the Youth Farm, Intervale Center's summer employment and educational program for teens.

### Inputs & Outputs of the Healthy City Program

In 2008, 25 Healthy City teens worked 186 hours each, harvesting and processing produce from community-based farms for the Burlington School District's 2008-2009 school year. In addition, employees of the Youth Farm sliced and diced local vegetables for the free summer lunch program, serving 1,600 low-income students with produce and nutritional lunches.

Despite flooding at the beginning of the season, in 2008 the **CSA** distributed 70 food shares, including 54 to seniors. Additionally, the Gleaning Project allowed Healthy City to provide wholesale food to the Chittenden Emergency Food Shelf, Fletcher Allen Health Care, and the Burlington School District. In total, gleaners collected over 30,000 lbs. of food, which supplied quality produce to low-income members of the community.

In addition to this work, more than 350 volunteers spent approximately 1,500 hours pulling weeds, harvesting vegetables, and planting seedlings. Without the services provided by volunteers, the Healthy City Program would be far less successful at accomplishing its overall goal of enriching the community through food, education, and hands-on experiences.



*Left: Calkins Farmstead houses the Intervale Center's offices and is the gateway to the land which it stewards.*

*Above: Healthy City's Youth Farm provides opportunities and fosters connection between youth and the land.*

## Program Two: Agricultural Development Services

The Intervale Center's Agricultural Development Services consist of three programs that support the development of sustainable farms and the local food system. Efforts of these programs are community-based, focusing on the Chittenden County foodshed. In order to fulfill its goals, the Agricultural Development Services runs three programs, the Farm Venture, Success on Farms, and the Food Hub.

Founded in 1990, the Farm Venture Program creates opportunities for new farmers by eliminating financial start-up barriers. Using the model of a business incubator, this program leases land, farming equipment, greenhouses, and storage space at a subsidized rate to small farming operations looking to produce organic food. Additionally, the Intervale Center offers technical and mechanical support to new farmers, as well as marketing and business planning resources. This farming incubator also offers the expertise of farmers that have graduated from the program. Prior to being accepted, every incubator farmer must agree to mentor other new farmers upon graduation from the program. This farming support system creates a social network that is integral to the success of new farmers. After just three years as an Incubator farmer, participants graduate and become Enterprise farmers. At this time, farmers may continue leasing land on the Intervale Center's property, but are required to pay the full price for services. Fees increase to cover the unsubsidized operating costs of the organization's services. Farmers may also relocate their farms beyond the Intervale Center.

Success on Farms is a farm viability program that the Intervale Center founded in 2002. Growing out of the Farm Venture Program, Success on Farms started as a pilot project to increase the economic viability of Vermont farming operations. Over a two-year period, staff works one-on-one with selected farmers throughout the state to provide support and individualized business planning assistance. A critical part of this program is self-evaluation. Each participating farmer is required to assess his/her farming practice, which develops critical thinking skills necessary to future success. Through specialized support from the program and individual reflection, farmers are able to expand their markets, increase revenues, and achieve unique self-defined goals. Additionally, the program connects farmers to technical assistance providers such as lenders, extension agents, and tax consultants, who help farmers with production, distribution, processing, and marketing of their products. The overall goal of Success on Farms is to create a sincere and lasting relationship between Vermont's farmers and those dedicated to their success.

Started in 2007, the Food Hub is a project focused on meeting Burlington's increased demands for local agricultural products by supporting the local food economy. The Intervale Center is committed to building a community-based food system that connects Vermont residents to accessible, profitable, and fair food choices. The organization fulfills these goals by working with farmers and connecting them to new and well-established markets. In 2008, the Food Hub launched its first enterprise program, the Food Basket. The Food Basket is a multi-farm **CSA** that delivers fresh produce and agricultural products to local workplaces. An integral component of the Food Hub is research. The Intervale Center dedicates itself to furthering the local food movement in Vermont and supporting the farming community through vital research projects.

## Inputs & Outputs of Agricultural Development Services

In 2008, the Farm Venture Program was successful. Twelve farms located on the Intervale Center's land produced over 1.1 million lbs. of food, contributing nearly \$1,000,000 to Vermont's local economy. From green beans to free-range chickens, farms produced nearly 10% of Burlington's fresh produce needs. These farms not only produce food for the community, but supply jobs to more than 60 community residents. The scale of the Intervale Center's operation is a model for any community-based food system.

In 2008, Success on Farms enrolled its 60th farm. In just six years, the program reached an average of 10 farms per year. From helping farmers to find vacation time, to converting a farm from conventional to organic practices, the Success on Farms program has strengthened Vermont's food system.

The Food Hub started its first program in 2008, delivering weekly food shares to 125 members in local workplaces. Not only did workplace delivery save on transportation and distribution costs, but it also served as free advertising for the program. Continued through the cold Burlington winter, employees were able to share their weekly assortment of farm products and their satisfaction with the program with colleagues. Fifteen local farms contributed products to the program to sustain it year round, earning a collective total of \$70,000 in gross sales for summer shares and \$35,000 in gross sales for winter shares.

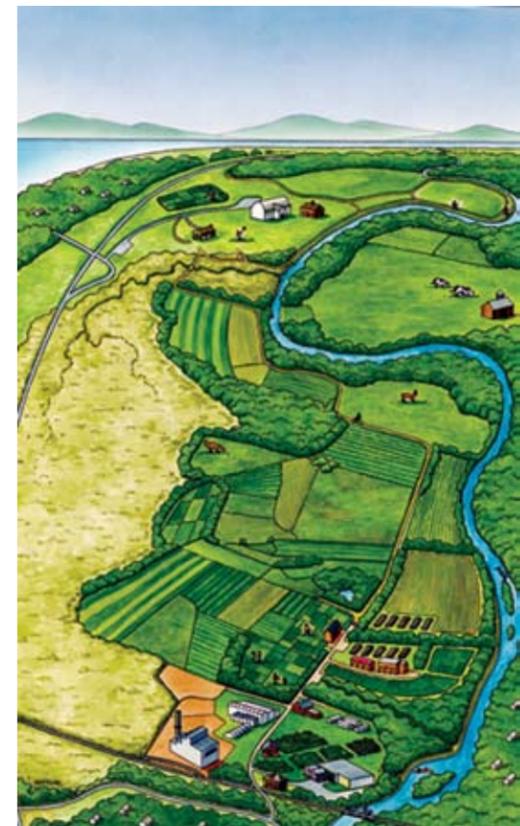
## Business Process

The Intervale Center is a multi-faceted organization that relies on revenues from various sources, including grant funding, fundraising, compost sales, program products and services, and partnerships with state-level organizations. Although it has achieved economic sustainability in some programs, it still relies on supplemental sources from donations and grants for others. For example, 20% of the land and equipment costs for the incubator farms are subsidized by the governmental Farms Program, and Healthy City depends on outside funding for all of its programming. One creative funding arrangement involves the Vermont Housing and Conservation Board, a quasi-public organization funded by the State, which contracted the Intervale Center to run Success on Farms and funds the program in its entirety. The organization hopes that more of its programs will develop self-sustaining revenue streams to reduce their reliance on outside funding sources. In 2008, the Center earned 40% of revenues as income, and 60% through fundraising and grants.



*Top: The land farmed on the Intervale Center's property contributes 60 jobs to Burlington's economy.*

*Bottom: In 2008, farmers produced over 1 million pounds of produce on Intervale Center land.*





*Top: Compost from the Intervale Center's composting operation is available for purchase.*

*Middle: Incubator farmers share farming equipment, increasing their chance of success by reducing startup costs.*

## Challenges & Solutions

Challenges facing the Intervale Center are constantly changing. As the organization transitions and grows, new and unique issues test its ability to adapt while continuing to advance its mission. Currently, the City of Burlington is a supportive partner of the Intervale Center. This 20-year collaboration between the two institutions is responsible for Intervale Center's increased success and ability to connect with the greater Burlington community. The City is instrumental in assisting the organization with its composting operations. The compost program's unexpected growth in its first few years resulted in management challenges, as costs started outweighing the benefits of the operation. After six years of using the compost to replenish the soil, Intervale Center decided to start creating compost commercially and selling it to the community. But transitioning into a commercial business presented unknown challenges; despite a supportive municipal government, the organization faced permitting disputes and lengthy negotiations that threatened the future success of the organization. Fortunately, Intervale Center was able to relinquish its compost operation and responsibilities to the county Solid Waste District, which now manages the program. Shifting this obligation allows the organization to focus on expanding and strengthening current programs, as well as reducing the revenues lost in maintaining the program.

Another significant challenge facing the organization centers on the Federal Emergency Management Agency's (FEMA) floodplain regulations. Nearly the entire 350-acre farmstead is located within a 100-year floodplain, as defined by FEMA. The flood regulations, matched with local zoning specifications and state-level best agricultural practices can conflict with infrastructure essential to successful agriculture. Hoophouses, greenhouses, barns, and fences are necessary for everyday farming operations; however, they present problems due to their location within the floodplain. Intervale Center is currently working with FEMA to reexamine the floodplain boundaries, as current flood maps do not represent up-to-date information. The organization hopes that technological advances will help refine floodplain boundaries for necessary infrastructure placement.

## Lessons Learned

The Intervale Center is a model of social and environmental sustainability. The organization exemplifies the principals of social sustainability by building community, working with immigrants to Burlington, promoting youth education and training programs, and ensuring **food security** in the community. Intervale Center provides a social good necessary to the community and believes that the desirability and livability of Burlington is, in part, the result of the organization's success. By preserving land by employing less-ecologically damaging agricultural practices, Intervale Center ensures that it implements long-term management practices that meet Burlington's criteria for environmental sustainability. These practices lead to locally produced food that stays in the community, improved wildlife biodiversity, increased carbon sequestration, preservation of intact riparian zones, and community-based jobs.

A second important lesson from Intervale Center is the significance of a strong relationship with municipal government. Since the organization's birth, the City of Burlington has been supportive of the organization. From developing agreements over land use, to selling and sharing property, the local government and the Center have worked together to overcome obstacles and find solutions to problems. The composting operation is an example of how local government has worked with the organization to ensure that a desired community service continues to exist. Any organization pursuing urban agriculture must establish a working relationship with their local government, as this is a necessary component in developing a community-based sustainable food system.

The final and most crucial message from Intervale Center is to remain focused. Too many organizations attempt to take on more programs than they can adequately run. Rather than spreading the organization's resources across multiple projects, the Intervale Center recommends focusing on a few programs and keeping them as the focal point. One organization cannot fill every gap in the local food system, nor should they try. Although creating a grand vision is integral in steering an organization forward, a solid base must always remain intact. An organization must stick to its vision and remember that although funding is essential, chasing funding does not create a sustainable organization, or satisfy the criteria of economic sustainability. In practice, this means tirelessly working to accomplish the mission through every program, a model that has and continues to bring success to the Intervale Center.

## Resources for Further Information

[www.intervale.org](http://www.intervale.org)

802-660-0440



Location	San Juan County, Washington
Sector	Processing
Organizational Structure	Member-Owned Cooperative
Sustainability Factors	Build Local Food Infrastructure

## Island Grown Farmers Cooperative



Top: Cows graze on San Juan Island.

Bottom: Preparing mobile unit for slaughter.



### Overview

The Island Grown Farmers Cooperative (IGFC) operates a mobile facility for slaughtering animals and processing meat in northwest Washington, primarily in San Juan County. Frustrated with the dwindling numbers and accessibility of slaughterhouses in the state, farmers and residents on Lopez Island, Washington, and the Lopez Island Community Land Trust, worked together to establish the first United States Department of Agriculture (USDA)-certified mobile slaughterhouse in the United States. This allowed farmers to continue raising their animals using sustainable methods, such as grazing, without undue hardship and high costs. The small size of the operation facilitates excellent relationships between the farmers, butchers, inspectors, and customers. The IGFC's motto: "Family Farms - Feeding our Community - Sustaining the Environment," encapsulates its mission and purpose.

### History

In the late 1990s, farmers on Lopez Island became increasingly frustrated as the number of slaughterhouses in the state of Washington dwindled, making it increasingly difficult, costly, and time-consuming to slaughter animals and practice sustainable animal husbandry methods. This frustration, combined with increased consumer consciousness about the origins of their food, and a rise in demand for locally-sourced and sustainably-raised meat, triggered efforts to develop an innovative solution. A group of 15 farmers initially explored building a slaughterhouse on the island, but neighbors' complaints and cost considerations quickly ruled out the idea. Around this time, Lopez Island farmer Bruce Dunlop heard about a rancher in Texas who slaughtered antelope in a trailer. He traveled there to learn about it, and returned to Lopez with a proposal to create a slaughterhouse-in-a-trailer that could travel from farm to farm throughout the islands and other parts of the state. In 2000, the farmers formed the Island Grown Farmers Cooperative, worked together to design a model mobile slaughterhouse, and submitted it for USDA approval. While initially hesitant, as this was a completely innovative idea, the USDA finally gave approval and provided a USDA inspector who travels to farms with the trailer. The IGFC's mobile meat abattoir began in 2002, and it has been highly successful, with membership increasing each year. The trailer started out with one butcher, and has since hired another to keep up with demand. Both farmers and consumers are benefiting immensely from this arrangement, and it has paved the way for small-scale animal husbandry to continue on the San Juan Islands.

### Inputs & Outputs

The Island Grown Farmers' Cooperative requires several types of inputs. The most crucial piece of equipment necessary is the trailer itself and the diesel truck that pulls it, which today would cost approximately \$175,000. The IGFC also employs two full-time butchers, a USDA inspector who travels around with the trailer, and three-five employees, depending on the season, at the meat packing facility in Bow, Washington. The facility, located in a small commercial building that previously housed another meat packing facility, holds the equipment necessary to process pork, lamb, goat, and beef products. The skilled butchers divide their time between the mobile slaughter unit, and the facility, and can **custom butcher** the animals as the farmers or purchasers desire. Waste from slaughtered animals was one of the USDA's chief concerns. The IGFC addressed this matter by pledging that farmers would properly dispose all unused animal parts, primarily as compost, directly returning nutrients to the soil.

### Business Process

The IGFC is a member-owned and governed organization, therefore farmers' costs are kept to a minimum. Membership in the cooperative has grown from 15 farmers in 2002 to over 60 by 2009. Membership in the IGFC is not required to take advantage of the services, but members are given priority, and demand is at an all-time high. The slaughter unit operates three-four days a week, and on the remaining weekdays it is washed and inspected for maintenance. Farmers pay a flat price per animal for slaughter, typically \$105 for beef, \$55 for hogs, and \$40 for lambs and goats. The IGFC offers discount rates for animals slaughtered during the off-season between February 1st and March 31st. Farmers pay per-pound for processing at the plant. Ground meat and sausage are the cheapest form of processing, at \$.25 per pound, and specific cuts require additional costs. Members receive equity credit, and each member's account is credited with a portion of the slaughter fees.



Top: Sheep awaiting slaughter.





*The mobile unit*

### Challenges & Solutions

The IGFC formed in response to a number of challenges to producing meat sustainably. Stringent USDA regulations make it increasingly difficult and costly for small farmers to comply and still maintain viable slaughter operations. Simultaneously, the number of processing facilities nationwide is decreasing, mainly due to their unpopularity among neighboring residents and competition from large centralized facilities that benefit from economies of scale. Meanwhile, pressure from the demand side is increasing, as many consumers are gaining awareness of the origins of their meat, seeking sustainably-raised and humanely-treated products that had not traveled hundreds of miles to reach their table. This presented quite a conundrum to the farmers of the San Juan Islands, as the closest facility was located over 150 miles away, and did not always serve all of the farmers' needs. After finding that building an on-site slaughter facility was both unpopular with neighbors and prohibitively expensive, farmers came together to find an alternative solution.

Several constituencies and stakeholders, including farmers, San Juan Islands residents, and the Lopez Island Community Land Trust, worked together to establish the idea of a mobile slaughterhouse based on a cooperative model. All members contributed ideas, research, and optimism. The model that they settled on reflects the prevailing attitude on Lopez Island: it is necessary to work together and share resources in order to address problems in a progressive manner.

### Lessons Learned

The residents, farmers, and organizations that helped create the IGFC learned many lessons in the process. First, they learned that working together to make the most of limited resources is key to their creation and longevity. None of the actors in the process could have made the IGFC possible independently. The very purpose of a cooperative is to meet individual farmers' common economic, social, and cultural needs through a jointly-owned and democratically-controlled enterprise. By pooling resources and using a common facility, the farmers are able to continue raising animals sustainably in the most cost-effective and efficient way possible for them.

Second, those invested in initiating the IGFC did not shy away from innovation. Even though the USDA's regulations are unfriendly to small-scale meat producers and the odds were stacked against them, the IGFC still went ahead and presented their idea. The application process involved members of several different constituencies, who worked together to formulate the idea, facilitate the approval process, bring the cooperative into reality, and operate and manage it. The IGFC would not have been possible but for the involvement of all of these parties, as well as their ability to innovate and set a new course that others across the country might now be able to follow.

