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Local Foods



sustain

Editor

Allan E. Dittmer

Cover Design

Tim Dittmer

Design/Layout

Nick Dawson

University of Louisville
Design & Printing Services

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The Institute provides a forum to conduct interdisciplinary research, applied scholarly analysis, public service and educational outreach on environmental and sustainable development issues at the local, state, national and international levels.

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Send electronic correspondence to r.barnett@louisville.edu

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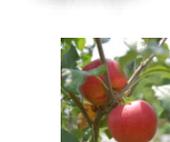
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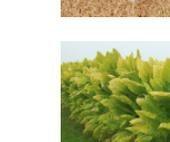
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Onions at the Gray Street Market in Louisville, Kentucky.

COVER PHOTO BY RUSS BARNETT, KENTUCKY INSTITUTE FOR THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT



LOCAL FOODS

Introduction by Lisa Markowitz, guest editor

In recent years, food has come to the forefront of public attention and scrutiny, both because of the deep problems in the existing food system and because of the broad-based efforts to fix them. The U.S. food system is huge, technologically sophisticated, and feeds hundreds of millions of people. But, paradoxically, it is its size, scale, industrial complexity, and concentration that have provoked many of the doubts, worries, and even fears that people have over food today, which in turn have inspired a cornucopia of initiatives to reform, rebuild, and reshape our food system. Although social movements and political strategies addressing food and farming have necessarily diverse starting points and goals, many efforts have coalesced around promoting local food. Eating close to home is delicious, and, as the contributors to this issue of *Sustain* argue with data, personal experience, humor, and cogence, it nourishes the health of our bodies, communities, economies, and planet. Our emphasis is local in a second regard: we focus largely on Kentucky, a state much favored by agronomic possibilities as well as an expanding cadre of nonprofit and government professionals, university-based researchers, farmers, and grassroots activists committed to food-system change. We are delighted to share with readers their perspectives, analyses, and hopes.

As is appropriate, we begin locally with an essay by Justin Mog, Assistant to the Provost for Sustainability Initiatives at the University of Louisville, *Sustain's* home. Mog recounts the University's steps to "shrink its foodshed" as part of its broad educational and civic mission. He points out the many ways a metropolitan institution can "use the power of [its] 29,000 eaters to revitalize our local economy and to support our local farmers."

Supporting farmers and eaters by building locally integrated food economies has been the work of Kentucky's Community Farm Alliance, even before local food became trendy. Martin Richards, farmer and CFA Executive Director, lays out the path and vision of this 27 year-old statewide organization. Growing a healthy, regional food system will take appropriate infrastructure, more farmers, and public policies that foster their success.

Sarah Fritschner, Coordinator of Louisville Farm-to-Table, works in the interstices of scaling up the food system, the "Byzantine world of food distribution and purchasing." Her account reveals the potential payoffs, as well as the complications, of connecting farmers with consumers, especially with those many eaters found in schools, hospitals, and other institutional markets.

In her work as Executive Director of New Roots, Karyn Moskowitz confronts the particular challenges of increasing the availability of local food in Louisville's low-income neighborhoods. Via community-based organizing and innovative Food Justice classes, New Roots has helped create volunteer-led buying groups called Fresh Stops which procure food directly from area farmers. The beauty of the Fresh Stop model, Moskowitz explains, is that it can be replicated anywhere.

Encouraging healthy eating among all residents of Jefferson County is very much a concern of Louisville Metro Government. Marigny Bostock, Josh Jennings, Mike Bramer, and Theresa Zawacki chronicle the multifaceted efforts of Metro agencies, in concert with nonprofit partners and citizen stakeholders, to reduce disparities in access to fresh food, to support food-based business development, and, most recently, to facilitate urban agriculture.

Community gardens are again blossoming across the United States. Anthropology graduate students Shelly Biesel and Christopher Sims examine the roots of this trend, and its growth in Louisville today. Their profiles of gardens in diverse economic and social settings illustrate ways "community gardening may sustainably rejuvenate Louisville food deserts, combat food insecurity, and address critical neighborhood problems."

Willie Wright, a doctoral student in Geography, takes us to rural Kentucky and North Carolina with his accounts of African-American farmers. He illustrates both the legacies of institutional racism and the many shared interests between black farmers and largely white local food movements. Greater collaboration between these too-often separate groups is key in building an inclusive and just sustainable food system.

How well has the Kentucky Proud campaign succeeded in promoting environmental sustainability and other dimensions of a “New Agrarianism” in the state’s post-tobacco landscape? Alicia Fisher, a Sociology PhD student, surveys participants to assess the course of the state’s branding program in furthering this broad vision for the relocalization of Kentucky’s agricultural economy.

Some of the most innovative crop development in the state takes place in the water. Jim Tidwell, Chair of the Division of Aquaculture at Kentucky State Agriculture University, reviews the imperiled state of the world’s fisheries to underscore the need and potential for local sources to meet growing consumer demand sustainably. KSU researchers are investigating small-scale production systems, new fishmeal sources (including distillery by-products), and the viability of fresh water mussels, prawns, and paddlefish in the region.

Finally, in his call for food sovereignty, Stephen Bartlett, farmer and Director of Sustainable Agriculture Louisville (SAL), highlights Louisville- and Kentucky-based farm and food initiatives, situating these within the practices and spirit of global movements struggling for local control over food systems in the face of predatory neoliberal trade regimes. In our regional efforts to create food democracy, we find animation, allies, and common ground across the hemisphere.

Guest editor, Lisa Markowitz is Associate Professor and Chair of Anthropology at the University of Louisville. Since the 1980s, she has carried out fieldwork in the rural highlands of Andean South America. For the past decade, as an activist-researcher, she has been involved with alternative agrifood movements in Kentucky. She is co-editor of *Anthropology and Advocacy: Food Policy in the Public Interest* (Routledge 2012).

I Eat, Therefore I Am - Localizing Food at the University of Louisville

**By Justin Mog, Ph.D.
Assistant to the Provost for
Sustainability Initiatives
University of Louisville**

I see our current economic downturn and fears over rising food prices as a tremendous opportunity to change course for the better. As painful as they may be, tough economic times tend to push people to re-evaluate priorities and to think about things like their food supply in new ways. We've begun to see the evidence of that effect in everything from the boom in garden catalog seed sales to the growing popularity of farmers' markets and Community Supported Agriculture (CSA) programs. As people start to worry about where their food comes from, whether it's safe, and whether they can afford it, many realize that one asset they do have and can control is a small amount of land, or even space on a porch or sunny window. Suddenly, lawns become anathema and a visual preference for neatly manicured grass gets replaced with a desire to grow your own food security. Once you start tending your own garden, you start thinking about other things you can do to re-localize your entire life-support system.

In the midst of considerable apprehension about the economy and climate change, I've been finding an amazing amount of hope and interest in sustainable re-localization. . . especially when it comes to food. At the end of 2008, after three years of working in agriculture and nutrition with the Peace Corps in Paraguay, my wife and I thought it would be fitting to send a letter to President-elect Obama urging him to plant an organic kitchen garden on the White House lawn as a model of sustainable living and healthy eating. To our delight, we weren't the only ones who thought this was a good idea, including the Obamas themselves, who broke ground on their garden that spring. And it's not just happening in Washington. Around the country and right here in Louisville, community gardens and farmers' markets are sprouting like weeds, gardening suppliers are reporting record sales, and people are organizing to reorganize the food system. We've seen inspiring efforts by groups like *Growing Power* in Milwaukee, the *New Agrarian Center* in Cleveland, *The Greening of Detroit*, and Louisville's own *Breaking New Grounds*, *15 Thousand Farmers*, and *Louisville Grows* (just to name a few) – all of which



are helping transform vacant lots, urban blight and food deserts into highly-productive sources of sustenance. It's as though our country has finally taken a lesson from the Paraguayans we were sent to help.