### Resources for Further Information

[www.igfcmeats.com](http://www.igfcmeats.com) (Island Grown Farmers Cooperative)

[www.lclt.org](http://www.lclt.org) (Lopez Island Community Land Trust)

### Lopez Island School Program

Lopez Island has demonstrated its commitment to sustainable community food systems in many ways, and its ability to initiate the IGFC illustrates just one part of its larger efforts. Due to its island location, residents are more aware of their vulnerability and dependence on outside sources for food and energy. The Lopez Island School recently developed a gardening and food education program. Part of the schoolyard has been converted into a garden, and students help plant and harvest fruits and vegetables. Older students travel to a nearby farm for an elective course in sustainable agriculture. Students also sample local cuisine at school lunches, where school chefs serve locally-grown vegetables, including bowls of raw vegetables like carrots placed out on tables while they are waiting to be served. Once a month, local chefs prepare "Evening Meals at School," which feature local, seasonal foods, served in the Lopez Island School multipurpose room. This event attracts a variety of community members and has been very successful increasing awareness about an alternative, sustainable, community-based food movement. Lopez Island farmers were also successful in creating a weekly farmers' market, where they distribute fresh produce, eggs, milk, and meat products slaughtered in the mobile abattoir.



Location	Holyoke, Massachusetts
Sector	Production
Organizational Structure	Private Non-Profit
Sustainability Factors	Increase Ethnic Food Options, Develop Workforce and/or Entrepreneurialism, Create Jobs

## Nuestras Raíces



Top: One of the organization's gardens and barns.

Bottom: Handmade sign depicts the network of farms



### Overview

Nuestras Raíces (“Our Roots”) is an organization that “promotes economic, human and community development in Holyoke, Massachusetts, through projects relating to food, agriculture and the environment.” Since its inception, the organization has used the Puerto Rican community’s connection to farming and gardening as a tool to develop youth leadership, job opportunities, and community and cultural pride. Holyoke is home to the largest percentage of Puerto Ricans in the nation, composing more than 40% of the City’s population. Many of these residents moved to the city in the 1940s and 50s to work in the region’s tobacco fields and apple orchards. Combined with agricultural knowledge brought from Puerto Rico and skills learned as farm workers, the community has a strong agricultural tradition that is still evident in the community today.

Nuestras Raíces serves as a source of support and technical expertise for people in Holyoke who have creative and innovative ideas about how to improve their community. The organization fosters the enthusiasm and dedication necessary to create programs that will support a vital and thriving community by building on the community’s agricultural skill base.

### History

Holyoke is a small city of 40,000 people that sits on the Connecticut River in central Massachusetts. A former manufacturing giant, once known as the “Paper City,” Holyoke has suffered major economic decline over the last 75 years, and currently struggles with unemployment rates around 31%. Additionally, a large number of vacant, abandoned, and blighted properties detract from the few available opportunities and resources, challenging the City and its residents. Furthermore, Holyoke is the 6<sup>th</sup> poorest city in the country, and the poorest in the state, with 50% of Hispanics in Hampden County living below the poverty line.

In spite of these circumstances, Nuestras Raíces forges ahead in developing programs that respond to these challenges. The organization was formed in 1992 by a group of Puerto Rican former migrant farm workers who sought to take over management of La Finquita, a community garden in south Holyoke. Daniel Ross came on as Executive Director in 1994 and the organization has grown tremendously under his leadership. The organization’s offices are located in the heart of Holyoke’s Puerto Rican neighborhood. Formerly an abandoned building, the community renovated the Centro Agrícola, which now serves as a bi-lingual library, meeting space, greenhouse, and Mi Plaza restaurant.

What began with a small group of former farmers and gardeners from Puerto Rico and a single community garden, today includes eight gardens serving 125 families, and is a thriving community development organization and model for similar organizations around the country. Nuestras Raíces has programming in youth development, job training, women’s leadership, commercial farming and tourism, economic development (restaurant, bakery, farmers market, community kitchen), community education, and also partners with organizations to improve social, environmental and economic conditions throughout the region. Nuestras Raíces is dedicated to tackling the challenges facing its community from the ground up, and builds on the skills, drive, and commitment to culture that Holyoke’s Puerto Rican community brings to its projects.

Connections to Puerto Rico are apparent everywhere in the organization’s projects and throughout downtown Holyoke. An important part of what happens in the community gardens and the farms is the cultivation of traditional Puerto Rican crops that may otherwise not be available in Holyoke, or be very expensive and highly processed. From the garden produce, members make their own sofrito, a traditional Puerto Rican condiment that they also sell at the Holyoke Farmers’ Market. Another way the organization addresses culturally appropriate food crops is by investing in season-extending technologies. The Centro Agrícola houses a greenhouse used to grow crops like bananas and other tropical plants that cannot survive the New England climate. In addition, members have worked with extensionists from the University of Massachusetts to develop more cold-tolerant strains of culturally important crops.



### Inputs & Outputs

Currently, Nuestras Raíces employs 20 adult staff members, and 10 youth leaders. The organization functions with an annual budget of \$1 million, which comes mostly from grant money given by the United States Department of Agriculture, the Environmental Protection Agency, and private foundations, such as the Kellogg Foundation and the Western Massachusetts Community Foundation. The group also receives funding from private donors, and exhibits a level of economic sustainability by earning income from its own enterprises. Nuestras Raíces engages 150 local youth in its many programs every year. Additionally, the organization's eight community gardens and two children's gardens serve 125 families. A study conducted by Mt. Holyoke College, showed that each family's garden plot grows more than \$1,000 in produce over the course of a season. The organization hopes that this data provides evidence to the City of the economic advantages of community gardening. The group's goal is to put money aside and ultimately purchase the community garden sites, putting them into a land trust.

*Top right: Cultural identity stays strong within the garden.*

*Bottom: Handmade signs herald a community garden.*

### Business Process

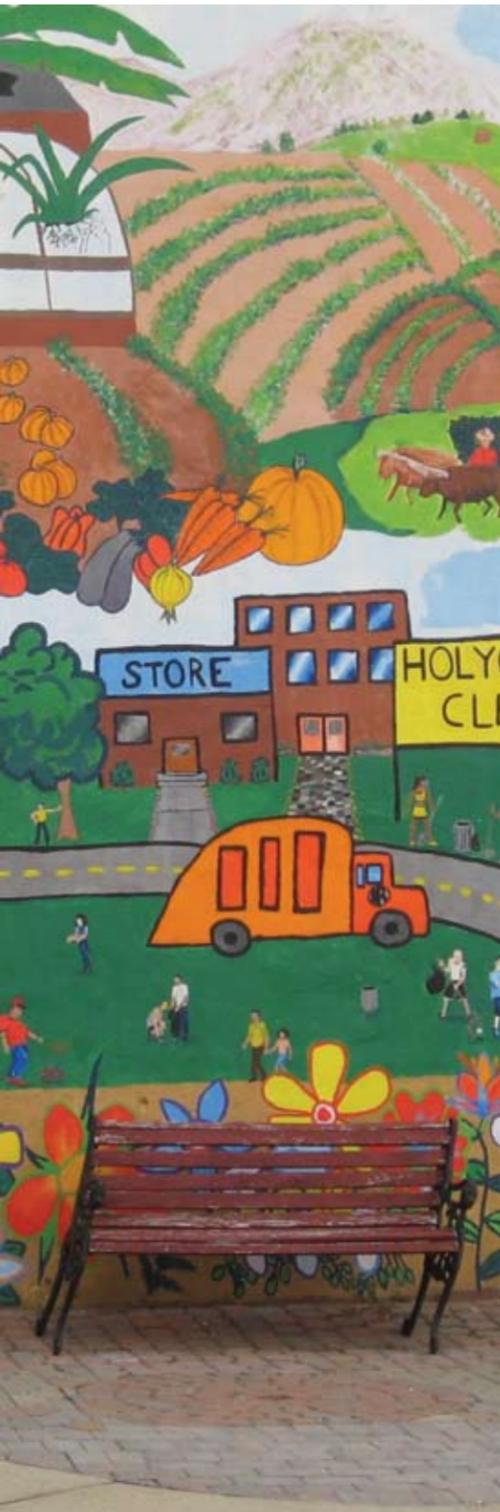
The organization uses a formal interview process whereby volunteers, often youth, survey neighborhoods to find out how people are doing, what they need, and what they would like to see in the community. It is from this grassroots canvassing that the organization formulates its programs. The approach is a holistic one that seeks to build trust and develop relationships with a community that has historically been ignored by city agencies. Daniel Ross explains that trust building is the most important part of the work done by Nuestras Raíces. This model takes the needs and ideas from the community and turns them into projects that address these collective desires.

Youth are an essential part of Nuestras Raíces' work and success. Holyoke has a 68% high school dropout rate, resulting in fewer employment opportunities for the area's youth. These limited opportunities, matched with insufficient experience and practical skills add to this problem. To address these challenges, Nuestras Raíces not only seeks to include youth in programs that enhance their opportunities, but also makes them central to fulfillment of the organization's mission. Employing 10 youth leaders who work in community gardens, at the farmers' market, and the Tierra de Oportunidades farm, provides work opportunities in the community. Many of the enterprises at the farm serve to enhance youth job training and leadership through vegetable farming, tours and sales, a youth-run petting zoo, and environmental stewardship. The farm's initial development included strategic planning amongst adult and youth members to decide on its goals and focus.

One of the organization's newest projects is called RootsUp Green Jobs training, which trains youth who have been involved in the justice system in emerging green industries. Through its own research, and collaboration with the Holyoke Mayor's Office, the Department of Youth Services, the New England Farm Workers' Council, and local firms, Nuestras Raíces identified solar heating as a growing regional industry. This year, the organization will prepare 15 youth to take advantage of this emerging opportunity.

*Top, Middle, and Bottom: Murals express the spirit of the organization.*





## Challenges & Solutions

Holyoke approaches economic development like most cities, through strategies to attract manufacturing and high tech industry such as tax incentives and infrastructure development. Sadly, these strategies have done little to bring meaningful change to the poorest residents of the city. Nuestras Raíces, on the other hand, tries to achieve development from the bottom up by creating programming to empower the people who need it most. Nuestras Raíces' work is innovative and unique in Holyoke, their projects that build community, cultural pride, and intergenerational connections, but are not always understood or supported by city policy-makers. To alleviate potential complications with the City, all of Nuestras Raíces' community gardens are located on private land. The group pays insurance on the properties and maintains them in exchange for their use. These properties have proven very successful, both financially and socially.

Currently, the organization struggles with strategic planning and economic sustainability. Because of the community's precarious situation, the organization can often only respond to challenges or opportunities, not anticipate them. As a result, Nuestras Raíces continues to put effort into the many projects it oversees, but struggles to forge a clear direction. In addition, the organization relies almost entirely on private and federal grants for funding. Ross sees this as a weakness, and believes financial independence reflects a fully evolved organization that is entirely community built and driven.

## Modes of Operation

Nuestras Raíces is a private non-profit, overseen by a Board of Directors from the community. Executive Director Daniel Ross stresses that unlike other non-profits, Nuestras Raíces selects its board members for their commitment to the organization and their skills in community organizing, not for their ability to generate funding and donations. Board members are community residents that have demonstrated their commitment to the organization and its mission.

*Left: Murals depict community spirit.*

## Lessons Learned

Nuestras Raíces manages to succeed and flourish in a very difficult environment, utilizing unique approaches that address and transform community challenges. By founding the organization in the roots and skills of the community, Nuestras Raíces is able to build on the rich traditions of farmers and gardeners who cherish the connection to their homeland, families, and culture, and to the community and the earth. Moreover, the organization expands these essential connections to culture, community, and the land, to build intergenerational cooperation, develop cultural pride and ownership among disenfranchised youth, and finally, to stimulate economic and community development.

Community gardens offer a way for Holyoke's Puerto Rican community to engage with the land and their cultural roots, to transform their neighborhoods, and to create community relationships built on shared pride and enthusiasm for gardening.

The Nuestras Raíces model shows that community empowerment begins with the community itself and residents' own vision. In every project, the organization includes youth and incorporates them in decision-making processes and planning. In addition, members have access to inexpensive healthy food, the ability to generate additional household income through the sale of produce, and exposure to the beauty and regenerative effects of the gardens. This enriches the programs immensely while also planting the seeds for a new generation of leaders and residents committed to Holyoke and its unique culture and history.

Members of Nuestras Raíces maintain their focus on the "big picture," while using small programmatic steps to realize it. The organization is very successful in forming partnerships with strategic allies and regional organizations that work on similar issues. For instance, the group leveraged its investment in land stewardship to found the Pioneer Valley Environmental Coalition, which works on important environmental issues facing the region. Later this evolved into the Holyoke Environmental Health Coalition, where Nuestras Raíces is involved in assessing environmental risks in Holyoke. In addition, in 1998, the organization collaborated with a dozen agencies to form the Holyoke Food and Fitness Policy Council, a citywide advisory board to promote **food security** and public health.

Lastly, Nuestras Raíces makes use of strategic relationships to increase its capacity and provide additional opportunities to its members. When a community member approaches the organization with a program idea, Nuestras Raíces always tries to find a way to support the effort by developing the ideas into action plans, finding resources, and building support. If a project would have a positive impact on the community, it is viewed as a net benefit to the organization and its mission, even if it is seemingly un-related to agriculture. The organization brings this same enthusiasm and willingness to the partnerships and relationships the organization is part of, and each new endeavor they approach. If the partnership or program will ultimately enhance opportunities for residents or improve the community, the answer is "yes."

## Resources for Further Information

[www.nuestras-raices.org](http://www.nuestras-raices.org)



Location	Detroit, Michigan
Sector	Distribution
Operational Structure	Private Non-Profit
Sustainability Factors	Engage Youth, Provide Education, Make Nutritious Food Accessible, Develop Workforce and/or Entrepreneurialism

# Peaches and Greens

## Overview

Peaches and Greens is a program that the Central Detroit Christian **Community Development Corporation** (CDC) created in November, 2008 to address the dearth of fresh fruits and vegetables available to residents of Detroit's Woodward Corridor. The program consists of the Peaches and Greens Fresh Produce Market and truck, which the organization uses to distribute and supply produce to local residents. Cooking classes, community gardening, and youth-led neighborhood advocacy programs serve to engage and educate the community about food. With some of the highest obesity, heart disease, and diabetes rates in the country, combined with inaccessibility of grocery stores to many Detroit citizens, this project seeks to reverse and transform central Detroit's food crisis. Through a community driven effort to improve public health, strengthen the local economy, and develop solid land use stewardship, the Central Detroit Christian **CDC** seeks to fill the gap in the local food market and ensure access to fresh produce for Detroit's residents.

## History

Founded in 1993, the Central Detroit Christian **CDC** is the result of a collaboration between local pastors who agreed they could increase their effectiveness by working together. The **CDC** focuses on youth ministry, job training and development, and housing, as well as meeting the community's direct needs through charitable services. The organization launched its first programs in 1994, which focused on youth development through job training and after school and summer activities. Launched in 2008, the Peaches and Greens program consists of a permanent market and truck that sell culturally appropriate fresh fruits and vegetables. The group puts up fliers in neighborhoods to advertise the truck delivery schedule. Using a megaphone to announce its arrival, the truck serves different neighborhoods throughout the Woodward Corridor, reaching residents who are unable to leave home to shop.



Peaches and Greens

## Inputs & Outputs

The Peaches and Greens market is open six days a week for eight hours, conveniently serving the community. The organization makes truck deliveries five days from 9am to noon. Both programs depend on the 14 paid staff and six dedicated volunteers. Primarily funded through grants, the project operates on just less than \$230,000 per year. The organization estimates that the truck serves 20-25 customers daily, depending on the weather. In winter and spring of 2009 youth cooking classes started and the group began preparing gardens for spring planting, and hopes to use its own produce in the market and truck.

## Business Process

Currently the organization buys wholesale produce from the Detroit Produce Terminal, and as Michigan produce becomes available in the spring and summer, the group will buy produce from Eastern Market. Peaches and Greens buys wholesale and marks up produce as any other food retailer would, but tries to keep prices lower than other markets, if only by pennies. Peaches and Greens accepts **EBT** and Bridge cards at this time but is not yet certified to accept **WIC**.

*Photos of Market and gardens courtesy of Peaches and Greens*

## Challenges & Solutions

The entire City of Detroit suffers from high rates of unemployment, and this is especially marked in youth. High School dropout rates in Detroit's Woodward Corridor neighborhoods are close to 75%, making youth engagement in meaningful activities an important goal of the organization. The organization addresses this challenge by seeking to train and employ youth in the produce market and on the truck. In addition, Peaches and Greens partners with community gardeners to engage youth in growing fresh vegetables for sale in the market. Not only do youth participate in growing and selling fresh produce, but they cook it as well. Resulting educational programs include food preparation and cooking classes for youth. The organization selects a maximum of ten youth from the community, annually, to learn recipes from local chefs and cooking enthusiasts. These ten youth then enter the community, teaching and sharing the recipes and new cooking techniques with local residents. In addition to these programs, Peaches and Greens hopes to create a Green Squad of youth community advocates that will work in local convenience and liquor stores to "prepare" them to sell fresh produce. Although not ideal, convenience and liquor stores are fixtures in the Woodward community and serve as the primary place to buy food. The Green Squad will clean the stores inside and out, painting over graffiti and preparing the interiors, making them more attractive, and inviting for the community. When this is completed, the Green Squad will supply the stores with displays and produce. Teens will be responsible for monitoring the stores and restocking the produce. The **CDC** aims to partner with five local stores to launch the Green Squad.

## Resources for Further Information:

[www.centraldetroitchristian.org](http://www.centraldetroitchristian.org)

## Lessons Learned

Peaches and Greens strives to turn community challenges into opportunities for youth development and enrichment, community and economic development, and partnerships that strengthen investment and connections throughout the community it serves. By engaging youth, and building on the strengths already present in the community, Peaches and Greens addresses three of the most challenging and persistent problems facing Detroit: high youth unemployment, public health crises, and inaccessibility of healthy food. The project uses a holistic approach that tackles food production and distribution while pulling as many community members as possible into the process. From convenience store owners, to housebound elders, to cooking and gardening enthusiasts, to underemployed youth, this program seeks to include all community members to create a healthy and thriving community.



# Rainbow Grocery



Location	San Francisco, California
Sector	Distribution
Operational Structure	Cooperative
Sustainability Factors	Make Nutritious Food Affordable, Make Nutritious Food Accessible, Build Local Food Infrastructure



Left: A worker stocks local organic produce; Right: The grocery provides a variety of local dairy products.

## Overview

Rainbow Grocery is a worker-run cooperative in which the workers are the sole company shareholders. The grocery's mission is: "to offer resources, education and a forum for informational exchange for many local communities and organizations." Workers come to Rainbow because of a shared desire to work in a democratic environment while making a difference in the community through providing healthy sustainable food and goods. The grocery prides itself on creating a business that places the ideals of sustainable living into real, everyday practice.

## History

Rainbow Grocery was founded by an ashram, or spiritual community, that operated in San Francisco in the 1970s. The ashram required a macrobiotic vegan diet, so in order to meet their dietary needs they developed a bulk food-purchasing program. This buying program, located in the space that soon became Rainbow Grocery, was developed by an ashram member who knew the pitfalls experienced by the many politically-charged local food stores in San Francisco; in response, he encouraged the grocery to become a spiritually, and not politically, based entity.

The first store opened up in what was then referred to as "skid row," a depressed location in the city that attracted young people affiliated with the counterculture. From these roots, the dedication to serving the community that began with the ashram members grew to a successful operations model that has managed to avoid the political pitfalls that became the undoing of many other local food stores. Rainbow also attributes some of its success to those workers that possessed business skills and other related backgrounds. Additionally, the ability to stay flexible and to expand its product base to provide a wide variety of healthy products geared toward a large number of specific diets has guided Rainbow Grocery on a successful path from the turbulent 1970s onward.

## Inputs

The grocery's food supply is set up on a "Farmers Direct" arrangement, where the grocery contacts and buys directly from the producer whenever possible. This is considered to be a very mutually beneficial relationship, allowing for better prices paid to the farmer, and better prices offered to the consumer. Both the grocery and the farmer save money when they eliminate the cost and labor required to go through a distributor. This arrangement is feasible because the grocery is large enough to buy foods at a sufficient volume.

In a reflection of the ashram's humanitarian philosophy, Rainbow Grocery began with volunteer labor. As the store became more successful, volunteer workers, who were originally compensated only with food, were eventually brought on to the payroll for what was then approximately minimum wage. The store also transitioned to a non-profit entity.

Once the non-profit grocery became economically self-sustaining, the taxable excess funds were reinvested into the grocery through increasing worker compensation and expanding the grocery to include a general store. In order to continue growing into a new, larger facility, Rainbow had to acquire loans from its own customers because banks would not lend money to "a worker collective legally-organized along the lines of a charitable nonprofit." Today Rainbow has overcome this problem, but during their expansion in the 1990s, obtaining funding was a major hurdle.

## Outputs

Rainbow Grocery provides a wide variety of goods to the community, with an emphasis on locally-farmed organic products. To further distinguish local products, Rainbow places special "Locally Grown" labels on the descriptive price tags of products from within 250 miles of San Francisco. The grocery produces a large array of baked goods, beer and wine, bulk foods and herbs, cheeses, prepared foods, and produce, all of which it sells in the store.

One of Rainbow's overall goals is to provide high quality, affordable vegetarian food that is both socially and ecologically responsible. The grocery's buyers strive to support local independent farmers and focus on stocking the freshest seasonable organic fruits and vegetables available. Also, to better serve individual customer's needs and minimize environmental waste, over 800 products are available in bulk, including coffee, beans, bamboo rice, thirty varieties of flour, preserved lemons, and pastas. Rainbow seeks to buy these bulk goods directly from local organic farmers and local manufacturers. Though the grocery places a premium on stocking organic foods whenever possible, they will carry both conventional and organic versions of a product if the organic version is particularly expensive in comparison.

## Business Process

Rainbow reaches out to potential customers through various methods, including a website promoting sales and specials. Recently, Rainbow ran a successful advertising campaign in the Yellow Pages, providing a coupon for people to shop on certain days. This promotion has been so successful that employees have discussed extending business hours on coupon days.

Rainbow Grocery has a total of 265 employees. The people who work at Rainbow work because they believe in the grocery's mission and in the importance of local, sustainable, and organic food. The passionate workers of Rainbow stay at the grocery to do hard work and a good job, and many of the workers have been there for over 20 years.

## Modes of Ownership

Under the Co-Op law of California, there are now no individual owners of Rainbow Grocery. The grocery's workers are its shareholders, as opposed to other food co-ops, which may have patrons as members and employees as employees. All of Rainbow's customers are simply customers, and the store does not offer co-op membership at the consumer level. The grocery became a co-op for tax advantages, and as such its activities are governed by the California state legislature. Accordingly, 100% of the surplus income the store generates is distributed to the employee-shareholders on a sliding scale based on seniority and hours worked.

The grocery's management system is composed of just under 20 autonomous departments which function together as a mini-collective. There is an elected steering committee responsible for managing operations and mediating worker problems. Also, Rainbow prides itself on providing excellent healthcare benefits to its employee-shareholders. They do this by taking a stop-loss insurance plan for healthcare of individual employee-shareholders as an aggregate group. This is a very economical method of providing quality benefits, but is being threatened by large corporate insurance companies looking to phase out such policies.

## Challenges & Solutions

The most significant barrier in the grocery's early years was the issue of legal organization. The grocery was originally legally owned by two individuals who took full legal responsibility for the store and declared the store's operations on their tax forms. As the store grew and became a larger liability, the grocery was able to transition into a non-profit corporation while maintaining their worker-shareholder model.

Throughout the life of Rainbow Grocery, the once grassroots nature of natural and organic food stores has transitioned into a competitive industry. Rainbow struggles to find its place in a time when large scale corporate markets attempt to persuade the consumer that they are not unlike a locally owned and supplied grocery like Rainbow. Additionally, the grocery's buyers must constantly reevaluate the ownership of products they purchase in order to ensure that the small independent supplier they bought from yesterday has not been swallowed up by a giant multi-national corporation today.

According to longtime worker Larry Gilmore, Rainbow has no strategic or master plan for the future. The grocery was founded on a spiritual devotion to providing healthy, local food to the area, and the employees share a common value system and community centered spiritual values. There is no boss figure in the employee-shareholder structure, but a tremendous amount of accountability comes from co-workers' expectations. Unfortunately, veteran workers are concerned about the next generation of Rainbow workers, sensing that this upcoming generation has lost focus of Rainbow's spiritual beginnings, and instead focus only on their own sense of personal entitlement for their work.

Rainbow also faces the problems that come with potential expansion. There have been thoughts about other locations, but nothing has been established due to the sentiment that it would be hard to manage a satellite location in the same method and quality as Rainbow. Since the grocery is in a densely populated area, additional parking is being considered in order to encourage those who drive in to the city to shop there.



*From top left: Grains and beans in bulk chutes and bins; A wide variety of organic prepared foods are available; A worker demonstrates how the labeling system informs consumers of local and organic status; Spices and teas available in bulk.*

## Lessons Learned

*Personally Invested Employees* – Rainbow grocery was founded by those who saw this not just as a business, but as a spiritual mission. Those early founders devoted themselves to building the kind of business that would truly serve the neighborhood and its diverse needs. The workers of Rainbow Grocery truly believe in “food for people, not for profit” as a driving theme behind the success of the grocery. The most evident lesson in this is that employees with a stake in the business, whether financial or spiritual, will work much harder to ensure the businesses' success, and because of their personal investment and dedication, Rainbow employees are willing to work long hours with relatively little compensation.

*Offer Affordable Options* – Part of Rainbow's success is that it appeals to people at all income levels. Although Rainbow encourages customers to purchase organic and local foods, when the cost of these products are particularly high Rainbow will also sell the conventional version for customers who can't afford the expensive organic product. In this way, customers know that they will always have an affordable option at Rainbow Grocery.

## Resources for Further Information

[www.rainbowgrocery.org](http://www.rainbowgrocery.org)



Location	Taos, New Mexico
Sector	Processing
Organizational Structure	501(c)3 Non-Profit
Sustainability Factors	Increase Ethnic Food Options, Provide Business Opportunity, Develop Workforce

# Taos Food Center

## Overview

The Taos Food Center is the core program of the Taos County **Economic Development Corporation** (TCEDC), whose mission is to “support the food, land, water and cultures of the people of Northern New Mexico.” The centerpiece of the Food Center is a fully-licensed, fully-stocked commercial kitchen, available for rent to small food businesses. Entrepreneurs use the facility to produce and package food products for sale in Taos and throughout the region. Producers share costs and offer support to one another as each works to survive the start-up phase of their new ventures.

Despite the homogenizing influence of the global food system, the Taos Food Center is helping to revive rich Native American and Hispanic culinary traditions. Much of the food prepared in this facility is the product of long-held family recipes.

The Taos Food Center demonstrates how a community can build a more locally-based food system despite adverse growing conditions (in this case, water scarcity). It also demonstrates the economic development potential of local food, particularly for disadvantaged groups. Many of the Food Center entrepreneurs are low-income, Hispanic women.

## History

The Taos County **Economic Development Corporation** (TCEDC) was founded in 1987 by Pati Martinson and Terri Bad Hand. Taos County was recovering at that time from a recent mine closure and TCEDC was working to stimulate new development and job creation for the displaced mine workers. Nine years later they opened the Taos Food Center to build on the region’s strong agricultural tradition and entrepreneurial instincts. The Center has grown to become the organization’s core program.



Left Page: One of several rooms in the Taos Food Center kitchen.

Left Above: Fresh tamales for same day sale at a local convenience store. Right Above: The kitchen contains a scullery as mandated by state regulations

## Inputs

The centerpiece of the Taos Food Center is a 5000 square foot commercial kitchen, large enough for nine people to process food simultaneously. It is stocked with a wide range of industrial-grade kitchen equipment and can accommodate organic processing.

Raw ingredients for the kitchen’s various enterprises come from a variety of sources, including local farms licensed to sell to commercial producers, national distributors, and TCEDC’s own garden and greenhouse, which occupy a field behind the kitchen. Some of the entrepreneurs combine purchases in order to qualify for reduced, bulk pricing.

TCEDC also owns a specialized truck capable of harvesting livestock on-site at local farms. After preliminary processing, it delivers the meat to a building adjacent to the kitchen that contains sterile quarters for final processing and packaging.

## Outputs

About 50 small businesses prepare food in the Taos Food Center kitchen. They produce a variety of products for sale throughout the region, as far as Albuquerque and Southern Colorado. Products include traditional food such as tamales, baked goods, chocolate, cream cheese, and hummus.

The Food Center hires a truck to make deliveries twice weekly to more than 15 retailers throughout the region. This includes coffee shops, restaurants, cooperative grocery stores and large grocers, including Albertsons and Whole Foods.



## Business Process

TCEDC built and manages a six-acre business park whose long-term, market-rate leases subsidizes kitchen rental fees. The kitchen itself is located in this business park.

Each new business using the kitchen begins when an entrepreneur participates in the Food Center's week-long crash course on how to start and grow a food business. Local authorities, such as university professors and regulators, teach the curriculum, which includes courses in business practices, marketing and management, food safety and other food-business related issues. Federal grants allow the Food Center to offer this program for no cost, twice per-year. It is here that participants first build the relationships with TCEDC staff and other entrepreneurs that can help them down the road. Once they have completed the program, participants can start using the kitchen.

The Food Center's entrepreneurs sign up to use the kitchen at \$12 per hour, recording when and how much space they will need and what equipment they will be using. The rental rate is low compared to kitchen incubators in other communities (averaging \$20-\$40 and hour) as rent from the TCEDC business park subsidizes the cost.

## Challenges & Solutions

*Prohibitive complexities for food business start-ups* – The nation's regulatory environment treats small food businesses the same as large, established corporations. Start-ups must overcome an array of permitting and licensing requirements before making the first product for sale. These barriers originate from all levels of government, from Food and Drug Administration's (FDA's) nutritional labeling requirements to local business licensing. The Food Center's crash course orients new entrepreneurs to these complexities and the trained staff helps them meet the requirements.

*Prohibitive food business start-up costs* – Food businesses face particularly large start-up costs. Food prepared for sale must be prepared in a kitchen that meets an array of regulatory requirements. The cost of outfitting such a kitchen is too steep for many aspiring entrepreneurs to afford. The Food Center pools the cost of building, stocking, certifying, and maintaining a commercial kitchen, effectively eliminating this massive cost.

*Economies of scale* – New food businesses struggle with disadvantages due to their small scale. They may not use enough ingredients to qualify for bulk pricing, distributors may refuse service until orders reach a certain size, and important equipment is often prohibitively expensive. The Food Center helps small food businesses overcome these types of challenges by pooling resources among its community of businesses.

## Lessons Learned

*Build a commercial kitchen for your community* – The Taos Food Center has helped more than 50 people launch successful food businesses. This has generated wealth, created new jobs, and established new buyers for local agricultural products. It is a model applicable to any community, particularly those with large populations of disadvantaged people who are otherwise disconnected from the job market. In addition, this type of program can be successful whether privately or government run.

*Creating other revenue sources* – Many other kitchen incubators around the country have struggled to remain open while keeping costs down for the participants. TCEDC keeps kitchen rental rates low and helps keep the Food Center running, thanks in part to revenue generated from its business park leases. Creating other revenue sources can help finance the operations of a kitchen incubator.

## Final Thoughts

*Success Stories* – The Taos Food Center has helped launch many successful new food businesses. One typical success story illustrates the power of this type of organization to transform and empower lives. A woman started a business making tamales to help support the two children she was raising. Initially, family members provided the labor, but now her staff has grown to employ 12 workers. She makes regular deliveries under contract to local retailers and grocery stores, has built her own kitchen, opened a restaurant and licensed her recipe to a larger producer.

## Resources for Further Information

[www.tcedc.org](http://www.tcedc.org)

575-758-8731

## Kitchen equipment available in the Taos Food Center

- Large stoves and ovens
- Deep fryers
- Rotisserie
- 20 and 60 quart mixers
- Scales
- Dehydrator
- Immersion blender
- Preparation tables
- Cooling racks
- Proofing racks to let bread rise
- Scullery for cleaning, with large-capacity stainless steel sinks and dishwasher
- Apple juicing system including an apple press, pasteurizer and bottling machine
- Bond and heat sealer for tamper-proof packaging
- Walk-in freezer including a flash freezer for meat
- Dry and cold storage



Location	211 Woodward, Ypsilanti, Michigan
Sector	Production
Operational Structure	Household
Sustainability Factors	Make Nutritious Food Accessible, Increase Biodiversity, Recycle Waste

## Thomason Family Farm

### Overview

The Thomason Family Farm is an urban micro-eco farm on a one-tenth-acre lot in Ypsilanti, Michigan. The family began the farm in 2006, and has steadily expanded it every year since then. In addition to growing produce, the Thomason's keep layer hens, goats, and rabbits. Well known throughout the community, the Thomason Family Farm has incited a battle with the municipal government to repeal local animal control ordinances. The family's legal battle has become a rallying call for micro-farming, and their farm exemplifies the ease and benefits of subsistence farming in urban environments.

*Planting beds have a variety of produce, including lettuce, and grapes.*



### History

The farm was started on the Thomason's small residential lot in 2006. The poor housing market and economy of Southeast Michigan had prevented the family from selling their urban home and moving to the country, so the family chose to pursue farming on their single-family (40-by-150 foot) lot.