The simple fact that most rural families in countries like Paraguay are capable of meeting many of their basic needs with their own land and labor means that they are living much more sustainably than the vast majority of us in the so-called 'developed' world. While we typically measure success and progress by how much farther we can detach ourselves from the land, many of us are starting to realize that, from a sustainability perspective, the scales run in the opposite direction. This is why I have tremendous hope for societies like Paraguay's and feel that the corner we're finally turning in the U.S. is such an important milestone. Fortunately, there's still time for us to learn from one another.

Meet Your Foodshed

For decades environmentalists have urged us to get in touch with our watershed to better understand our place in the world and our connections to others. Just as a watershed is an area of land drained by a particular river, a foodshed is the area used to supply food for a particular family or community. And just as the water quality in a river or lake is directly affected by the things going on in its watershed, so too is our physical, social and economic health influenced by the size, scope and nature of our foodshed. The good news is that, unlike the river or lake, we can make some informed choices about who or what is in our foodshed. We can also decide how big we want our foodshed to be – a vital concern from a sustainability standpoint. Consider, for instance, the many externalized social and environmental costs of eating steak produced in a crowded feedlot with grain grown on land cleared of Amazon rainforest (as we saw happening all around Paraguay) vs. eating beans and vegetables from your neighbor's garden.



A Kentucky Proud section of the UofL Bookstore was dedicated in April 2010. TOM FOUGEROUSSE, UOFL

The idea is not unlike that of the much broader concept of an ecological footprint. While your ecological footprint includes a hypothetical estimate of the amount of land needed to feed you, determining your foodshed requires tracing the food you eat back to the land and water where it was produced. It requires getting to know the people who grew, harvested, processed, transported, and sold the food and all the environmental impacts along the way. It's about land, people and community.

The sad reality is that in the U.S., even the 'greenest' consumers and closest label-readers among us would be hard-pressed to know where the vast majority of our food comes from. If we're lucky, they tell us what country it's from; if we're paying close attention, we might know which state it's grown in; and, if we're true wine connoisseurs, we might even know the name of the vineyard. But only if our food is grown locally do we have any hope of connecting it with the actual people involved in getting it to us and knowing just what exactly is going on inside our foodshed. I would argue that helping people understand and shrink their foodshed is at least as vital to education, and certainly a more pressing sustainability concern, than the standard goal of convincing people to consume more wisely.

The Power of 29,000 Eaters

It is this ethos which is helping drive the University of Louisville (UofL) in our efforts to become a leader in urban sustainability by reconnecting people with the land through food. As unusual as this goal might seem for Kentucky's 'premier metropolitan research university,' we recognize that sustainable cities must ultimately become productive, regenerative environments in which people learn the skills involved with growing, cooking, preserving and eating local, seasonal foods. UofL not only has an institutional responsibility to provide ever greater access to local, healthy, and sustainably produced food on campus, but we must find ways to make eating educational. People come here to learn and if we're not teaching them how to be responsible global citizens with their forks, we're not doing our job. The role of any educational institution must be to challenge our students and colleagues to be more responsible citizens. In feeding hungry students and employees, UofL must strive to live up to Gandhi's call to "be the change you want to see in the world."

Fortunately, UofL has already begun taking steps to shrink its foodshed and to create a campus that educates its students, faculty and staff about where food comes from, how it is produced, and why that matters. Our food initiatives include:

- A weekly public farmers' market on our downtown health sciences campus in the midst of an urban food desert;
- A community supported agriculture (CSA) program with weekly campus drop-offs;
- Working with our dining services provider, Sodexo, to identify appropriate sources of food within 250 miles of campus (along with maps and educational posters at campus eateries);
- A Kentucky Proud section of local products in our campus bookstore and convenience store;
- Hiring caterers for campus events who specialize in local foods;
- A Basic Pantry program through the Office of Health Promotion to teach our students basic life skills in the kitchen and at the grocery store;
- Organic vegetable gardens on all three campuses and gardening workshops each spring;
- On- and off-site food waste composting programs; and
- The organization and sponsorship of food system educational workshops for farmers, community members, and university folks.



The Gray Street Farmers' Market opened on UofL's Health Sciences Center in 2009 providing low-income seniors access to the USDA's Farmers Market Nutrition Program benefits. JUSTIN MOG, UOFL



The CSA program brings farmers like Joe Trigg to campus throughout the growing season. JUSTIN MOG, UoFL

The point of all these efforts is precisely to draw stronger connections – through food – between campus, our community, and sustainability. Our objective is to not only educate about these connections, but to use the power of our 29,000 eaters to revitalize our local economy and to support our local farmers.

Farmers' Market on Campus

While Louisville is blessed with dozens of farmers' markets all around town, UofL got in the game in 2009. The Gray Street Farmers' Market began as an outreach program of our School of Public Health and Information Sciences with the goal of increasing access to fresh, locally grown food in the under-served downtown area. The program got a boost in 2010, when the market acquired a machine to accept debit cards and electronic food stamps, called EBT vouchers. In 2011, the market began providing low-income seniors access to the USDA's Farmers Market Nutrition Program benefits. Today, the market is a thriving food community, popping up on the 400 block of E. Gray Street for nearly four hours every Thursday from May through October and featuring a wide variety of local vendors, offering hot lunch items, fruits, vegetables, eggs, meat, cheese, honey, bakery items, canned goods, crafts and flowers. UofL's partners in this effort include the Louisville Metro Department of Public Health and Wellness, UofL Health Care, the Louisville Area Chapter of the Red Cross and Norton Healthcare, all of which have representatives on the market governing committee.

Meet Your Farmer

Each year since 2009 UofL has also invited students, staff, faculty, and the public to connect directly with local farmers through our CSA program. Customers subscribe to a CSA in the spring, providing farmers with much-needed income at the beginning of the growing season, and then share in the bounty of the harvest. At a March fair, the UofL community has the opportunity to meet area farmers and choose from a variety of weekly local food delivery options with on- and off-campus drop-offs. Options for farm-fresh food baskets include not only fresh vegetables and fruits, but mushrooms, meats, cheeses, eggs, and more. Full shares start as low as \$22 per week, but lower-cost/quantity half-shares starting at just \$12.50 per week are also available, and participants are encouraged to consider splitting a share with opportunities to connect with other subscribers through social media. Participating CSA farms for the 2012 season included: the Farmers2City Connection CSA (Glasgow, KY - Barren Co.), Courtney Farms CSA (Bagdad, KY - Shelby Co.), Harmony Fields Farm - certified organic CSA (Shelbyville, KY - Shelby Co.), Lucky Clover Farm - (Richmond, KY - Madison Co.), and Grasshoppers Distribution (a Louisville distributor for multiple area farms). Non-subscribers also benefit from the program, as farmers often bring extra produce to sell at drop-offs, and a new green grocer called The Root Cellar provides 100% locally-sourced food year-round just four blocks north of Belknap campus.

Grow Your Own

UofL directly promotes food literacy and urban agriculture through gardens on all three of our campuses. The Garden



The Garden Commons at the Cultural Center provides UofL students and employees with an opportunity to get hands-on experience with the most local of food. JUSTIN MOG, UoFL



Commons at the Cultural Center on Belknap campus is a community space for learning about organic urban agriculture, more sustainable food systems, and building resilient community. The garden was created in March 2010 as a collaborative project in partnership with Louisville Grows, and after a pilot internship program during the first year, the garden is now student-managed by the Garden Commons recognized student organization whose simple goal is: “Educating ourselves to become urban farmers.” Though everyone in the UofL community is invited to participate, students have taken the lead role in making decisions about what to plant, how to care for the crops, and what to do with the harvest. To help bring people up to speed, the Garden Commons hosts an on-going series of workshops about organic gardening, agriculture, and food justice.

With the help of a major grant from the Akzo Nobel coatings company in June 2011, the Garden Commons underwent a major expansion from four to ten raised beds, adding a large greenhouse, compost bins, rain barrels, bike racks, and an outdoor classroom space. A year later, the gardeners called on fellow students in the Renewable Energy & Energy Efficiency Club to help them solve a persistent problem – a hot greenhouse with no power for ventilation. UofL’s engineering students jumped on the challenge and, within a matter of months, they had built and installed solar panels to power two fans for the greenhouse whenever the sun shines.

The Garden Commons continues to grow – a small orchard is the next thing in the works – but the idea has also helped seed small gardens elsewhere at UofL. The Office of Health Promotion was inspired to start an herb garden outside its front door in repurposed cigarette butt containers made superfluous by the implementation of UofL’s smoking ban. At our Health Sciences Center downtown, a Feeding Therapy Garden sprung up in 2011 with tomatoes, sweet potatoes, and green beans growing in 3 square raised beds that were already in place between Baxter I and II. The garden was the brainchild of dedicated nutritionists from the Weisskopf Child Evaluation Center who decided to create a garden for the benefit of children receiving evaluation and therapy through the Feeding Disorders Program. The vision was that a garden would provide great opportunities for the children who are restricted in the variety of foods they will eat. Similarly inspired staff at UofL’s LEED Gold certified Center for Predictive Medicine on Shelby campus planted a “Birthday Garden” with fresh-picked vegetables taking the place of cake and ice cream celebrations for employees. Staff and researchers at the Regional Biocontainment Laboratory enjoyed a bountiful harvest in 2011 and replanted the garden right outside the break-room windows in 2012.

Comfort in the Kitchen

Getting access to locally-grown food is just one piece of the puzzle. Knowing what to do with it is another barrier for many. This is why UofL’s Office of Health Promotion has ventured into the realms of cooking classes, grocery store tours, and nutrition



The Office of Health Promotion found a creative reuse for cigarette butt containers no longer needed after UofL implemented a smoking ban. *KAREN NEWTON, UOFL*

education. The Basic Pantry program provides kitchen skills workshops, shopping guidance, and tasty recipes to help students learn the basic arts of stocking a pantry and preparing healthy meals on a budget. The idea is that no matter what a student’s wealth or prior cooking experience, a well-stocked pantry makes it easier to create quick and nutritious meals. Wisely stocking your pantry is a step toward your good health because the food you have on hand largely determines how healthfully you’ll eat. Adding in the health arguments for better food choices, I sometimes feel like we just might get enough motivation for real cultural change toward greater sustainability within the next generation.

Campus Dining

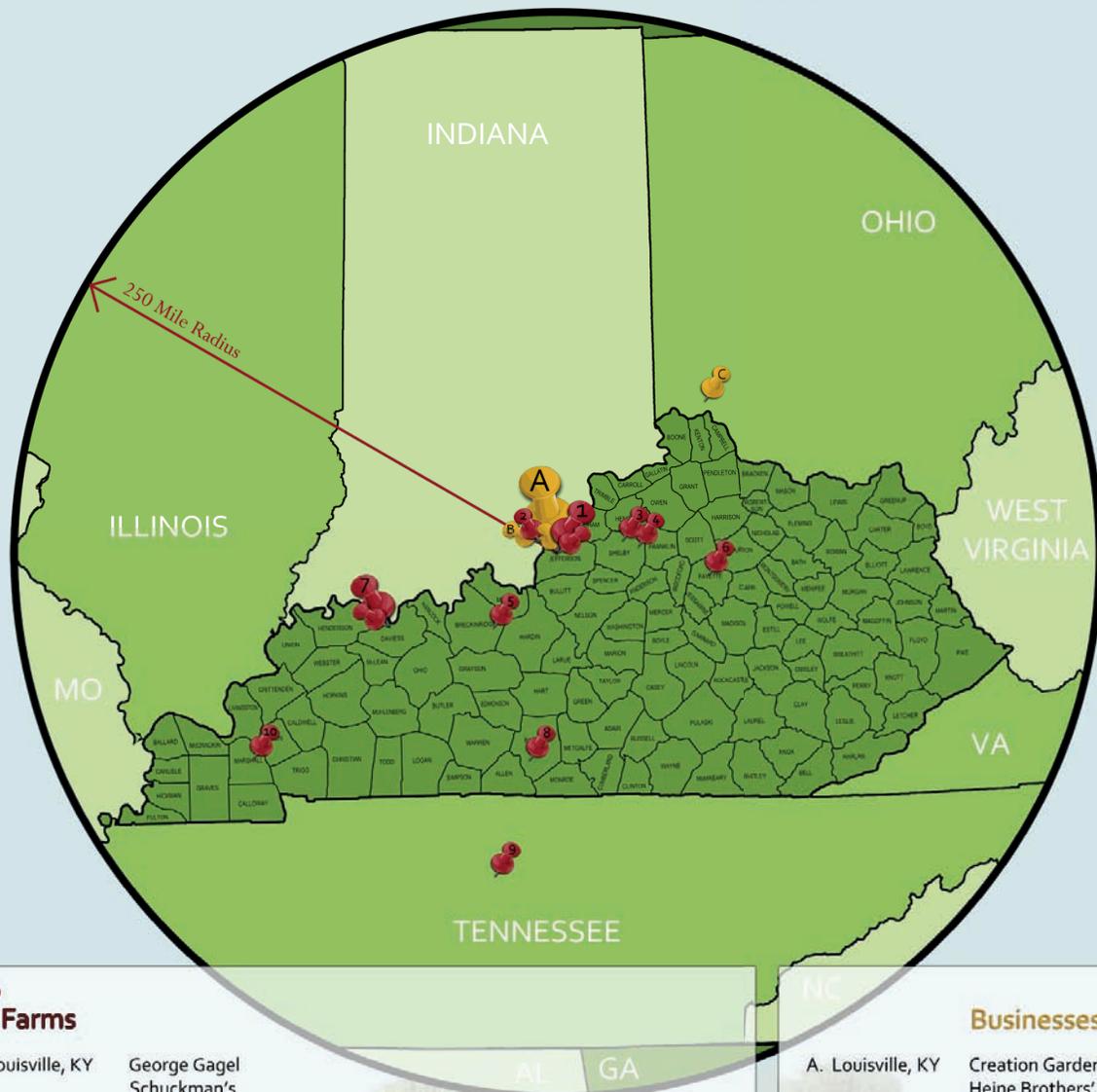
UofL works closely with Sodexo on a variety of campus dining sustainability initiatives, from beverage discounts in reusable bottles and mugs, to offering complete, nutrient-rich vegetarian meals, to fair trade coffee and tea, to composting, excess food donations, trayless dining, and other zero-waste operations. What we wrote into our contract with Sodexo from the beginning, however, is a preference for local food purchasing and a minimum requirement of 15% locally-grown products. Through on-going discussions and mandatory quarterly reporting of local food purchases, we’ve encouraged Sodexo to go beyond that minimum and they’ve been able to average about 20% of all food purchases being sourced from within 250 miles of campus, including produce, dairy, meats, and baked goods. Sodexo has also helped make this an awareness-raising and educational opportunity for our students, through a map posted in campus dining facilities indicating where local food is sourced, a produce calendar detailing seasonal availability, and an “L” icon on packaging and counters highlighting local food options at Simply to Go kiosks and dining venues around campus. Each fall Sodexo also hosts a fine dining Farm-to-Table Dinner with a special local harvest menu.