Although the operation started with just two planting beds, it continues to grow every year as the family makes additions to the garden. Currently, the farm covers much of the backyard and part of the side yard, and includes 20-30 layer hens, four Mini-Nubian goats, and a family of Lionhead rabbits for breeding. While the primary yield of produce, eggs, and goat's milk feed the family, the Thomason's sell extra eggs from a cooler on their front porch. Producing food first for the family, and then for sale, exemplifies the overall family ethic: contribution, not consumption, meaning that the family consumes as little outside product as possible and instead contributes positively to the ecosystem. Driven by this ethic, the Thomason's have salvaged and repurposed all of the farm's built features, significantly reducing the environmental impact and the start-up costs. Operating costs remain minimal, requiring the occasional hen replacement, as well as the constant supply of hay, oats, and feed for the animals, as the farm does not have enough space to grow these crops. Another integral ethic of the Thomason farm is the promotion of what they call a "new-sensibility:" the benefits of a home economy and the importance of home-based subsistence. This sensibility ultimately prompted the inevitable but well-publicized conflict between the Thomasons and the City of Ypsilanti over the right of urban dwellers to farm—and keep animals—on their land.

In 2006, the Thomason's began their legal battle with the City of Ypsilanti when the family purchased a few dozen layer hens for their farm. At the time, the Ypsilanti ordinance was unclear on the legality of keeping chickens in a residential yard, so the family sought legal clarification from the City Attorney's office and learned that the City did indeed prohibit chickens. In 2007, despite the ordinance, the Thomason's expanded their livestock collection by purchasing four goats, which kidded two sets of twins in March 2008. The family has received several citations from the city after complaints from neighbors, but they continue to contest the legality of these citations and work towards amending the current local animal control ordinance. As of print time, the City of Ypsilanti is revising the animal control ordinance to allow for a small number of chickens and the keeping of bees. The family not only fights for its right to farm, but for the right of all residents to keep farm animals on their property.



*Left: Four-to-six goats provide the family with milk daily; Right: 30-40 layers provide the family with eggs.*

### Inputs & Outputs

The Thomason Farm is a perfect example of the limited resources necessary to create a small farm on urban land. The goats are a one-time financial investment, and subsequently breed to maintain an ongoing stock. Additional inputs are seasonal and inexpensive: seeds for planting; hay, oats, and feed for the animals; and layer hens. When possible, the family purchases supplies at the local tractor supply store and the Ypsilanti Food Co-op to support their local community. The largest input into the farm is time; the ten member Thomason family dedicates as much time into the farm as possible, but in the near future the family may seek community volunteers to help manage and maintain the farm.

The Thomasons have been resourceful to ensure that their endeavors remain productive but not overly consumptive. Old and unwanted materials are salvaged and repurposed, for example an old playhouse from the children's childhood now functions as the chicken coop. This spring, the family acquired for free a greenhouse worth \$2500, materials to build six cold frames, and a quarter of an acre of land, demonstrating that, when you ask, you may receive. This guarantees that the overall costs of operating and maintaining the farm are minimal, about \$2000 a year, comparable to the food savings the family enjoys from the farm's harvest. What the family is unable to consume it sells, mostly to neighbors, thereby reducing farm waste. Food leftovers help feed the chickens, or become compost; animal waste becomes fertilizer and replenishes the soil with vital nutrients.

### Business Process

The Thomasons do not consider their farm a business; however, to ensure that they qualify for protection under the Right to Farm Act, they sell some of what they produce to neighbors, allowing them to file a **Schedule F** tax form. The family would like to expand their farm, but have no intention of venturing into a full-farming enterprise. As the farm outgrows the time and labor constraints of the family, the Thomasons may have to reach out and coordinate with the local community to help tend the farm. If plans to expand the farm beyond the extent of the single-family home lot are successful, and the farm becomes a community-based farming endeavor, there may eventually be a transfer of responsibility to volunteers. They hope to create a sense of stewardship for the land by using their farm to teach community members, especially youth, about farming. This summer, the Thomasons are coordinating with 15 volunteers, some of whom come from the local high school, to grow food to feed seven families on land owned by friends and neighbors.

### Challenges & Solutions

Most challenges faced by the Thomasons center around the misperceptions of urban farming. Local law, which many consider the primary challenge to the urban farm, is a barrier only as much as it represents and perpetuates people's misunderstanding about farming in the city. An equally persistent barrier, however, is the culture of consumption. Together, these challenges are difficult to overcome, especially when combined with the fears of pestilence and nuisance, and with decreased property values.

The Thomasons' struggle with local law has built a community base of supporters slowly working to erode negative impressions of their operation through educational outreach. Community education, especially through grassroots efforts, continues to be the most effective way to deflect and eliminate erroneous preconceptions about urban farming and the residential keeping of farm animals. The Thomason's legal battle with the municipal government has played a significant role in creating momentum and change for the local Ypsilanti food movement.



*Above: Cold frames and greenhouses allow the family to extend the growing season.*

*Below: Peter Thomason holds a week-old Lionhead Rabbit.*



### Lessons Learned

Over the years, the Thomasons have learned several valuable lessons. First is the significant role of government in the food system. The Thomasons, like many food activists, envision a government that fosters citizen action and works to make life more healthful and secure for its citizens. Local government could aid the community food movement by promoting an environment rife with educational opportunities to learn about food and urban agriculture. Government has long shrugged its responsibility to the food system and regulated without granting citizens the right to make their case. Investment in the food system would not only promote community awareness of nutrition, but would ultimately ensure food access and the provision of food in a state of emergency.

Second, the Thomasons have learned the importance of finding a community base. The community can provide a wealth of resources and encouragement. Locating a community base in any area of the country can be achieved a number of different ways. It is often easiest to begin at the local farmers' market, where farmers sell what they grow locally directly to their customers. An additional resource for finding those involved in the local food movement is through the slow food movement. "Edible Communities," the mother-publication for over 50 local "edible" periodicals, also promotes localized agriculture, and is a resource for finding more information about what is going on in your area.

Finally, the Thomason's demonstrate that their model can easily be replicated – anyone, any family – could construct and operate a farm with minimal resources. The Thomason Family Farm began with two planting beds, expanding over the years, as the family learned through trial and error. If every family with a small amount of earth planted and harvested their own food, it would go a long way toward ensuring the **food security** of all American families.

### Resources for Further Information

[www.thomasonfamilyfarm.blogspot.com](http://www.thomasonfamilyfarm.blogspot.com)

There are many benefits to keeping chickens. The eggs produced are generally tastier and more nutritious, provide a home-grown source of protein to accompany the fruits and vegetables produced in the garden, and have the added benefit of pest-control. Small-scale chicken keeping reduces the negative externalities inherent to the global food system., like carbon emissions from transporting food. Additionally, keeping chickens locally also reduces the number of eggs purchased from Concentrated Animal Feeding Operations (CAFO). A 2008 US Governmental Accountability Office report highlighted the grave problems of CAFOs, including the large amount of concentrated animal waste produced on site, air and water quality contamination, and insufficient governmental oversight. Visit <http://www.gao.gov/products/GAO-08-944> for details on the report.

For more resources on raising urban chickens, visit the following websites:

- [TheCityChicken.com](http://TheCityChicken.com)
- [UrbanChickens.org](http://UrbanChickens.org)
- [MadCityChickens.com](http://MadCityChickens.com)
- [BackyardChickens.com](http://BackyardChickens.com)





Location	Toronto, Ontario
Sector	Consumption
Operational Structure	Sub-committee of the Toronto Board of Health
Sustainability Factors	Make Nutritious Food Affordable

## Toronto Food Policy Council

### Overview

The Toronto Food Policy Council [TFPC] is one of the most successful and influential **food policy councils** in the world. Policy councils throughout North America look to Toronto as a model of best practices and strategies. The Toronto Food Policy Council is a sub-committee of Toronto's Board of Health and consists of 30 members. The Council acts as an advisory group that conducts research and public education in order to make policy recommendations to the city on a range of topics, including waste management, nutrition, hunger and food access, urban agriculture and land use, and food-related health and environmental issues. The Council has no authority to create or pass laws, but uses its resources to generate ideas, momentum, and solutions for the City's most pressing food related health and environmental problems. Staff and Council members act as "brokers and catalysts" to engage people from across disciplines and to unite food-related organizations. Food-related issues cross many disciplines and city departments, thus the Council "is a forum for discussing and integrating policy issues that often fall between the cracks of established departments and research specialties." The Council works on issues specific to Toronto, but is invested in working on food issues of regional and global significance, and is engaged with provincial, national, and international partners.

### History

The recession of the early 1980s created a proliferation of food banks in Toronto, signaling that hunger was a pervasive and persistent problem throughout the city. The people of Toronto were unsettled by the idea that the city could not adequately employ or feed its citizens, and soon a citywide movement emerged to find solutions to Toronto's hunger problem. This movement led Mayor Art Eggleton to create FoodShare in 1985. Originally, the purpose of the organization was to coordinate the efforts of food banks throughout the city and to increase employment opportunities for food bank clients. However, by the late 1980s organizers realized that they had to address the problem of hunger through systemic and policy changes. This led the city to create the Food Policy Council in 1991, which conducts research and public education on hunger and food access issues, and makes policy recommendations to the city. That same year the Council wrote the City of Toronto Declaration on Food and Nutrition and Toronto became one of the first cities to sign on with the World Health Organization's Healthy Cities Initiative.

Since its formation, the Council has played an essential role in bringing food security and a myriad of other health and environmental issues to the public consciousness. The Council's first initiative promoted breastfeeding, and featured bus ads advertising "Two convenient locations near you," with an image of a woman's breasts. The purpose of the initiative was to show how elemental and universal food is to human experience, as well as to advocate for a woman's right to breastfeed in public, and to show how individuals can take action around food. Since that first initiative, the Council has spearheaded an impressive array of policy and action oriented programs, including a kitchen incubator, and the first Green Roof incentive program in North America that Chicago and Portland, OR have used as models. The Council's most recent initiative is a healthy food cart vendor project for low-income neighborhoods. The Council has been an important contributor to Toronto's Official Plan update and to the City's community gardening and food production strategy.

*Opposite Page: A Toronto Food Policy Council Meeting*

### Inputs

The Toronto Food Policy Council operates with only two full time paid staff. From 2000 until January 2009, the Council functioned with only one full-time paid staff person but this year the City agreed to hire a second staff person to respond to the growing movement around local food. The Council has an annual budget of \$200,000. Interestingly, the City pays only 25% of the Health Department's operating costs and the County pays the remainder. Despite the City's small contribution to the Council's budget, the Council does feel pressure every year to prove its relevance and importance to Toronto's Department of Public Health. Toward that end, the Council makes an annual report to the Board of Health and has a member of the Board on the Council in order to maintain a direct and working relationship.

The Council is made up of a maximum of 30 members and Council terms last four years. There are no limits on how many terms a member can serve so some members have been on the Council for a number of terms. When there are openings, members are chosen on the basis of their qualifications and the profile of the Council at the time. The Council holds five public meetings every year. In between these meetings, which occur approximately every two months, there are meetings to discuss issues in more depth, or to address topics the Council has been asked to consult on. These meetings are also open to the public.

### Outputs

Throughout its 18-year history, the Council has written 15 "Discussion Papers." The papers cover policy issues ranging from the health impacts of recombinant bovine growth hormone, to how Canadian federal farm policy should change to promoting small food businesses as drivers of economic development. The purpose of the papers is to influence future policymaking and generate discussion and awareness of a diversity of food related issues.



## Business Process

In 2001, Toronto City Council adopted the Toronto Food Charter, a document that commits the city to putting food security on the city agenda. Commitment to the ideals and goals of the Charter is a pre-requisite to membership on the **Food Policy Council**. Council Director Wayne Roberts and other council members nominate new members based on filling a total number of 30 spots. The Toronto Department of Health and the City Council must approve all TFPC appointments; therefore, members are generally very well respected and have significant experience and qualifications in their chosen field. TFPC also attempts to represent a broad spectrum of food actors; currently council members include a dentist, a doctor, representatives of food and community development organizations, and businesses throughout the city, as well as professors, farmers, and the former Rwandan Minister of Agriculture.

The Council is broken down into various sub-committees that work on different issues. These sub-committees set their own agendas and goals, which they then submit to the entire Council for a vote. If there is controversy around certain issues, the sub-committees deals with it through small meetings and personal communication prior to the larger Council meetings to avoid complications. The council makes decisions by a “consent agenda” which puts routine items to a vote quickly so little time is spent on routine or non-controversial agenda items. The consent agenda process allows the meetings to be productive and proceed on time. The council invites the public to these meetings, during which it profiles a “Local Food Hero” and gives a brief presentation. Meetings also include one or two other educational presentations on issues of local and international concern. The purpose of the presentations is to educate members about local and international projects and issues.

## Challenges & Solutions

Many urban groups interested in food policy look at how food is produced and focus on creating opportunities for urban agriculture. While this is an important component of food security, particularly in cities, it does not address everyone’s needs. For instance, working mothers, the disabled, or low-income people who work long hours – groups experiencing the biggest food access and poverty problems – may not have the time or inclination to work in gardens. Urban **food security** has to go beyond urban agriculture to address underlying issues of poverty and access. The Council sees itself as a tool to address these bigger issues. It supports the work of urban agriculturists in whatever ways it can, but focuses on transforming the system and creating equity and security.

Another challenge facing the TFPC is the issue of education. True change can only come when society’s view of the food system shifts to a healthier, more sustainable outlook, and this change begins with youth. Unfortunately, TFPC finds that school administrators and teachers are reluctant to add food issues into the curriculum, despite the fact that students love working with food, especially hands on in a learning garden.

## Lessons Learned

When unattached to a governmental entity, one of the biggest challenges faced by **food policy councils** is their inability to affect real policy change. Non-profit councils made up of interested citizens can educate and organize, but they lack the “heavy lifting” power of municipal government. The Toronto Food Policy Council’s obligation is to the public interest, and as part of the Board of Health, improving the public health of Toronto is at the heart of the Council’s mission. The Council’s main responsibility is to Toronto citizens, not to city council members, funders, the mayor, or any other interested party.

The Council is not a political entity, but because of its affiliation with the city, it gets respect and deference from other city offices that a non-profit food policy council might not. As an advisory board, the Council is free to conduct research, create education programs and develop policy recommendations as it sees fit, without the political wrangling that corrodes many policymaking processes. Roberts sees the Council as a “program organization,” not a policy-making organization. The distinction is important because it points to the very delicate balance between policy, politics, advocacy, and the public interest that the Council has to manage. Roberts feels that his position as a public employee sets him up to be a collaborator and a problem solver, and he believes this approach, backed by the city’s adoption of the Food Charter, is what makes the Council so successful. In addition to the city’s commitment, Food Policy Council members’ commitment to the Food Charter reduces the divisiveness that can often immobilize stakeholder-represented councils. Everyone is working toward the same goals of **food security** and improved public health for the city, and therefore its work is divested from individual agendas.

## Resources for Further Information

[www.toronto.ca/health/tfpc\\_index.htm](http://www.toronto.ca/health/tfpc_index.htm) (Toronto Food Policy Council)

[www.foodsecurity.org](http://www.foodsecurity.org) (Community Food Security Coalition)

[www.foodshare.net](http://www.foodshare.net) (FoodShare)

## **Food Policy Councils**

The first **Food Policy Council** (FPC) was formed in Knoxville in 1981 and today there are more than 50 communities in North America with a council. The biggest growth in FPCs has occurred since the early 1990s, concurrently with the development of the community food security movement. Early FPCs were made up of local farmers, anti-hunger, activists and advocates of sustainability. While FPCs today differ in make-up and level of government sponsorship, most focus on resolving local food issues and promoting equitable and ecologically sustainable food systems.

**Food policy councils** are made up of food systems stakeholders—farmers and other producers, restaurateurs, processors, distributors, community members, schools, etc, and can be created under the auspices of state or local governments, or as independent community advisory boards. They can be focused on economic development and marketing of local products, or used as tools for community development and food security advocacy. In addition, **food policy councils** can formulate policy and work in an advocacy and lobbying capacity. Because food policy and food security are not addressed by one government department but have implications in many areas, FPCs can bridge disciplines and constituencies. Unfortunately, many FPCs are ineffective because they are resource poor and heavily project-oriented, meaning that they focus on initiating projects rather than advocating for policy change that would affect lasting systemic change.



Location	Decatur, Georgia
Sector	Distribution
Operational Structure	Privately-Owned Corporation
Sustainability Factors	Make Nutritious Food Affordable, Recycle Waste, Develop Workforce and/or Entrepreneurialism, Build Local Food Infrastructure

# YOUR DeKalb Farmers' Market

## Overview

YOUR DeKalb Farmers' Market (YDFM) is an international market that serves the Atlanta regional community. The market is comprised of a produce market, bakery, fish market, butcher, dry goods market, café, and wholesale business. The market sells both conventional and organic products, caters to Atlanta's internationally diverse community, and provides a variety of unique international food items and prepared foods.

## History

In 1977, Robert Blazer decided that he no longer wanted to work for his father's fabric business in Rhode Island and began distributing fresh produce from the basement of his father's warehouse. Blazer enjoyed the fast-paced food business and decided that he wanted to move south and open his own fresh food business. Blazer moved to Decatur, Georgia and went door-to-door to gauge interest in an Atlanta-based farmers' market. He opened Georgia's first farmers' market in Decatur and enjoyed success. In 1979, a hailstorm destroyed the store and Blazer lost his investment. However, community members dedicated to the store loaned Blazer money to rebuild the damaged facility. Ten years later, Blazer decided that the business had outgrown its facility and relocated to its current Decatur location, a city located adjacent to Atlanta on the city's northeast border. Blazer made it a priority to provide the comforts of local food to the many international YDFM customers. At the demand of customers, YDFM began to provide many ethnic produce and other food items collected from across the globe.