Local Farms and Businesses

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4. Bagdad, KY	Courtney Farms, Inc
5. Custer, KY	Sunny Side Quail Eggs
6. Lexington, KY	Marksbury Farms
7. Owensboro, KY	George Jones Kentucky Honey Farm
8. Austin, KY	Kenny's Country Cheeses
9. Smyrna, TN	Gourmet Nutrition
10. Benton, KY	Heartland Hydroponics

Businesses	
A. Louisville, KY	Creation Gardens Heine Brothers' Coffee Prairie Farms Dean's Milk Home City Ice John Conti Coffee Co. Trompeter Universal Linens
B. New Albany, IN	Dawn Food Products
C. Cincinnati, OH	Klosterman

Published February 2013

Sodexo posts maps of local food sources in UofL dining facilities to educate eaters about where their food comes from. *SODEXO*



It's Happening Here

The University of Louisville is committed to integrating sustainability into everything we do – from how we manage our facilities, finances and people to what we teach in the classroom and what we research in the lab. Our vision is to create a university that is itself a living laboratory for sustainability and a campus community that leads by example and educates as much by what we do as by what we say. Our goal is to make decisions which reflect a balanced consideration for environmental, social and economic responsibility and to continually learn as we go. All of this is manifested in the way we value access to local food, educate about our food system, and support a revitalized regional agricultural economy. Creating a more sustainable UofL is a dynamic, multi-faceted, long-term process. You can learn more about what we're up to and how you can get involved at <http://louisville.edu/sustainability>. We have come a long way and we have a long way to go but, yes, it's happening here.

Justin Mog has served as the University of Louisville's Assistant to the Provost for Sustainability Initiatives since 2009. He earned his Ph.D. in 2003 from the University of Wisconsin-Madison's Institute for Environmental Studies where he studied sustainable development in Ghana, Costa Rica, and was a Fulbright scholar in the Philippines. From 2005-2008 he worked on sustainable rural development in Paraguay with the Peace Corps. Justin is a car-free, TV-free, vegetarian, beekeeping, gardening Quaker with a solar-powered home.



The Benefits, Opportunities and Challenges of Creating Local and Regional Food Systems in Kentucky

Martin Richards
Executive Director
Community Farm Alliance

Introduction

In 1993 I was transitioning, to the friendly amusement of my neighbors, a traditional tobacco and cattle to organic vegetables and cut flowers farm, when I got a call from Kathy Aman, CFA leader and the Director of Kentucky's Organic Certification Program. We had recently become the 63rd certified organic farm in Kentucky and Kathy was inviting organic farmers to a meeting at the Burley tobacco Growers Cooperative to form what would become the Kentucky Organic Growers Cooperative (KOG). With the help of Community Farm Alliance (CFA) and the vision of Wendell and John Berry, who was the Burley Coop president, this meeting was to form the Kentucky Organic Growers Cooperative.

The KOG meeting was my introduction to CFA, but it was also the beginning of my realization that farming is not an independent act, that my farming and my farm in my little community of Nonesuch in Woodford County were part of something much bigger. Before anybody, at least in Kentucky, had even heard of "local foods", "locivores", food deserts, food systems; before eating local and seasonal was cool; John, Wendell, and the other members of CFA had a vision for a future for Kentucky family farmers beyond tobacco; a vision that is alive and more important than ever.

KOG was not CFA's first effort in providing alternatives for tobacco farmers. In 1986, just a year after CFA's founding, CFA farmers had started creating farmers markets in Marion Co. and in Louisville, leading to the formation of the Family Farm Growers Cooperative. Meanwhile Steve Smith, CFA member and tobacco farmer from Trimble Co., had been trying to grow and market organic vegetables with mixed results until he adopted the community supported agriculture (CSA) model in 1990 (just four years since the idea had been introduced in the USA!).

While KOG was not the first attempt at "local food" in Kentucky, it was innovative in that it married the CSA model with the Burley Coop's system of matching supply and demand

to market a premium product. The result was the creation of a structured, scalable system through which farmers worked cooperatively to match their production to a market demand, enabling them to enhance their profitability.

CFA's History of Making Progressive Change

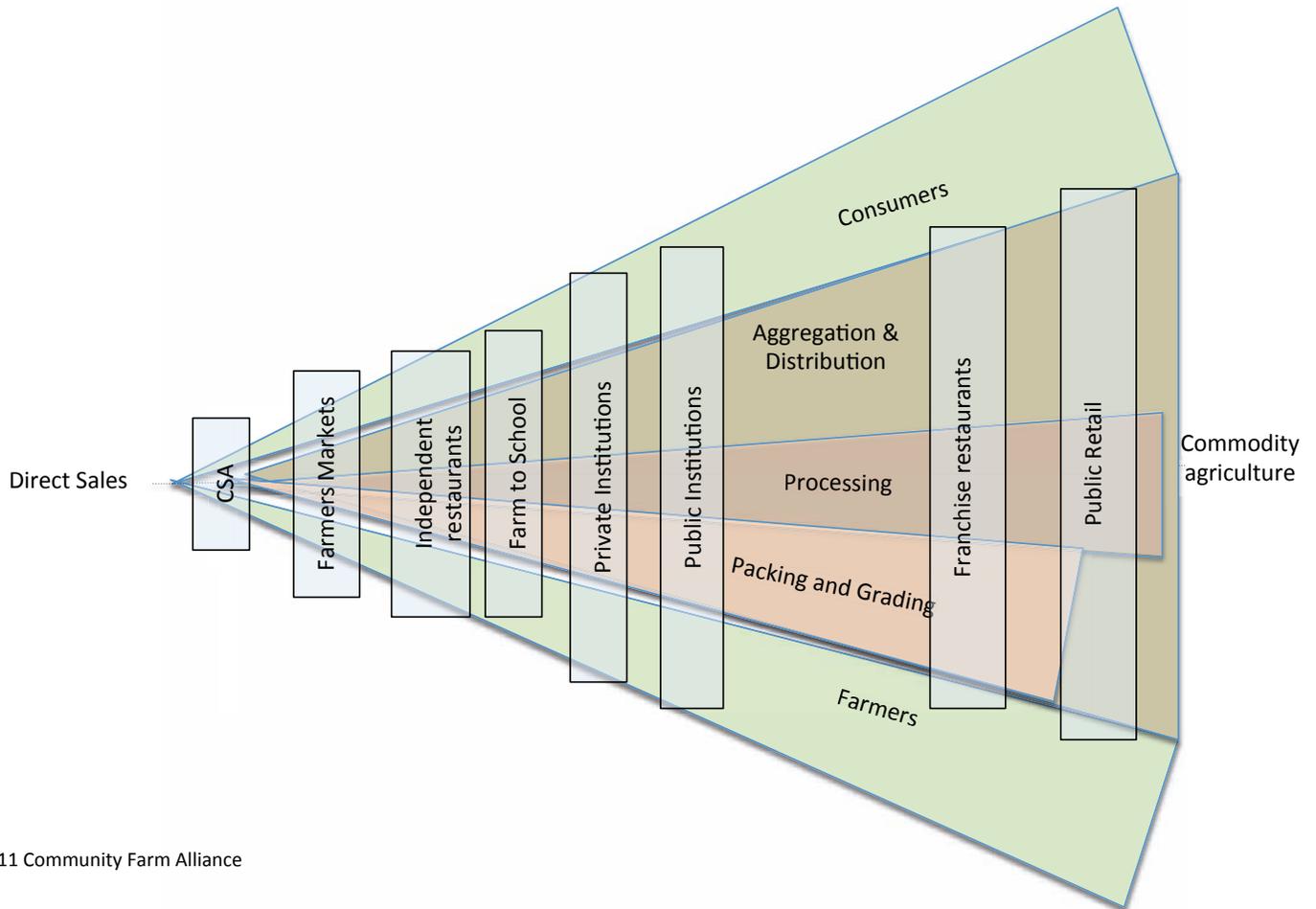
During the credit crisis of the 1980s, a group of Kentucky tobacco and dairy farmers came together to face the fallout of Secretary of Agriculture Earl Butz's industrial agricultural driven policy of "get big or get out!" With the prospect of losing their farms (neighbors had already considered suicide as an option), they concluded that the problem wasn't with how they had been farming but with the public policies in place. (Despite watching my uncle lose my grandfather's dairy farm in the 1980's farm crisis, I never equated that as being the fault of bad farm policy – I mistakenly had thought that Uncle John just wasn't a good farmer!). To keep farming, and equally important, to allow their sons and daughters to keep farming, CFA's founders realized that they must organize to change public policy so in 1985 Community Farm Alliance was formed to bring the grassroots voice to public policy. CFA continues that mission to this day.

Since 1985 CFA has led grassroots campaigns to pass or defeat over 20 pieces of legislation in Kentucky's Legislature to support family farmers. Most of those, especially in recent years, have been directly related to local food system development. CFA uses several strategies to create good public policy, aid community development and build democracy. Through community organizing, leadership development and strategic alliances with other organizations, CFA works to bring a critical public voice to policy makers. From CFA's long experience, CFA members have learned that policy makers rely heavily, perhaps too much, on models for policy development. Therefore, CFA develops community-based projects that directly improve communities but that also can be used as models for good public programs and policy. Such is the case with Family Farm Growers, KOG and CFA's numerous other efforts over the years.



Figure 1.

The Modern Food System



©2011 Community Farm Alliance

In the 1990s Kentucky's tobacco farming families were coming to a crisis point as tobacco's future and profitability was increasingly uncertain. CFA members saw local food systems as the best opportunity to maintain family-scale agriculture. Much of CFA's members' hard work on creating a future for Kentucky agriculture beyond tobacco came to fruition with the passage of HB 611 and the creation of the Kentucky Ag Diversification Fund, dedicating resources to creating a long-term commitment to diversifying and rebuilding Kentucky's tobacco farming communities. Community Farm Alliance members are justifiably proud of their role in passing HB 611 and helping to focus KADF support for farmers growing for local and regional markets.

CFA's Local and Regional Food System Development

While CFA members certainly had a clear vision of what they wanted to create, it is also a stretch to say that initially we saw how people grow and eat in the context of a "system." Through continued market development, such as four farmers' markets in low-income neighborhoods of West Louisville and the Bath Co. Farm to Community Demonstration Project, CFA members quickly learned that in fact there is a system in place for how food in America gets from the farm to the plate, and how the

current system has been largely created since the end of World War II through the control of agricultural policy by corporations. CFA members also learned first-hand that local food systems have a great potential for creating jobs, improving health through better nutrition, and alleviating poverty. To reach that potential however, farmers could not do it alone. Community partners, health and nutrition specialists, educational institutions, local and state agencies must be at the table. CFA has been building those alliances through the Farm to School Task Force, the Louisville Food Policy Advisory Council and most recently with the Eastern Kentucky Food System Collaborative.

Recently CFA has developed a diagram (fig. 1) to explain how food systems work and what it takes to get food from the farm to the fork. Aside from home and community gardens, the most direct approach is the CSA (community supported agriculture) where the farmer literally hands the consumer the farm products. Obviously farmers sell directly to consumers at farmers' markets but at these markets there is also a level of infrastructure involved with times, locations, market oversight, and at long-established markets, a market manager. As we move from left to right in the diagram, there is increasing complication of marketing logistics that includes how farmers' products are aggregated or



accumulated for processing and distribution according to the final market destination. At the far right of the diagram, farm products are treated less as food and more as commodities with all of ramifications that come with commodities, including speculative and futures markets. The diagram is also useful in representing that from left to right, farmers' share of the "food dollar" decreases. Though too involved to discuss here, this diagram can also be used to represent other factors such as system capitalization, support and subsidies.

The diagram shows that most consumers and most farmers are participating in the food system through the commodity production system that supports the large franchised retail and restaurant outlets. The food consumed at the far right also tends to be far more processed, higher in fats, oils, sugars and other additives necessary for the increase in transportation and "shelf-life." While it is true that most low-income consumers get their food at the right end of the diagram, and more affluent consumers are able to participate on the left end, the diagram does not represent the cost of food in relation to where in the system it is accessed.