## Inputs

YOUR DeKalb Farmer's Market is 140,000 square feet and has 650 employees from over 35 countries. The market creates all of its value-added products on site, such as YDFM sauces, baked goods, soups, pastas, and prepared meals. Each department requires a multitude of inputs to create these value-added products, keep produce fresh, and case the fish and meat. Blazer believes in providing fresh healthy food at a low cost to the consumer and buys produce, meat, and fish directly from farmers in order to eliminate intermediary costs. YDFM also has their own truck fleet, airplane, and fishing boat to minimize transportation and distribution costs. The current YDFM location has reached maximum capacity and it will soon expand to a plot of land adjacent to the current facility purchased 10 years ago for that purpose. Although YDFM has an international component, much of its produce is purchased locally and labeled "Georgia Grown."

## Outputs

YDFM services over 100,000 customers per week and operates a market, café, value-added production service, and wholesale business. Local retailers purchase wholesale and value-added products, and community members shop at YDFM because of their commitment to quality and affordability. YDFM labels all of its products so that consumers know the origins of their food and if it is conventionally or organically grown.

## Business Process

Blazer believes in providing access to local, healthy food and his business model reflects this mission. Blazer buys directly from farmers in the international market and through travel, he has developed a close relationship with farmers across the globe. He reinvests every dollar earned back into his business and believes in self-reliance in the business process.

## Challenges & Solutions

When YDFM first opened, there were nuisance complaints from the community. Neighbors complained about trash and truck noise. Blazer did what he could to pacify the neighbors, but it was YDFM's reputation that saved the original store. A city commissioner felt that closing the store would disappoint community members and limit the access to fresh and affordable food.

## Lessons Learned

*Buy directly from the producer to decrease costs* – Blazer builds relationships with local and international farmers and buys directly from the farmers, eliminating costly intermediaries. YDFM has the highest credit rating available in the industry which reflects the quality and value for both producers and consumers. and this credit rating ensures quality and value for both producer and consumer.

*Establish a connection to the local community* – Blazer attributes his success to his dedicated customers. As the first farmers market established in the Georgia, YDFM has a reputation as a family-owned and operated local business that caters to the international and ethnically diverse Atlanta community.

*Create a mission to provide access to local, healthy food to the community* – Blazer believes that everyone should have access to healthy, affordable food and is extremely committed to providing Georgia Grown produce and locally produced items. Blazer's mission has always been "no matter how technologically advanced we become, we cannot escape our fundamental relationships with food and each other. The possibility of these relationships is the world market. In this context, the world works for everyone free of scarcity and suffering."

*Provide a variety of ethnic foods and cater to the ethnic community* – The ethnically diverse population in Atlanta saw YDFM as their ethnic food hub and began requesting more and more items that they could not get at the local grocer. YDFM provides local comforts to the ethnic community and Blazer is willing to purchase unique international food items based on customer requests.

## Resources for Further Information

[www.dekalbfarmersmarket.com](http://www.dekalbfarmersmarket.com)

404-377-6400



YDFM outputs almost zero food waste. Employees wait until produce displays are at a certain level before bringing produce out of the cooler. The remaining produce is bagged and sold at a discounted rate. If produce is not sold, it becomes a part of the café menu.

YDFM also operates the largest recycling facility in the Southeast. Businesses and individuals come to the facility to recycle glass, plastic, paper, cardboard, and aluminum. The YDFM houses the Decatur Municipal Composting program and works with the city to facilitate compost materials drop-off and pick-up.

## Toronto Food Policy Council Initiatives

There is a great deal that government can do to advance community-based sustainable food practices. Here are some examples from the Toronto Food Policy Council.

*“Toronto à la Cart”* — After more than two years of negotiation, the Toronto City Council just approved the licensing of eight new food carts for the city. Called “Toronto à la Cart”, the program will bring healthy ethnically diverse options to the city’s streets by May 2009. Historically hot dog and sausage vendors have been the only food vendors available on the streets. Food safety codes restrict street vended food to food that is previously cooked and only re-heated on the cart. Toronto bought more than a dozen food carts equipped with kitchens and dishwashing facilities in order to broaden the options available on the street, and after a rigorous selection process that included scoring for nutrition, food safety, locally produced food, ethnic diversity, taste, and overall business plan, the city approved eight vendors.<sup>1</sup> Greek, Thai, Eritrean, Central Asian and Indian are just a few of the kinds of food that will be available in high traffic areas throughout downtown Toronto, including City Hall Plaza. The TFPC has been instrumental in highlighting the need for more healthy options on the street as well as showing how the healthy food cart model can create economic development, improve public health and market the city’s diversity. In addition, the Council is partnering with non-profit organizations to bring healthy food carts to low-income neighborhoods where profit margins might not be as large as in downtown locations but the need for inexpensive high quality healthy food options, as alternatives to fast food, is essential.

*Toronto Kitchen Incubator* — The Food Policy Council’s research on the value of kitchen incubators to economic development and subsequent recommendations to City Council led to the construction of a kitchen in 1997, which managed by FoodShare and the Toronto Food Business Incubator. The kitchen is housed in a 2,000 square foot warehouse space and enables would-be food entrepreneurs to try out recipes and get technical advice and feedback without having to make a huge initial investment in equipment.<sup>2</sup> Toronto employs 40,000 people in the food sector, which generates \$20 billion in annual sales, so sustainability and innovation in the food sector is an important economic development strategy.<sup>3</sup> Toronto Councilor Kyle Rae, chairman of the council’s economic development committee, sees the incubator “as the first step in a larger vision we have to create a food processing and innovation centre” in a city where manufacturing jobs are fast disappearing.<sup>4</sup>

*Green Roofs* — The Food Policy Council’s interest in and research on Green Roof technology led the city to take action on climate change through the citywide green roof policy in 2006. As one of the first cities in North America to mandate green roofs on all new city owned buildings, and where feasible, retrofit existing city owned buildings, Toronto is a leader in green roof policy and climate change mitigation.<sup>5</sup> Initially, the city commissioned a study through Ryerson University to determine the environmental benefits and potential savings a green roof initiative would represent.<sup>6</sup> Evidence of reductions in storm water run-off, energy use, and the urban heat island effect, along with improvements in air quality, led the city to include green roof infrastructure in Toronto’s official plan, as well as to provide grants to private citizens and developers for implementing green roof technology.<sup>7</sup>

1. Lu, Vanessa. (March 19, 2009). New food carts hit Toronto streets in May. The Star. Retrieved on April 29, 2009 from <http://www.thestar.com/article/603954>
2. FoodShare. Toronto kitchen incubator [online guide]. Retrieved on April 3, 2009 from <http://www.foodshare.net/kitchen05.htm>
3. Lewington, Jennifer. (November 20, 2007). City incubator hatches culinary entrepreneurs. Toronto Food Business Incubator. Retrieved on April 3, 2009 from <http://www.tfbi.ca/02article03.htm>
4. Lewington, Jennifer. (November 20, 2007).
5. Zion Burton, Liora. (2006). Making Green Roofs Happen in Toronto. Green Roof Infrastructure Monitor, 8 (1).
6. Zion Burton, Liora. (2006).
7. Zion Burton, Liora. (2006).

## Recommended Actions for Individuals, Entrepreneurs, Government and Community Organizations

We can all take steps to help grow more community-based, sustainable food systems in our own communities. The following table identifies some of the most important steps that individuals, entrepreneurs, local government and community organizations can take.

Many of the recommendations point back to a particular set of case studies that demonstrate those steps in action. Short-term recommendations are those steps that a community can take immediately. Medium-term recommendations may require 1-3 years, and long-term recommendations may require more than 3 years.



## Short-Term (immediate)

Recommended Actions	Key Examples				
	Individuals	Entrepreneurs	Community Organizations	Government	
<b>1 Buy Local and Direct from Producers</b> To support the development of your community's food system. This includes individuals and institutional buyers such as governments, schools, and businesses.	★	★	★	★	Island Grown Farmers Co-op Eat Local Eat Natural Calder Dairy & Farm Rainbow Grocery
<b>2 Share your Knowledge &amp; Enthusiasm for Local Food</b> Discuss the benefits of local food with friends, family and neighbors, and share your expertise.	★				Four Square Society Earthworks Thomason Family Farm
<b>3 Join a Community Supported Agriculture (CSA) Program</b> To purchase or work for locally-grown food on a subscription basis.	★				Intervale Center
<b>4 Network Home Gardeners</b> Host networking events or create an association for home gardeners to share knowledge and encourage collaboration.	★		★		Four Square Society
<b>5 Add Value to Your Own Agricultural Products</b> Process, package, distribute, and sell your own products. This will help you retain more of every dollar spent on the final product and build a unique brand identity.		★			Calder Dairy & Farm Island Grown Farmers Co-op Nuestras Raíces
<b>6 Identify Opportunities for Local Distribution</b> As an alternative to selling products into commodity market. Includes sale through farmers' markets, direct agreements with wholesale buyers, local distribution services or CSA-models.		★	★		Calder Dairy & Farm Eat Local Eat Natural Intervale Center Added Value
<b>7 Find Ways to Pool Resources &amp; Costs with Others</b> This could include, for example, joining purchases of inputs to qualify for bulk pricing, coordinating delivery, and purchasing shared equipment.		★	★		Island Grown Farmers Co-op Taos Food Center
<b>8 Network Community Based Farmers</b> Host networking events or create an association for community-based farmers to share knowledge, pool resources, and encourage collaboration.		★	★		Intervale Center Island Grown Farmers Co-op Eat Local Eat Natural

Recommended Actions	Key Examples				
	Individuals	Entrepreneurs	Community Organizations	Government	
<b>9 Create Incentives for Consumers to Shop Locally</b> This could include a loyalty card program, fuel perks and cooperative discounts. May expand to include non-food products.		★		★	Dave's Markets
<b>10 Identify Opportunities to Engage Youth</b> As employees, volunteers or students to cultivate life-long habits of healthy eating and support for the community-based food system.		★	★		Added Value Peaches & Greens Nuestras Raíces Intervale Center
<b>11 Explore Available Resources from Local Universities and Agricultural Extension Services</b> This may include student research and volunteer projects, soil quality testing, and other technical assistance.		★	★		Nuestras Raíces Toronto Food Policy Council
<b>12 Promote &amp; Support Home Gardening and Farming</b> With resources, education, mentorship and inspiration to help individuals and families start growing on their property.	★		★		Four Square Society Thomason Family Farm
<b>13 Create Public Education Programs</b> To promote healthy eating and the benefits of community-based food.			★	★	Added Value Earthworks Urban Farm Peaches & Greens Intervale Center
<b>14 Create Demonstration Programs</b> To experiment and teach sustainable growing and food processing techniques.			★	★	Added Value YOUR DeKalb Farmers Market Nuestras Raíces Intervale Center
<b>15 Create Community Garden Plots</b> To educate and inspire individuals, build community, and produce local food.			★		Nuestras Raíces
<b>16 Designate a Local Food System Coordinator within Local Government</b> To exercise policy leadership and coordinate food system efforts across government.				★	Toronto Food Policy Council

## Medium-Term (1-3 years)

Recommended Actions		Individuals	Entrepreneurs	Community Organizations	Government	Key Examples
1	<b><u>Use Hoophouses and Greenhouses to Extend the Growing Season</u></b> Increase the supply of local food produced and expand opportunities for community-food activities throughout the year.	★	★	★		Nuestras Raíces Taos Food Center
2	<b><u>Establish a Community Supported Agriculture (CSA) Program to Sell Directly to Consumers</u></b> To sell, or exchange for work, locally-grown food on a subscription basis.		★			Intervale Center Added Value
3	<b><u>Establish a Produce Delivery Service for Underserved Neighborhoods</u></b> The service could deliver direct to households and neighborhood produce stands for resale.		★	★		Peaches & Greens
4	<b><u>Establish a Farmers' Market</u></b> To facilitate direct sale between consumers and local farmers and gardeners. This does not require fixed infrastructure.		★	★	★	Added Value
5	<b><u>Inventory the Existing Local Food System with a Baseline/Needs Assessment</u></b> Inventory programs, businesses, policies, skillsets, cultures and behaviors to identify existing strengths, weaknesses and needs.			★	★	Toronto Food Policy Council Nuestras Raíces Peaches & Greens Four Square Society
6	<b><u>Create and Advertise an Information Clearinghouse of Local Food Resources</u></b> Based on baseline assessment, build a public inventory of opportunities for participation in the community-based food system.			★	★	Toronto Food Policy Council Intervale Center Eat Local Eat Natural
7	<b><u>Identify Land for Potential Urban Agriculture</u></b> Inventory and prioritize vacant and underused land for siting urban gardening/agriculture. This may include yards, vacant lots, public parks, schools, and brownfields.			★	★	Intervale Center Added Value Nuestras Raíces Thomason Family Farm
8	<b><u>Identify Brownfield Land Suitable for Local Food Applications</u></b> To grow organic matter for biofuels or accommodate a compost exchange or farmers' market.			★	★	Intervale Center Added Value
9	<b><u>Establish a Regional Food Marketing Campaign</u></b> To identify (e.g. with a standard label) and promote locally grown and produced food products (e.g. the Buy Michigan campaign).			★	★	Dave's Markets Toronto Food Policy Council

Recommended Actions		Individuals	Entrepreneurs	Community Organizations	Government	Key Examples
10	<b><u>Expand Economic Development Programs to Include Food Businesses</u></b> Direct resources to attract, retain and expand sustainable, community-based food businesses. Encourage retailers to locate in underserved areas; stock local, healthy foods; hire community members.			★	★	Taos Food Center Toronto Food Policy Council Nuestras Raíces Intervale Center
11	<b><u>Enable Community-Based Retailers to Accept Payment from Public Food Support Programs</u></b> Design and install systems that allow the use of benefits from food assistance programs at alternative food suppliers.			★	★	Earthworks Urban Farm
12	<b><u>Create a Compost Exchange and/or Food Waste Collection Service</u></b> To drop off organic waste and pick up organic material for reuse (e.g. compost and vegetable oil for fuel).			★	★	Intervale Center YOUR DeKalb Farmers Market
13	<b><u>Grow Food for Food Security Programs</u></b> At community gardens or on the grounds of the relief organization itself, as an alternative to using discarded food. Employ beneficiaries and youth.			★		Earthworks Urban Farm Nuestras Raíces
14	<b><u>Expand Nutrition and Health Education at Schools</u></b> This could include after-school programs built around gardening, cooking and fitness; school gardens that are integrated into the curriculum; and fresh produce for children to take home.				★	Earthworks Urban Farm Added Value Island Grown Farmers Co-op
15	<b><u>Ensure Healthy Locally-Sourced School Lunches</u></b> Healthy menu options that source from local producers, encourage portion control and engage students in making healthy choices.				★	Intervale Center
16	<b><u>Expand Transportation Options for Accessing Local Healthy Food Retail</u></b> Programs may include bus incentives, ride sharing, and better walking and biking infrastructure.				★	Dave's Markets
17	<b><u>Mandate Nutritional Labeling on Restaurant Menus</u></b> To encourage healthier eating. Information should include calories, fat content, sodium, and sugar (e.g. state law in New York).				★	
18	<b><u>Establish a Local Food Policy Council</u></b> To identify barriers to a community-based food system, establish community vision and strategies, coordinate efforts and advise policy makers.				★	Toronto Food Policy Council Nuestras Raíces

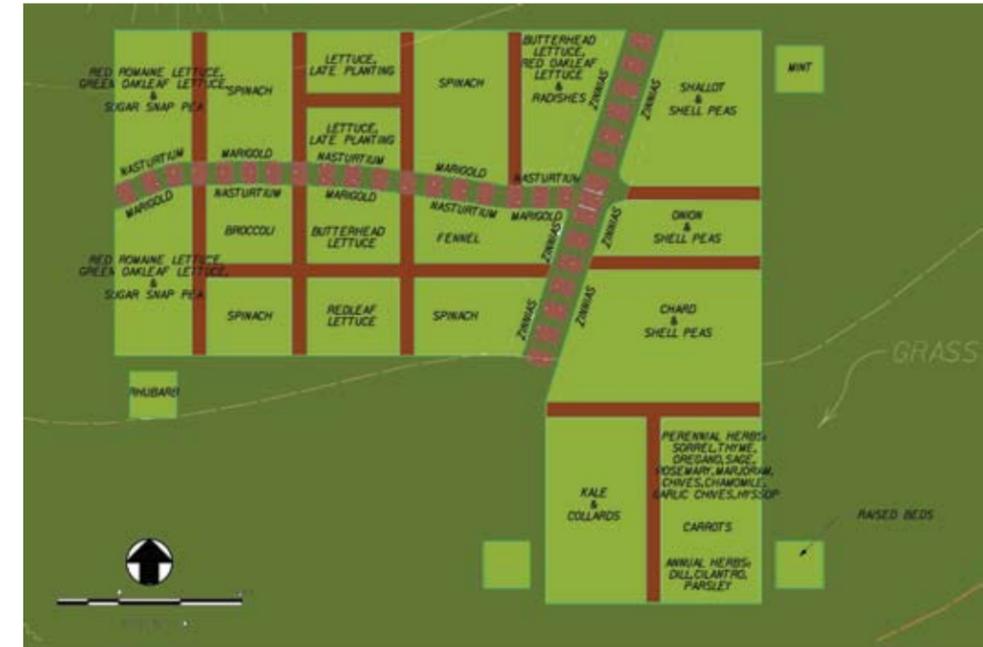
## Long-Term (3+ years)