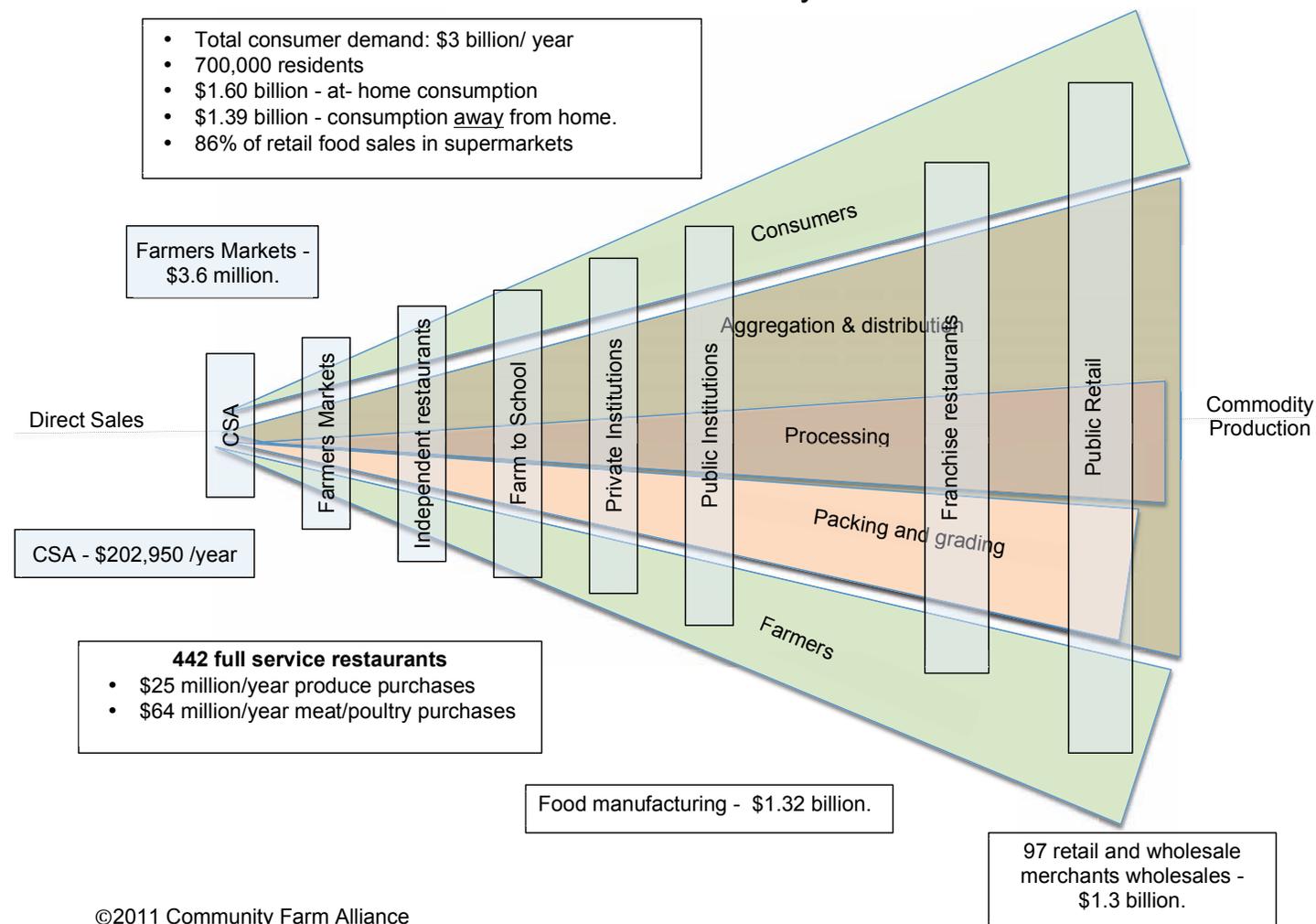
There is intentional and unintentional misrepresentation that the cost of food is higher on the left. A recent study by SCALE Inc. of Abingdon, VA¹ looked at 24 farmers markets in 19 communities, ranging in population from 10,000 to over 250,000 in six states: Virginia, Tennessee, West Virginia, Kentucky, North Carolina and South Carolina, and concluded that overall, farmers markets in the Southeast and Appalachia are highly competitive with mainstream supermarkets in their pricing on a range of commonly consumed foods, including produce, meats and eggs. In 74% of communities examined, produce, including organic, was less expensive at farmers markets.

The Economics of Local Food

As Kentucky's farmers were on track to create a new economy based on producing food, CFA in 2002 compiled the statewide policies necessary to build a local food economy and outlined the necessary steps for creating a locally integrated food economy (L.I.F.E.). CFA's 2003 report, *Bring Kentucky's Food and Farm Economy Home*², highlights that a local food system has an employment multiplier of 1.4 and income multiplier

Figure 2.

The Louisville Food System



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of almost double (A 2010 USDA report³ came to the same conclusion).

In 2011, two new national studies by the Union of Concerned Scientists⁴ and the USDA⁵ are the first attempts to document the economics of local foods. Both reports found that though local and regional food systems at this time represent a small segment of U.S. agriculture, they are a rapidly growing, expanding part of agriculture with \$4.8 billion in sales in 2008. According to the USDA report, small farms (those with less than \$50,000 in gross annual sales) accounted for 81 percent of all farms reporting local food sales in 2008. They averaged \$7,800 in local food sales per farm and were more likely to rely exclusively on direct-to-consumer marketing channels, such as farmers' markets and roadside stands. The report also concluded that once farmers pass \$10,000 in annual gross sales, operating expense ratios of farms engaged in local food sales may be lower than the average farm not engaged in local food sales, implying that local food sales farms may reach profitability at a lower gross sales point.

A soon to be published report by Michael Shuman of Cutting Edge Capital for Berea's Economic Advancement Team (CFA is helping to facilitate the local food group), shows that the economic leakage that a local food system in Berea could plug would create almost 225 jobs, third behind professional services and distribution.

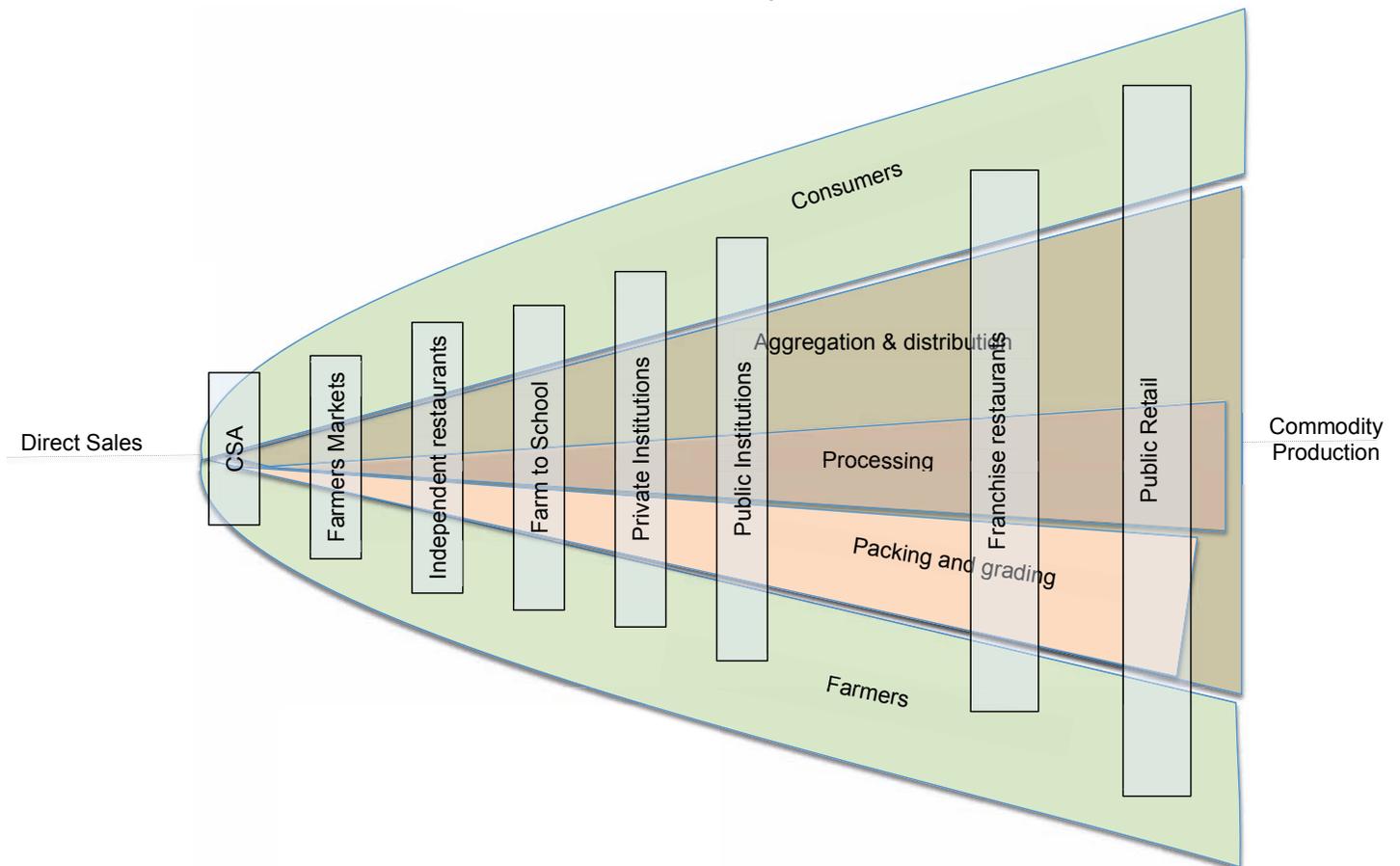
What does this look like on the ground? Food production, processing, marketing, and distribution are a huge part of our economy. According to the 2010 report *The State of Food – A Snapshot of Food Access in Louisville*⁶, food is a \$3 billion dollar economic sector in Louisville, Kentucky. Diagram 2 shows the particulars of the current food system in Louisville. Note that Louisville, like the rest of America, purchases 40% of its food to be consumed away from home.

The Economics of Food and Health

Poor health has its own economic impacts. For example Floyd County, Kentucky is ranked 112th among KY's 120 counties for health with 30% of adults as obese, 10% of adults

Figure 3.

Localized Food System





have diabetes, 50% of children live in SNAP eligible households, and only 15% of adults eat the recommend amount of fresh fruits and vegetables. Based on the USDA report *The High Cost of Poor Eating*⁷ and adjusted for inflation, the economic impact due to poor health in Floyd County is almost \$6.5 million over a generation.

Without affordable healthy foods available, people tend to eat foods high in fats and sugars but low in nutrients. When faced with the decision of how to spend very limited resources on food, the options that win out most often are those most affordable, filling and flavorful – highly processed and packed with calories. Too often it is assumed this purchasing pattern results from ignorance. In reality, this choice is the more rational due to the many constraints faced by low-income consumers. In other words, the short-term need beats the long-term need.

The consequences of this behavior are destructive to the lives of our most vulnerable citizens and perpetuate similar behavioral patterns in future generations. To blame those who fall into the trap of acting out these behavioral trends is to misunderstand the situation. The real injustice lies in the fact that people are forced to make choices that destroy their health and the health of their children and future generations because of structural problems within our food system. It is clear that our current food system is failing us both nutritionally and economically.

However, the situation is not completely hopeless. The barriers to healthy food choices, once identified, can be addressed. Two of the greatest of those barriers, the lack of access and the affordability for low-income citizens to fresh fruits and vegetables, can be significantly addressed through public policy.

Opportunities and Challenges

Local food has not only become “cool” and trendy but is also making a significant economic impact. Like organic agriculture, which was once considered a fringe and niche market, local and regionally produced and marketed farm products can serve to “expand the economic pie” for farmers and increase the percentage of fresh food consumed. Consumers and farmers alike would like to see a food system that looks like fig. 3, and by doing so we would begin to reap the economic, health and wealth creation benefits that come with it. While there remains economic, sustainability, and nutrition issues at the right end of the food system in fig. 3, a more localized system does not eliminate commodity production nor markets because there are benefits from this segment of the food system, namely in terms of economy of scale and overall national food security.

I think that it is important to note that from Community Farm Alliance’s perspective, the initial gaps between farmers growing for local markets and commodity producers are not an “us versus them” situation. Like so many times before, those with a special interest in maintaining the status quo are working to divide farmers, when in fact all farmers have much to gain.

But what would it take to create the food system in fig. 3? Despite the explosion of CSAs and farmers markets (Kentucky farmers markets have doubled in the decade from 1998 to 2008 from 59 to 120⁸), so much more can be done to support those markets. For instance, according to the Kentucky Department of Agriculture, currently only 45 farmers’ markets, out of over 120, across Kentucky accept WIC farmers’ market vouchers. Seven of Eastern Kentucky Counties do not have a single farmers market. Opening farmers markets at those seven locations could result, by modest standards, in a direct increase in over \$250,000 local annual sales, almost a half a million dollars in increased local income, and 30 new jobs. But just providing the universally

needed farmers market pavilion does not ensure a markets success. Lack of a market manager, inability to accept even credit/debit cards (let alone food and nutrition electronic benefit transfer (EBT) cards) and public education continue to plague most Kentucky farmers markets.

CSAs and farmers markets are extremely important for beginning farmers who are not growing commodity-based crops. These are the “gateway markets” because they require minimal capital investment and are “scalable,” allowing beginning

farmers to gain both production and marketing experience. Such experience often allows these farmers to supply to restaurants that use, or feature locally grown farm products. As important as farmers markets and local restaurants have become to local food farmers, they have also become a “glass ceiling.” As more farmers enter the local food system through farmers markets, these markets have become more competitive closing avenues for farmers to expand.

Marketing local food in rural communities remains a challenge. CSAs work best in concentrated population centers and with many rural people having large gardens, getting a critical mass of farmers and consumers for a farmers market is difficult. Institutional buying of Kentucky grown products is the “middle market” that continues to evade many farmers because they typically demand a greater, consistent supply of products. Put another way, institutions want one truck coming once or twice a week, and not a dozen pickup trucks every other day.

Kentucky has the largest developed state park system in the country with 17 state resort parks (over half are in Eastern

To blame those who fall into the trap of acting out these behavioral trends is to misunderstand the situation. The real injustice lies in the fact that people are forced to make choices that destroy their health and the health of their children and future generations because of structural problems within our food system.



Kentucky). With each resort park purchasing an average of almost a half a million dollars in food purchases a year and at least one school district in every county, institutional food sales are a huge potential market that could support the next level of a local food system market development.

Food aggregators and distributors have been around for over a hundred years (think of Sysco, Gordon, etc.), but those that market locally grown food for local markets and include traceability back to the originating farm are only a recent development. Whether they are non-profit, for profit, a farmer cooperative, or investor-owned, “food hubs”, as these local aggregators have been dubbed, offer the solution to institutional buying of “local food”. Kentucky Organic Growers and to a certain extent Cumberland Farms were early Kentucky food hubs. Today Grasshoppers, founded by CFA members, in Louisville and Marksbury Farms, primarily a meat processor and distributor in central Kentucky, are leading the next generation of Kentucky food hubs. Many of CFA’s farmers are marketing through both Grasshoppers and Marksbury Farms.

Creating an aggregation and distribution system, for local food or otherwise, requires a huge capital investment. It also requires qualified professionals to market and manage the operation. Many previous attempts in Kentucky and other states have failed because of the lack of skilled management. Localizing the far right of the food system obviously involves taking the infrastructure necessary for institutional buying to the next level, but by developing the capital, management and marketing needed for institutional buying, it will set in motion what is needed to reach those markets.