### Recommended Actions

	Individuals	Entrepreneurs	Community Organizations	Government	Key Examples
<b>1 Create a Pooled Community Supported Agriculture (CSA) Program</b> Provide locally-grown food for sale or exchange to local consumers on a subscription basis from a collection of farms.		★			Intervale Center
<b>2 Create a Shared Distribution Service for Local Food</b> To gather locally-grown and/or produced food, and deliver to customers.		★	★		Eat Local Eat Natural Taos Food Center Calder Dairy & Farm
<b>3 Establish a Community Food Cooperative</b> To sell local food products, educate and inspire individuals, and build community. Could be worker or member owned.		★	★		Rainbow Grocery
<b>4 Create a Food Business Incubator</b> A new organization or program to provide facilities, training, technical assistance, mentorship, and other support services for aspiring food entrepreneurs.		★	★		Taos Food Center Toronto Food Policy Council
<b>5 Create a Farming Incubator</b> A new organization or program to provide equipment, training, technical assistance, mentorship and other support services for aspiring new farmers.		★	★		Intervale Center Four Square Society
<b>6 Build Local Processing Facilities</b> For small and medium-scale food manufacturing, preparation and packaging. Will help food remain local throughout lifecycle and reduce leakage of food spending from the local economy.		★	★		Island Grown Farmers Co-op Taos Food Center
<b>7 Establish a Physical Marketplace for the Wholesale Purchase of Local Agricultural Products</b> A place for distributors, restaurants, institutional buyers and retailers to purchase direct from local growers.		★	★		YOUR DeKalb Farmers' Market
<b>8 Review Ordinances to Remove Barriers to a Community Based Sustainable Food System</b> Review all zoning, municipal, and other codes.				★	Toronto Food Policy Council Thomason Family Farm

For the first time since the days of the victory garden, there is a home garden at the White House. The Obamas are leading the nation by example, growing food for their table at home to reduce their reliance upon conventionally grown produce. Michelle Obama says: "I wanted to be able to bring what I learned to a broader base of people. And what better way to do it than to plant a vegetable garden in the South Lawn of the White House?"<sup>1</sup>

Garden Plan Courtesy of the White House website<sup>2</sup>



## Big Ideas from Big Names

**Michelle Obama:** "You can begin in your own cupboard by eliminating processed food, trying to cook a meal a little more often, trying to incorporate more fruits and vegetables."

**Michael Pollan:** "Sunlight nourishes the grasses and grains, the plants nourish the animals, the animals then nourish the soil, which in turn nourishes the next season's grasses and grains."

**Wendell Berry:** "And nowhere now is there a market for minor produce: a bucket of cream, a hen, a few dozen eggs. One cannot sell milk from a few cows anymore; the law-required equipment is too expensive. Those markets were done away with in the name of sanitation—but, of course, to the enrichment of the large producers. We have always had to have 'a good reason' for doing away with small operators, and in modern times the good reason has often been sanitation, for which there is apparently no small or cheap technology. Future historians will no doubt remark upon the inevitable association, with us, between sanitation and filthy lucre. And it is one of the miracles of science and hygiene that the germs that used to be in our food have been replaced by poisons."

1. Burros, Marian. (March 19, 2009). Obamas to plant vegetable garden at White House. New York Times. Retrieved on April 29, 2009 from [http://www.nytimes.com/2009/03/20/dining/20garden.html?\\_r=2&em](http://www.nytimes.com/2009/03/20/dining/20garden.html?_r=2&em)
2. White House. (2009). [Map of White House garden]. Retrieved on April 29, 2009 from [http://www.whitehouse.gov/assets/documents/garden\\_layout.pdf](http://www.whitehouse.gov/assets/documents/garden_layout.pdf)

## Epilogue: The Situation in Detroit

The focus of this research project was to discover and share best practices in community-based, sustainable food systems for application in other communities. Throughout our research, we have been thinking about Detroit, Michigan in an effort to understand how changes to the current food system could enhance the presence of healthy, affordable food, and serve as an economic development tool in Detroit, Michigan. Yet a more thorough investigation is needed. In this section we discuss what we have learned about the current food system in Detroit and encourage others to pick up where we left off.

## Community Mapping

Below is a sample of the questions used in the community food mapping project in the South Parkdale area of Toronto. Community mapping emphasizes: (1) involvement of a spectrum of community members; (2) transparency of local power relations, goals and aims, process, etc.; and (3) empowerment as a springboard or catalyst to further action (Parker, Brenda, "Constructing Community Through Maps", 2006). Community mapping is similar to Participatory Action Research, in that it provides a clear process for collecting information about a community and reporting on that research according to the community's own vision of their space. The project uses the application of community mapping to the specific issues of food security, and represents a strongly participatory and innovative use of community mapping techniques.

**In South Parkdale, where is food available (where do most people shop)?**

**Where does the available food come from?**

**What foods are most important?**

**Where do people enjoy getting their food the most?**

**What food is missing from the community?**

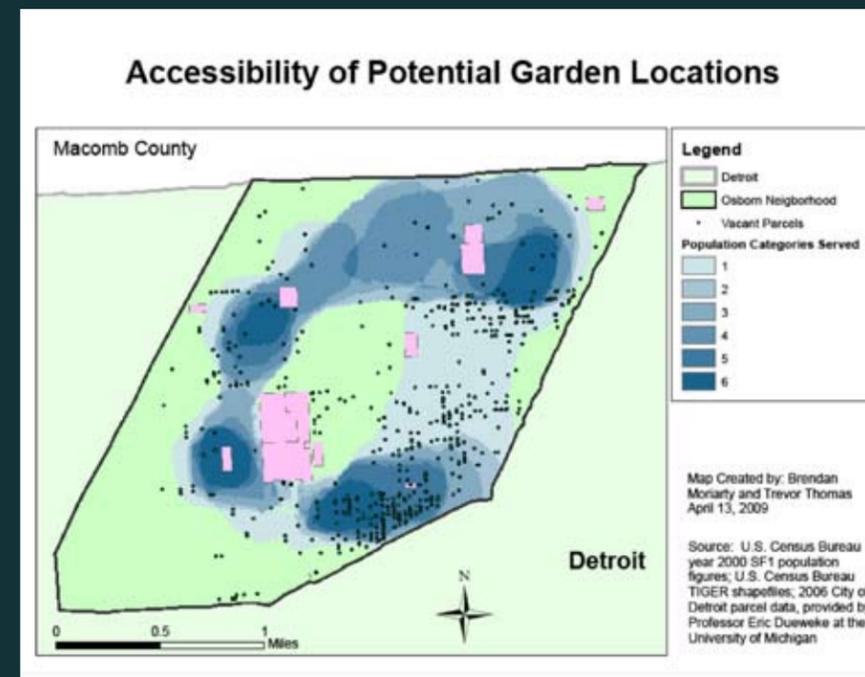
**What avenues of distribution (such as local sources) have been under-utilized?**

### Community Food System Assessments

A Community Food System Assessment (CFSA) is a collaborative process to inventory, map, and analyze a community's food system.<sup>1</sup> In the process of conducting a CFSA, participants identify local connections between economics and job security, healthcare and education, and social systems to understand their impact on community food security. The CFSA approach is based on a participatory model of community assessment that holistically views the entire community as a "unit of solution." This grassroots process engages community members to assess the existing resources and craft locally-appropriate solutions. Community mapping is a common technique used in these assessments to evaluate methods of food distribution and food quality. Community mapping may range from simple techniques such as interviews (see below), to sophisticated mapping using geographic information systems (GIS) (see following page).

## GIS Analysis

This map reveals which parcels are best positioned for gardening, to meet the need of Osborn residents for fresh produce.



One of the first steps in planning for a community-based food system is evaluating the existing food supply and unmet needs. Research by two graduate students at the University of Michigan's Taubman College of Architecture and Urban Planning demonstrate a method for beginning this process.\*

The students – Trevor Thomas and Brendan Moriarty – used geographic information system (GIS) software to identify where the Osborn neighborhood in northeast Detroit could locate community gardens to best meet its food needs. This neighborhood measures four square miles and is home to about 37,000 people.

Data for the study came from several sources. They acquired a list of all schools, parks, and vacant lots

\* Moriarty, Brendan & Thomas, Trevor. (2009). Prioritizing locations for urban gardening in Osborn. University of Michigan, Taubman College of Architecture and Urban Planning.

in the neighborhood from the City of Detroit. They drove around the neighborhood to inventory all of the places where food is sold and what kind of food is sold there. They also downloaded information from the US Census Bureau website on where different segments of the population live in the neighborhood.

Their GIS software plotted all of this information on a series of maps and identified parts of the neighborhood that are more than a 10 minute walk away from fresh produce. Their findings, summarized below, reveal some important insights that can help the neighborhood plan for a more community-based food system.

Food is abundant in particular areas – There are 71 places to buy food, essentially all of which are located on a few commercial corridors. The vast majority of these locations sell only packaged and processed food; only 11 sell fresh produce.

A large share of the neighborhood is underserved – 51% of Osborn residents live more than a 10 minute walk from fresh produce. The underserved area contains hundreds of households for whom this could be real burden: households under the federal poverty line, without access to a car, with an elderly head of household or with children. These sensitive groups are concentrated in four particular zones, indicated by dark shading in the map below.

There are abundant locations for urban gardening to help meet the need for fresh produce – There are about 100 acres of green space – on school yards, parks and vacant parcels – in the underserved area that could accommodate urban gardening. Many of these are in the four zones of greatest need, as seen in the map below. The dots are vacant parcels and the pink boxes are schools and parks.

### Agriculture in Michigan

Second only to California in terms of diversity of agricultural products, Michigan is an agricultural powerhouse, producing more than 200 commodity crops. Agriculture is the second largest economic sector in the state after automobile production, and in 2006 agricultural receipts totaled close to \$4 billion. Michigan ranks 20th in the country in terms of volume of agricultural production and is the top producer of 13 agricultural products, including blueberries, tart cherries, and black beans. Within the state, dairy farming is the most important farming activity and provides the largest share of farming income to the state. Ornamental plants, corn, soybeans, and hay follow as the most profitable agricultural enterprises in the state, and cropland accounts for 78% of farmland use. The fastest growing sector of the farm economy is livestock production, poultry, beef and hogs, while fruit production is declining slightly.

### Demographic Overview of Detroit

The City of Detroit and its residents face many serious challenges. One foundational problem relates to the City's size and its declining population. Detroit was originally built to support a population of well over 1.5 million residents, but today there are less than 900,000 people living within the city limits. Deindustrialization, suburbanization, and racism, among other reasons have resulted in high unemployment rates and a large percentage of residents living beneath the poverty level. As a result, the city is unable to provide many of the necessary social programs and municipal services required to sustain the current residents. At its peak in the 1950s Detroit was home to nearly two million residents, with high manufacturing employment throughout the metropolitan area. Unemployment was only 7% in 1950, as opposed to over 14% in early 2009.<sup>2</sup> In addition, the racial makeup of Detroit has changed drastically in the past 60 years. In 1950, the Detroit population was over 80% white and only 16% African American. In the late 50s and 60s, White Detroiters began to leave the city for the suburbs in what is commonly referred to as "white flight." This phenomenon came to a head with the race riots in 1967, scaring out many of Detroit's remaining white residents.

Today, Detroit is a very different city than it was in the 1950s. According to the 2005-2007 American Community Survey, of the 837,711 people living in Detroit, approximately 33% of all individuals and 27% of all families live below the poverty line. Detroit is the second most segregated city in the country, with a population that is 82.8% African American, 10.4% white, 6.1% Latino, and 4% "some other race," including a significant Hmong population.<sup>3</sup> The current economic crisis has hit Detroit particularly hard, leaving many residents out of work as the result of the struggling auto industry and the deindustrialization experienced by the "Rust Belt" in the past few decades. As a result of this decline, over 174,200 households in Wayne County depend on **Bridge Card** (food stamp) subsidies to feed themselves.<sup>4</sup>

### Detroit's Biophysical Context

Urbanization and sprawl continue in southeast Michigan due to the loss of population in urban centers and increasing residential lot sizes. As a result, 99% of Wayne County's wetlands and 86% of its forested land have been lost since the city was originally settled. Between 1990 and 1995, Southeast Michigan lost more than 41,000 acres of cultivated land, woodlands and wetlands to development. Much of the development in southeast Michigan has happened in the headwaters of the Rouge River watershed and along the Detroit River, undermining the integrity of these ecological systems.<sup>5</sup>

Urbanization increases the amount of impervious surface such as asphalt, cement, brick, and tar. Increases in impervious surface negatively impact water quality and increase heat island effects. Thirty-two percent of Wayne County is covered by impervious surface. The amount of impervious surface in Detroit increases the overall temperature of the city and leads to the "heat island" effect. Rooftops, impervious surfaces and other reflective surfaces store heat and make natural heat moderation difficult.<sup>6</sup> The built environment also slows prevailing winds that otherwise provide natural cooling. And because sewers bury water and carry it away, none is available for evaporative cooling. Overall, the heat island effect is a negative phenomenon that can have dire consequences for watersheds, urban waterways, and aquatic habitats. However, the overall increase in temperature has positive implications for agriculture. Detroit's annual growing season is 175 days, 17 days longer than that of the neighboring non-urban areas, and the threat of frost lasts for a shorter period.<sup>7</sup>

According to the Center for Watershed Protection, areas with more than 25% impervious surface also suffer from severe stream degradation, poor water quality, low biodiversity, and unstable stream banks.<sup>8</sup> Using measures of pollutants in local fish, the Michigan Department of Community Health has shown that all streams in the Rouge River watershed are of fair to poor quality, and all exceeded safe levels of PCB and mercury concentration.<sup>9</sup> Combined sewer overflows also pose a threat to Detroit's waterways, as four major streams in Wayne County receive this overflow. Six of the county's 10 major waterways, including the Rouge and Detroit Rivers, regularly receive untreated sewage discharge.<sup>10</sup>

Plants are important in cities because they moderate temperature, decrease air pollution, and improve water quality. Plants moderate climate through evapo-transpiration, the process whereby plants absorb water in their roots and evaporate it through their leaves. Re-greening of abandoned sites can fix nitrogen, stabilize soil, and create microclimates. In addition, plants can absorb pollution and heavy metals from the air and soil. For example, the city of St. Louis releases 462 thousand tons of sulfur dioxide. Fifty million trees, occupying a total of 5% of the city's land area, could absorb almost all of this pollution.<sup>11</sup> Additionally, small areas of vegetation throughout a city mitigate pollution, climate, and air quality more efficiently than do large parcels of vegetation.



*The rooftop of the Burnside Rocket building in Portland, Oregon holds a surprise for diners: the restaurant below grows food for its menu on the roof, repurposing otherwise vacant space and reducing the impervious surface.*

### Urban Agriculture

Small-scale, urban agriculture is not new in American cities. Many remember the Victory Gardens of the Second World War, the community garden movement of the 1970s, and the food security movement of the 1990s. Urban agriculture is variously defined but essentially refers to the production, distribution, consumption, and waste management of plants and animals in urban and peri-urban settings. The goal of urban agriculture is not to replace rural food production but to compliment it by providing “local” food security. Urban farming is a growing trend and is experiencing a change in scale of operation, ownership, and purposes of production since the WWII Victory Gardens. Urban agriculture may occur in parks, schools and churchyards, on rooftops, rights-of-ways, alleys and private yards, and is often seen on vacant lots.

### The Potential of Vacant Lands

Vacant lands are a growing problem for many American cities. Loss of manufacturing jobs, the abandonment of industrial sites, inner-city population loss, decentralized development, the recent economic and home foreclosure crises all help create vacant urban land. It is estimated that 15% of all land in American cities is vacant, and in Detroit that number is almost 30%.<sup>12</sup> The National Vacant Properties Campaign defines vacant property as under-performing, neglected or abandoned residential, commercial, or industrial buildings and land.<sup>13</sup> Left neglected, vacant properties attract crime and arson that strain public safety services while producing little or no tax revenue. Neglected vacant properties decrease the property values of the surrounding area. The longer a community ignores its vacant properties, the higher the public costs, as public health hazards increase and demolition becomes necessary.<sup>14</sup> However, creative reuse of vacant lands can be an important asset to communities. Open space preservation and agriculture, in the form of community gardens and urban farms, can yield significant social, economic, environmental, and health benefits to local residents. However, reusing vacant urban lands requires determining whether and how the site’s former use contaminated the soil.

### Brownfields

Contaminated land is commonly referred to as a ‘brownfield’. According to the United States Environmental Protection Agency, “brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment.” The word “remediation” literally means “to remedy”, and one may think of remediation of soils in the same sense that one thinks of a surgical procedure in medicine. A wide variety of soil remediation methods exist, and they are of varying practicality for community groups attempting the remediation of brownfields for urban agriculture.<sup>15</sup>

Both common and specialty land uses can lead to site contamination and designation as a brownfield. This includes heavy industrial (such as refineries or manufacturing), light industrial (such as electroplating), and small businesses dealing with hazardous materials or chemicals (such as dry cleaners and service stations). Heavy industrial operations can yield petrochemical spills and heavy metal contamination, such as lead and arsenic. Light industrial operations can leave a wide variety of hazardous waste behind, including dyes and paints, chemical solvents, and other improperly disposed substances.

Remediation techniques range from very inexpensive and low-tech, to very expensive and highly technical. Among the low-cost, low-tech techniques, excavation of all contaminated soil is an optimal method for community groups because it can completely remove undesirable contaminants in a short amount of time. Other simple techniques include tilling and composting the soil. These simple, inexpensive practices encourage dilution and use ultraviolet light and ambient air exposure to naturally decrease some types of contamination. Phytoremediation is recently developed technique that utilizes metal-accumulating plants and fungi to draw heavy metal and other contaminants from the soil. All of these techniques are relatively easy and economical, but require a strategy for properly disposing of the contaminant-laden plants and soil.<sup>16</sup> Alternative solutions to conventional remediation include capping and raised beds. Caps can effectively prevent human exposure to contamination left on site and may be implemented to seal off polluted soil in its place. This provides a clean foundation for raised-bed farming, in which the soil is formed in three to four foot wide planting beds.



The organizations in several of our case studies confronted the problem of contaminated urban soil. Three, in particular, demonstrate slightly different approaches to introducing new soil.

- Earthworks Urban Farm in Detroit bulldozed its top layer of contaminated soil into a berm on the side of its property before laying down a fresh replacement.
- Added Value in Brooklyn, New York first laid down an impermeable surface before adding new soil.
- The Four Square Society encourages residents in Ypsilanti, Michigan to grow inside raised beds on top of their yards.



*Cold frames allow growers to extend the season.*

### Season Extension

One challenge facing agriculturists in cold northern climates such as Detroit is the short duration of the growing season. This places limits on the benefits of urban agriculture as a strategy for improving food access and food security, and for creating economic development opportunities. There are, however, methods to extend the growing season, including the use of hoophouses and cold frames, both of which can be inexpensive and easy to build. Hoophouses are constructed from a series of “hoops” or bows made of metal or plastic, which are then covered in thick plastic sheeting and secured to a wooden base. Using only natural sunlight, wind, and careful monitoring, hoop house are able to maintain an optimal growing temperature. They can extend the growing season by four to six weeks in cold climates.<sup>17</sup> Cold frames are another inexpensive and easily constructed season extension method. A cold frame is essentially a wooden box sunk a few inches into the ground for stability, filled with dirt and plants, and covered with glass, typically an old window or glass door. Oriented to the south to take advantage of maximum solar exposure, cold frames also considerably extend the growing season and are a good space to grow lettuce and other hardy greens through the winter.<sup>18</sup>

### Detroit’s Food Desert

In Detroit, residents lack the retail opportunities and reliable public transit necessary to access and purchase nutritious, affordable food.<sup>19</sup> Detroiters spend nearly one billion dollars a year on food, but of that amount more than 20%, or over \$200 million, is spent outside of the city limits.<sup>20</sup> There are simply not enough food stores in Detroit to support the population and their nutritional needs. In 2008, there were approximately 177 grocery and convenience stores operating in the city, but only 92 of those were bigger than 10,000 square feet (most suburban grocery stores are between 25,000 and 30,000 square feet).<sup>21</sup> With its current population, Detroit could support an additional 600,000 to one million square feet of grocery space, or at least 12 large (over 40,000 square foot) commercial grocery stores.<sup>22</sup> In addition, over half of Detroit residents live in what some studies classify as a food desert.<sup>23</sup> According to the Mari Gallagher Research and Consulting Group, author of the Detroit Food Desert Report, food deserts are “large geographic areas with no or distant mainstream grocery stores.”<sup>24</sup> This does not mean that people living in a food desert have no access to food, but instead that they have access only to fringe food, processed food high in salt, fat, and sugar.<sup>25</sup>

One reason food retailers give for the lack of fresh food is the **Bridge Card** dispersion schedule. The **Bridge Card**, Michigan’s version of electronic food stamps, is a debit card credited by the government that can be used to purchase food and other essentials (not including cigarettes, gas or alcohol). The problem, according to some food retailers, is that the Bridge Cards are credited at the beginning of the month, creating a huge rush the first week of the month and a severe drop for the remaining three weeks. These fluctuations make it difficult for some food retailers to consistently stock fresh food, because the food goes bad between **Bridge Card** disbursements.

### Wholesale Food Markets

Detroit has two large wholesale markets. Eastern Market serves as the distribution center for both local farmers and large distributors. Its wholesale market runs every night from midnight to 6am during Michigan’s prime growing season. This market serves as the main supplier to many local restaurants and independent grocery stores in the Detroit Metro area. The second large wholesaler is the Produce Terminal, which operates during the same hours but stocks produce from a larger range of national and international sources. Buyers from locally-owned groceries and restaurants will generally start at Eastern Market and then go to the Produce Terminal for any additional needs. Larger grocery chains and chain restaurants usually have contracts with the Produce Terminal or direct distributors and tend to bypass the local options available at Eastern Market.

#### *Eastern Market*

Eastern Market began in 1841 as the Detroit Farmers’ Market, then moved to its present location and was renamed Eastern Market in 1891. In its current state, Eastern Market covers a 43-acre area on the East side of Detroit and consists of retail and wholesale stores selling everything from meat, poultry, and dairy, to fruit, nuts, and candy. There are three main components to the market: 1) the permanent retail and wholesale stores open year-round Monday through Saturday, 2) the morning wholesale market that runs from March to November and is open from midnight to 6 am, and 3) the Saturday public market open year-round. During the Michigan growing season, the Saturday market provides local produce, but the rest of the year provides mostly conventional produce, often purchased from the Produce Terminal and sold to consumers at close to wholesale price.

The morning wholesale market serves a very important role in the Detroit food system. It is the main provider of locally-grown food to restaurants, specialty grocery stores, and small distributors. According to Rob Ruhlig





*Eastern Market makes seasonal produce available to Detroit residents year-round.*

of Ruhlig Farms, a family-run farm that sells at the market, 80% of the area's Michigan-grown produce is sold at Eastern Market, and only 20% at the produce terminal. Many of the 40 or so farmers at Eastern Market have been selling at the wholesale market for several generations, and use the market as their main distribution point. Some also act as distributors for several local farms in order to increase inventory and reduce costs for each small farmer, who may not have the money, time, or volume to bring food to the market every night.

The morning market comes to life between midnight and 2 am. At this time, farmers arrive with semi-trucks full of produce from their farms and set up wholesale displays for buyers. Prices at the market are on a sliding scale based not only on quantity purchased, but also on the relationship between the producers and purchasers. Some buyers call ahead of time to determine what produce is available on any given night, and to place orders over the phone. The larger buyers rent designated truck parking at the market so that each farmer knows exactly where to drop off the pallets of produce purchased by each store, restaurant, or distributor.

Eastern Market is run by the Eastern Market Corporation (EMC), a non-profit organization, that took over control of the market from the City of Detroit in 2006. EMC is run by a diverse board of directors and several full-time staff members who work on-site. Running the market through a non-governmental entity provides greater opportunities for funding and greater accountability for spending and development within the market. Since its inception in 2006, EMC has cleaned up the market, rebuilt a number of the historic market sheds, increased market security, and embarked on several economic development initiatives to bring 24-hour life to the Eastern Market District.

Eastern Market serves as an excellent example of how providing a retail/wholesale outlet for local farmers greatly encourages the consumption of local food in an urban area. Buyers are able to establish a close working relationship with farmers, cementing their commitment to providing local foods in their own store or restaurant.

### *Produce Terminal*

The Detroit Produce Terminal is the largest wholesale distributor of food in Southeast Michigan. Products from around the world are shipped to the Detroit Produce Terminal throughout the year, where they are then resold at wholesale prices to different businesses and organizations throughout the region.

The Detroit Produce Terminal is not just one organization, but rather a conglomerate of multiple distributors and sellers, coming together in a central market location. Currently, the building known as the Detroit Produce Terminal serves as host to 10 different food distribution companies, who each rent space from the Terminal's private owner. Some of these companies are famous local Detroit brands such as Aunt Mid's and Andrews Brothers.

The Terminal must maintain a constant flow of renters and customers interacting on-site in order to maintain success. Participants need trucks to bring in their food and manpower to load and unload many tons of food sold every day. The Terminal is actually two parallel buildings, and originally trains ran between the buildings to make deliveries, a function now served by dozens of semi-trucks.

Like Eastern Market, Produce Terminal vendors begin to set up their displays in the late hours of the night, with the terminal selling its products between the hours of 3am and 10am. By 7am, most of the day's sales have already been conducted and the vendors begin packing up their displays and returning their produce to the giant walk-in coolers that they rent with their retail space. The produce terminal is open for business Monday through Friday, and is closed on the weekend.

Although it sells very little local food, the Produce Terminal is essential to the Southeastern Michigan food system. During the winter months and in tough growing seasons, the Terminal is the primary distributor of produce, and throughout the year it supplies citrus, bananas, and every other form of produce unavailable in the Michigan region. Because such a high volume of food in the Detroit region passes through the Produce Terminal, if something were to happen to the terminal (such as from fire, bankruptcy, or another disaster) Detroit's food supply would be at serious risk.

The Produce Terminal also serves as a quality control mechanism for local grocers and restaurants. By seeing the produce on display at the terminal, retailers are able to make purchasing decisions based on the freshness and quality of each shipment. It is more difficult for a store to control the quality of the food they receive if it is delivered directly to the store, since the grocer cannot physically examine the produce before purchase.



### Existing Detroit Food Retail Options

The following section presents an overview of the existing food retail options in Detroit, listed in order of product origin from national grocery chains providing internationally grown meat and produce to more community-based food outlets.

*National Grocery Chains:* The few commercial grocery stores in Detroit are spread out and not easily accessible to many residents. Although many outsiders and some residents believe that opening additional grocery stores would solve the current food shortage, this may not be the best solution. Grocery chains generally do not provide food from local suppliers and often make little effort to employ neighborhood residents.

*Liquor and Party Stores:* These stores are the most accessible food source in Detroit, but their inventory is a poor substitute for healthy, fresh, sustainable food. The minimal, if any, fresh produce they supply is often unappealing or even rotten. In addition, there is a great deal of racial tension surrounding liquor and party stores. Local black residents feel that the store-owners, many of whom live outside of Detroit, are often racist and rude, creating an unwelcoming atmosphere. The easiest way to alleviate this problem is to help local residents open their own stores to better serve the needs of the neighborhood.

*Ethnic Groceries:* Ethnic food stores are the only thriving category in the Detroit food system. The majority of these stores are owned and operated by Mexican or Asian families and serve their neighborhood ethnic population. These stores serve as a model of success for potential local groceries in African American neighborhoods.

*Local Grocery Stores:* Detroit is home to a collection of locally-owned grocery stores that are taking initiative to provide their local Detroit community with the best service possible. The stores face large start-up and security costs, but are helped by grants and funding from several local, private, and governmental organizations. Many local grocers have recently joined together to create Guaranteed Fresh, a coalition formed to combat the perception that fresh food is unavailable in the city of Detroit.

*Farmers' Markets:* There are a small number of neighborhood farmers' markets in Detroit as well as the large Saturday market at Eastern Market. The majority of the market vendors come from within 100 miles, and there are even a few vendors selling Detroit-grown produce. There is ample vacant land in Detroit, and organizations like The Greening of Detroit and SEED Wayne are creating programs to encourage urban agriculture. Yet the supply is still low and Detroit-grown produce sells out within an hour or two at the markets. In addition, brownfield remediation costs are extremely high and most vacant land in Detroit requires at least minimal clean up. The other problem with farmers' markets is that the government makes it very difficult for them to accept **Bridge Cards**. Because of its size Eastern Market has been able to navigate the process and provide **Bridge Card** exchange tokens accepted by many vendors. This program has been very successful since its inception in 2007, attracting increasing numbers of **Bridge Card** users every week. Unfortunately, many **Bridge Card** users do not have transportation access to Eastern Market and are thus unable to purchase locally grown produce in this way.

## Municipal Efforts to Promote Urban Agriculture

Urban agriculture is increasingly appearing on municipal agendas across the country. One of the first steps that a municipality can take is updating its master/comprehensive plans and zoning ordinances to address issues of food access and security and to permit urban agricultural uses. The following examples from Chicago, Philadelphia and Madison illustrate how creative approaches and strategic partnerships may serve as models for other municipalities.



### Chicago

In order to preserve green places from development that citizens had been caring for throughout the city, the City of Chicago, Chicago Park District and Cook County Forest Preserve District partnered to create the non-profit group NeighborSpace in 1996. The mission of the organization is to engage communities in the management and care of public open space throughout the city.<sup>26</sup> Funded through municipal and private funds, NeighborSpace can “own, lease, manage, or hold easements to small open spaces for development and maintenance by community groups”.<sup>27</sup> In addition, the organization can acquire tax delinquent properties. The Chicago Park District partners with Growing Power, a local urban agriculture non-profit to manage two urban farm sites. Grant Park “Art on the Farm” and Jackson Park Urban Farm primarily provide training and education to local citizens, to youth in particular, in addition to growing food for Chicago’s Southside neighborhoods and providing community garden plots.<sup>28</sup>

The New Communities Program (NCP) in Chicago is an initiative of the Local Initiatives Support Corporation (LISC) to create a five-year plan for comprehensive community development in 16 Chicago neighborhoods.<sup>29</sup> The NCP works to create partnerships and coordinate programs amongst local and city-wide agencies and organizations to address issues of affordable housing, education reform, and open space management, among others. In 2005, the NCP published the Quality of Life Report for Southwest Chicago (a recognized food desert) in which the group addressed the rise of obesity, and designated an urban agriculture district the purpose of which is to provide fresh produce and employment opportunities to local residents. In 2007, the Department of Planning and Development followed with its plan “Chicago: Eat Local Live Healthy”, a “framework for creating a food system where the production and distribution of locally grown, healthy food is available, accessible and affordable to residents year-round.” The Plan includes an initiative to “increase food production in more urban settings and encourage children to develop an interest in gardening skills”, as well as to “focus on the business of locally grown, natural, and organic food processing”.<sup>30</sup>

*Chicago’s Grant Park Urban Farm.*

*Photo Courtesy of  
Milwaukee Renaissance*



*Left: Somerton Tanks Farm, Philadelphia. Intensive agriculture on one half acre on the site of two 5 million gallon water tanks in northeast Philadelphia.*

*Photo Courtesy of the Rodale Institute*



*Right: Tending a Food Pantry garden at Troy Community Farm, Madison, Wisconsin.*

*Photo Courtesy of Friends of Troy Gardens*

## Philadelphia

In 2001, a strategic partnership between the Philadelphia Water Department (PWD) and the Philadelphia-based Institute for Innovations in Local Farming (IILF), created the Somerton Tanks Farm to creatively manage acres of open space surrounding PWD facilities, as well as promote IILF's mission to advise urban farmers in sub-acre farming techniques.<sup>31</sup> Together, the organizations have a shared vision to protect Philadelphia's open space and to create economic opportunities through urban agriculture. Using only a half-acre of land around city water tanks, the Farm has been in operation since 2001 and has shown impressive economic growth. The Farm grossed \$52,000 in 2006, and \$68,000 in 2007.<sup>32</sup> The farm runs a 46-member **CSA** and sells its produce at four Philadelphia farmer's markets.<sup>33</sup>

To publicize the success of the Somerton Tanks Farm and to make recommendations to promote more urban farming, IILF published "Farming in Philadelphia: Feasibility Analysis and Next Steps" with funding from the Philadelphia Department of Community and Economic Development. Agriculture is not formally prohibited in Philadelphia's Land-use codes so there is huge potential for urban farming and agriculture on the city's more than 300 vacant parcels that cover more than 12,000 city acres.<sup>34</sup> The report compares the cost to the city of maintaining these vacant parcels to the sales tax and property tax revenues generated through urban farming. "Based on PWD's practice of seventeen annual mowings at a unit cost of \$200 per half acre per mowing, ten half- to one-acre farms operating on former public open space area would result in annual savings in public operating costs of more than \$50,000, for mowing alone."<sup>35</sup> The Somerton Tanks Farm demonstrates the multifaceted benefits of urban agriculture in a city struggling to care for vacant properties. Not only is vacant land returned to productive use with health and environmental benefits accruing to local residents, but the city also creates opportunities for economic development and tax revenue generation.

## Madison

One of the most innovative and unique urban farming enterprises is happening at Troy Gardens in Madison, Wisconsin. In 1995, after the state put 31 acres of Madison land that community members had been using for community gardens and recreation on the state surplus land list, a movement began to get the land back into the hands of the community that had been cultivating and caring for it for many years. A group of active citizens partnered with two area non-profits, the Madison Area Land Community Trust and the Urban Open Space Foundation, and together formed the Troy Gardens Coalition. Together, these groups created a mixed land-use plan for the land that included mixed-income housing, native prairie, and the 3.5 acre Troy Community Farm, Madison's first urban farm. The City accepted the plan in 1998 and the purchase was completed in 2001. The Friends of Troy Gardens, formed by the Troy Gardens Coalition, manages the farm. It operates a CSA that had 115 members in 2008.

The success of the Troy Gardens project is due in large measure to the level of community investment and interest in the project, as well as the support of sympathetic politicians. Today, Troy Gardens is not only a model of innovative land use across the country but a source of local pride. In 2006, the City took action to include urban agriculture in Madison's comprehensive plan. One goal of the comprehensive plan is to have one community garden per 2000 households.<sup>36</sup> In addition, the comprehensive plan recommends mapping the city to identify current urban agriculture operations, and improve opportunities for farmers to create **CSAs**. The plan addresses several issues essential to the development of urban agriculture including increasing length of tenure for community gardens, protecting urban fringe areas for open space or agricultural use, promoting the development and marketing of Dane County grown and produced goods, as well as supporting the Dane County Food Policy Council and helping urban farmers create long-term economic sustainability.



## Conclusion

These three cities provide examples of programs and municipal practices that are advancing progressive changes in urban neighborhoods. It is important to note that each city has an active **food policy council** that helps coordinate and direct change in a positive direction. Meetings to create a **food policy council** in Detroit were held in the fall of 2008, and efforts are being made to connect existing urban agriculture efforts such as Earthworks, social service agencies like Peaches and Greens, and local decision-makers. The creation of this **food policy council**, along with a thorough community food system assessment and the removal of legal and political barriers to urban agriculture, would create positive momentum in transforming Detroit's current food system. It is our hope that, over time, Detroit's unique situation will allow for the creation of an innovative, community-based, sustainable food system, that provides all residents with access to healthy, affordable food.

## End Notes

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## Glossary

**Body Mass Index (BMI)** – The Center for Disease Control and Prevention uses BMI to measure obesity. It is based on the ratio of an individual's height and weight. A person with a BMI between 25 and 29 is overweight; a person with a BMI over 30 is obese.

**Bridge Card** – Michigan program for delivering government benefits by combining the best of electronic technologies. Instead of paper food stamps and paper checks, Department of Human Services (DHS) clients are issued a debit card to purchase food products and access cash benefits. See EBT.

**Community Development Corporation (CDC)** – a broad term referring to not-for-profit organizations incorporated to provide programs, offer services and engage in other activities that promote and support a community. CDCs usually serve a geographic location such as a neighborhood or a town.

**Closed-loop System** – A system whose outputs re-circulate into the system as inputs. Such a system is more likely to be sustainable with its lower environmental impacts. Because it must sell products, no food business will be completely closed-loop, but most can take steps in this direction.

**Community Supported Agriculture (CSA)** – Community residents' purchase shares in a farm or garden to cover anticipated costs. In return, shareholders receive a portion of the farm's produce – often on a weekly or bi-weekly basis during the growing season.

**Conventional Agriculture** – an industrialized agricultural system characterized by mechanization, monocultures, and the use of synthetic inputs such as chemical fertilizers and pesticides, with an emphasis on maximizing productivity and profitability. Industrialized agriculture has become “conventional” only within the last 60 or so years (since World War II).

**Custom Butchering** – A type of butchering in which animals must be purchased prior to slaughter, often done to avoid USDA regulations

**Electronic Benefit Transfer Card (EBT)** – Public assistance card redeemable at an Automated Teller Machine or at retail point-of-sale terminal. Alternative to paper food stamps (see definition).

**Food Bank** – Usually a private non-profit organization that collects donated food to be re-distributed to the needy. Food banks are an “emergency” response to hunger, in contrast to organizations that work on food security and systemic or policy change. Religious organizations are important sponsors of food banks. Food banks are meant to be a stop-gap and often receive low quality food and few fresh fruits or vegetables.

**Food Desert** – a large geographic areas with little to no access to mainstream grocery stores. This does not mean that people living in a food desert have no access to food, but instead that they or have access only to fringe food, food high in salt, fat and sugar

**Food Miles** – The distance a food item travels from a producer to its consumer. This includes the processing and distribution distances.

**Food Policy Council** – Food Policy Councils (FPCs) bring together stakeholders from diverse food-related sectors to examine how the food system is operating and to develop recommendations on how to improve it. FPCs may take many forms, but are typically commissioned either by state or local government, predominately a grassroots effort. Food policy councils have been successful at educating officials and the public, shaping public policy, improving coordination between existing programs, and starting new programs.

**Food Security** – When all people, at all times, have access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

**Food Stamp** – A government issued stamp to people of lower socioeconomic status that can be used in the exchange for food.

**Micro Eco-Farm (MEF)** – defined by the Center for the Micro-Eco Farming Movement as sustainable local mini-farms, including urban greenhouses, backyard gardens, and small rural 1 to 25-acre parcels. <http://www.microecofarming.com/>

**Schedule F** – filed by self-employed farmers to report profit or loss from farming to the IRS. used by self-employed farmers to report profits or losses to the government, which thereby qualifies the farmer for protection under the Right to Farm act.

**Social Sustainability** – Refers to the fact that all members of a society should have equal and fair access to healthy food.

**Value-Added Product** – a food product made from foods or honey cultivated on the farm's premises that is then processed and bottled for sale.

**Vermiculture** – The process of composting with worms. Performed in or outdoors, this is an effective way of composting produce and yard waste in a compact space.

**Women Infant Children (WIC)** – The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk.



## Acknowledgements

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We gratefully acknowledge the following individuals and groups for their invaluable contribution to this project:

### Individuals

Amanda Edmonds, Director of Growing Hope  
 Aubrey Thomason, Thomason Family Farm  
 Barbara and Dave Thomas, Swift Bay Farms  
 Bruce Dunlop, Lopez Island Farm  
 Daniel Ross, Nuestras Raíces  
 Deirdre Stockmann  
 Elena Arguello, Food Center Manager, Taos County Economic Development Corporation  
 Eric Dueweke, University of Michigan Faculty Advisor  
 Glenn McRae, The Intervale Center  
 Graeme Hussey, Toronto Food Policy Council  
 Guy Williams of the former Fair Food Foundation  
 Janice Etter, Toronto Food Policy Council  
 Joel Heeres and the Sustainable Agriculture Network  
 Karen Spangler, Growing Hope  
 Kim Bast, Lopez Island  
 Larissa Larsen, University of Michigan Faculty Advisor  
 Larry Gilmore and the workers of Rainbow Grocery, San Francisco, California

Lisa Johanon, Peaches and Greens  
 Lisa Richter and the staff of Earthworks Urban Farm and Capuchin Soup Kitchen, Detroit, Michigan  
 Marty Phelan, Eat Local Eat Natural  
 Meredith Freeman, former Fair Food Foundation  
 Nancy Abdallah, Nuestras Raíces  
 Nicky Noble, general manager of Calder Farm  
 Oran Hesterman, Fair Food Foundation  
 Pati L. Martinson, Taos County Economic Development Corporation  
 Patrick Crouch, Earthworks Urban Farm  
 Peter Thomason, Thomason Family Farm  
 Randall Fogelman, Eastern Market Corporation  
 Robert and Barbara Blazer, YOUR Dekalb Farmers Market  
 Sandy Bishop, Lopez Island Community Land Trust  
 Steve Saltzman, Dave's Markets  
 Terri Bad Hand, Directors, Taos County Economic Development Corporation  
 Travis Marcotte, The Intervale Center  
 Trevor Thomas

### Groups

Wayne Roberts, Toronto Food Policy Council  
 Graham Environmental Sustainability Institute  
 The DOW Chemical Company  
 Central Detroit Christian CDC  
 The workers at the Detroit Produce Terminal  
 The founders and volunteers at Added Value Urban Farm  
 Center for Local, State and Urban Policy at the University of Michigan  
 A. Alfred Taubman College of Architecture and Urban Planning  
 Gerald R. Ford School of Public Policy at the University of Michigan

## Team Biographies

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### Rachel Arndt

Rachel is a metro-Detroit native. In 2006, Rachel graduated from the University of Michigan. Her experiences working with community organizations and non-profits moved her to pursue a career in urban planning and to enroll in the University of Michigan's Urban Planning program. Graduating in May 2009, Rachel seeks to continue to work towards environmentally sustainable planning practices in Boulder, CO.

### Rebecca Cheney

Raised near Boston, Rebecca spent 10 years living in New Mexico after completing her undergraduate degree at the University of New Mexico. Her bachelor's degree in anthropology combined with an interest in design drew Rebecca to the urban planning program at the University of Michigan. She will graduate in May 2009 with a concentration in Land Use and Environmental Planning.

### Jaimie Cohen

Jaimie comes to Michigan from Cleveland, Ohio. In 2006, Jaimie graduated from Indiana University with a BS in Public Policy. After graduation she moved to Atlanta, Georgia where developed her passion for green building. Jaimie is a LEED AP through the US Green Building Council. She graduates in May 2009 with a Master's in Urban Planning with a focus on Land Use Planning.

### Allison Craddock

Allison comes to the University of Michigan from New Jersey. She earned a Bachelor in Engineering degree from Purdue, as well as a Master of Science degree in Historic Preservation from Eastern Michigan University. Allison will graduate from Michigan in May 2009 with a Master of Urban Planning degree concentrating in Physical Planning and Urban Design, and a Certificate in Real Estate Development.

### Stephanie Etkin

Stephanie is a Detroit native who returned to Michigan after receiving her Bachelor's in History from Middlebury College in Vermont and spending two years in New York City. She has traveled the world, learning to appreciate local cuisine and agriculture and the pride both provide the local community. Stephanie graduates in May, 2009 with a concentration in Housing, Community and Economic Development.

### Caitlin Greeley

A Rhode Island native, Caitlin graduated from Connecticut College with a Bachelor's degree in architectural studies in 2005. After working in Washington DC for two years advocating for smart growth and sustainability policy, she entered the Urban Planning program at the University of Michigan. She graduates in May 2009 with a concentration in Land use and Environmental Planning.

### Brendan Moriarty

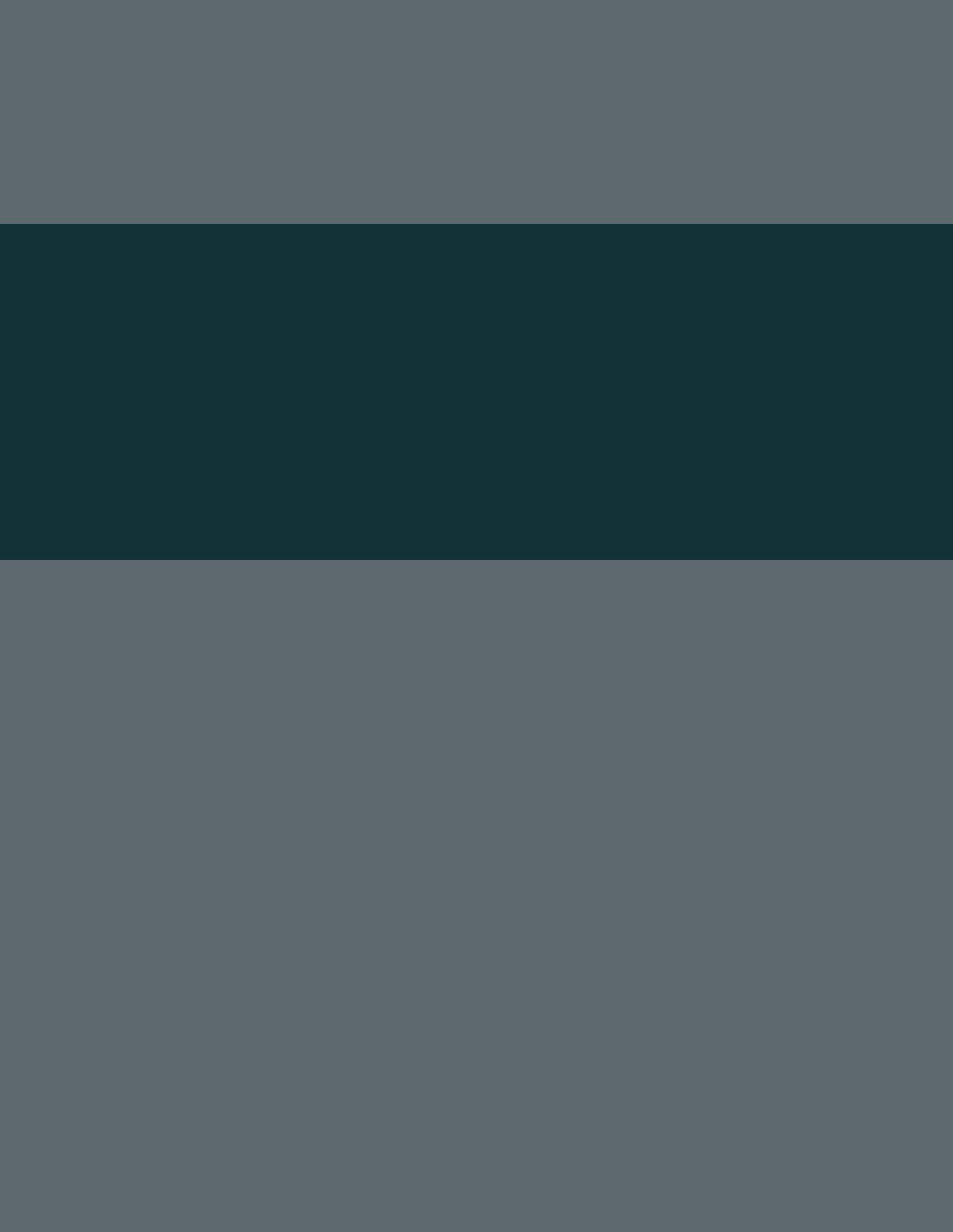
Brendan graduated with a Liberal Arts degree from Swarthmore College in 2004. In May 2009, he will graduate from the University of Michigan with Masters degrees in Urban Planning and Public Policy. At Michigan, he has focused on the practice of local economic development and land conservation, with professional experience in Philadelphia, PA, Portland, OR, Saint Paul, MN and Bozeman, MT.

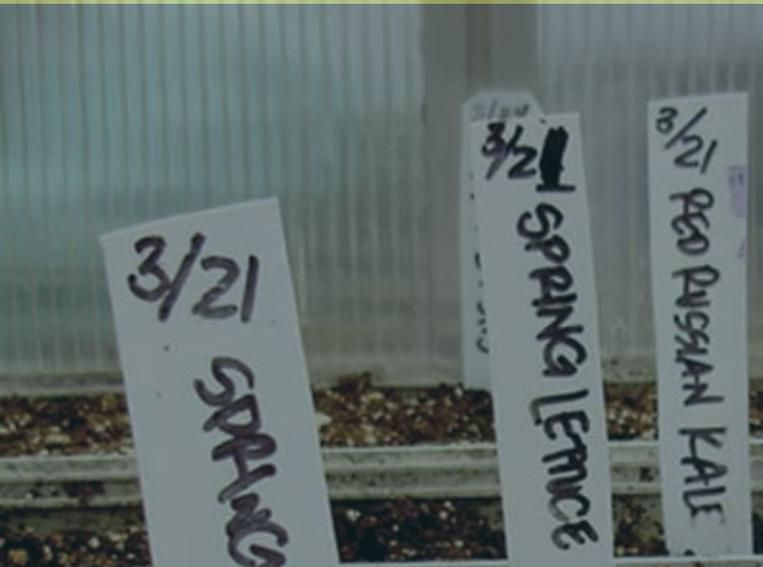
### Nick Posavetz

Nick is a lifelong resident of the Detroit area, and a career Michigan Wolverine. In addition to working towards a Masters of Urban Planning degree, Nick also received his bachelor's degrees in Economics and Mathematics from the University of Michigan and teaches for the Geology department. Nick graduates in May, 2009 with a concentration of Housing and Economic Development.

### Catherine Sanders

Catherine comes to Michigan from Denver. In 2006, Catherine graduated with her Bachelor's from Louisiana State University, where the destruction caused by Hurricane Katrina inspired her to enroll in the University of Michigan's Urban Planning program. She currently works as a part-time transportation planner for the City of Ann Arbor. She graduates in May, 2009 with her Master's of Urban Planning concentrating in Design and Land Use Planning.





University of Michigan  
Urban & Regional Planning  
Capstone Project  
April 2009