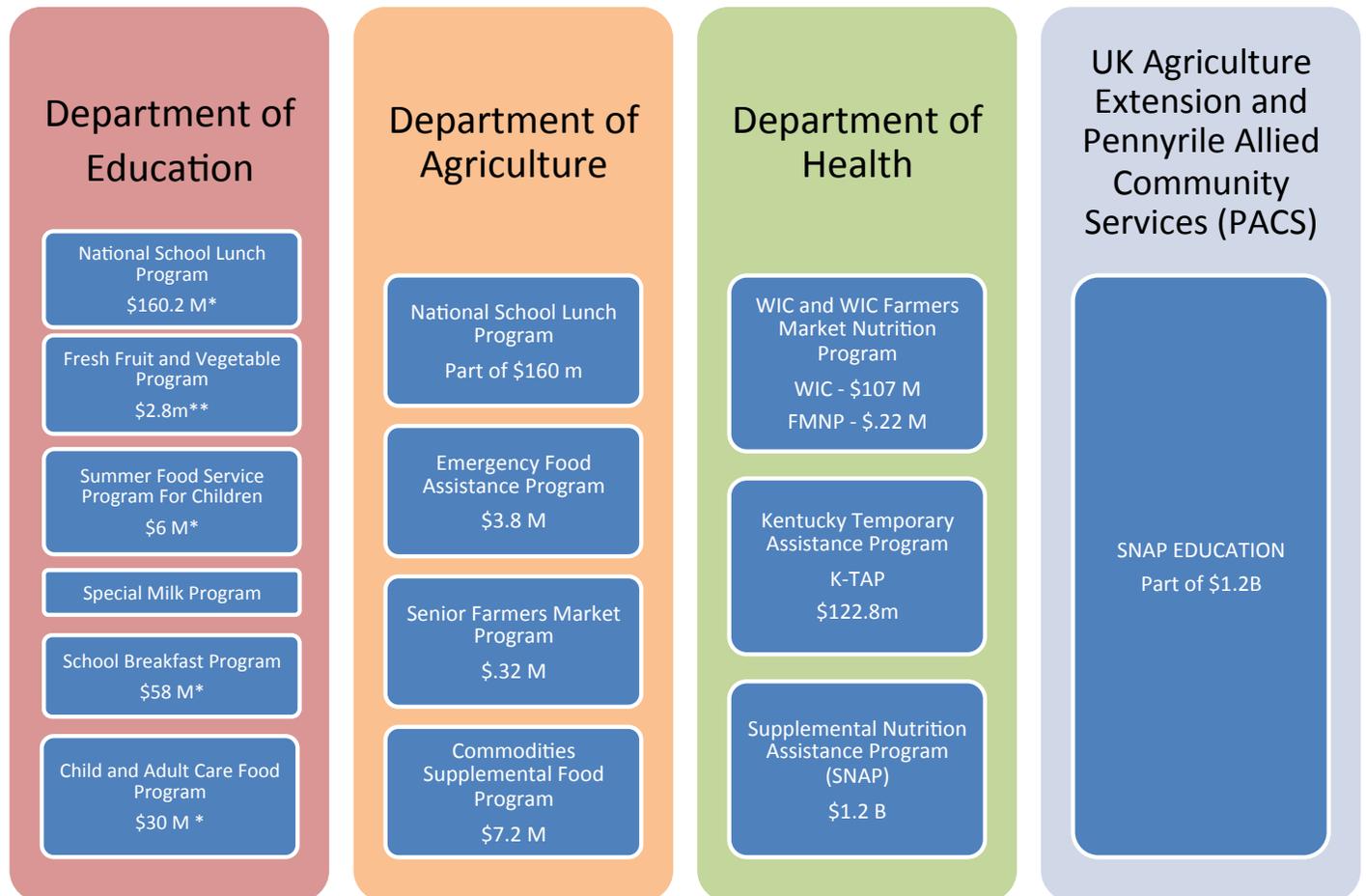
Public Policy is Key

Given the importance of food, it’s no wonder that public policy has always played an important role. While there is little opposition to the creation of local food systems, recognition that food system development is legitimate economic development is just beginning.

In May 2007, CFA members released *Bridging the Divide: Growing Self-Sufficiency in Our Food Supply*, a community

Figure 4.

Federal Food and Nutrition Programs Administered in Kentucky



* 2010 Funding levels, ** 2012-2013 level



food assessment of Louisville. In 2010 the City of Louisville received a \$7.9 million CDC stimulus grant to address the needs of underserved citizens in food deserts, marking the culmination of seven years of CFA organizing and advocacy for this goal. These two efforts have resulted in the creation, by former Louisville Mayor and current Lt. Governor Jerry Abramson, of the Louisville Food Policy Advisory Council with many of the FPAC members belonging to CFA. Current Mayor Greg Fischer's election campaign included the economic development potential of local food and his administration is following through on that commitment.

Referring again to fig. 1, as we move from left to right, public and private institutional policy plays a larger role in food system support, but nonetheless policy still impacts all parts. But even at the CSA level, the ability for food and nutrition program (i.e. SNAP and WIC) participants to use their benefits through a CSA is determined by program(s) policies. Policy implications for the far right include a wide range of not only the Federal Farm Bill but also, transportation, energy, foreign trade, land and water rights, etc.

It is worth noting that half of the Federal Farm Bill with an estimated five-year price tag of \$300 billion, renewed every five years and currently under debate in Congress, goes to 18 different food and nutrition programs administrated at the state level. Kentucky currently receives and disburses approximately \$1.5 billion annually through 14 programs (fig. 4). CFA is currently researching those programs to determine how they impact or could impact local food system development. While more research and communication is needed, there appears that many of these programs are not collaborating or coordinating with each other. As federal and state political pressure to scale back these important programs increases, so does the need to make them more efficient.

As mentioned before, institutional buying is the critical component of expanding local food systems and the barriers to local food in state institutions are primarily controlled by public policy. CFA has worked hard in introducing and passing three bills to "encourage" the state park system to purchase locally grown farm products.

In an era where jobs are everything, it is a CFA priority to move local food system development in the eyes of the public and policy makers into the economic development arena. If local food systems were systematically considered as such, then all of the resources and support usually given to efforts such as industrial recruitment would also be granted to food system development.

Given the many direct and indirect public policies that effect food, what is obviously needed but not happening is the need for a comprehensive policy and program approach. Food policy councils serve that need, hence the creation of the Louisville Food Policy Advisory Council and state food policy councils in other cities and states such as the Florida and Oklahoma Food Policy Councils. For that reason Community Farm Alliance is

working with a diverse set of statewide collaborators with the goal of bringing together what may become a state food policy council.

Kentucky Needs More Farmers!

Despite all of the opportunities, barriers and challenges noted above, the single biggest obstacle to local and regional food systems in Kentucky is the fact that we need more farmers. Farmers and ranchers constitute one of the most rapidly aging workforces in the United States. While the average age of the U.S. workforce is 39, the average age of all U.S. principal farm operators is 55.3 (56.5 in Kentucky). The Agricultural Census also showed that the number of full-time farmers in Kentucky dropped from 54 percent in 2002 to 40 percent in 2007 and though slower than the national average, Kentucky farms are getting fewer and bigger.

The decline of tobacco farming in Kentucky could have been devastating to farm loss but Kentucky's Ag Development Fund has been significantly slowing the loss of farmers, however Kentucky is still losing farmers. Though Kentucky saw an explosion of farmers markets from 1988 to 2008, at a recent Kentucky Legislature interim Committee on AG meeting, the Kentucky Department of Ag reported that the number of farmers markets and participating farmers is now declining statewide, primarily due to the age of farmers.

Maintaining a legacy on Kentucky farms has been a fundamental issue for CFA. Ensuring farm profitability through policy and program development has been a primary strategy for CFA, the KADF and KDA, but even with continued success that strategy alone is not enough. Despite the creation of new and proven profitable farm models, Kentucky is not providing "a pathway to the land" for the next generation. There remains huge gaps in Kentucky's capital, marketing, education and access to land support for beginning farmers.

The decline of tobacco and the elimination of the tobacco program has also created farms without farmers. CFA consistently gets calls from families that have land, lost their tenant farmer but wish to keep the land as an active farm. To address this issue, Community Farm Alliance has created The Agriculture Legacy Initiative, bringing together beginning farmers, hope-to-be farmers, landowners, and supportive agencies and institutions. With a growing base of over 75 beginning farmers, this is one of CFA's most important and exciting program areas.

Conclusion

We are living in one of the most challenging times in generations. Perhaps not since the Great Depression has there been such widespread economic uncertainty. Our planet now has over 7 billion people, most of whom are living in the developing world where they spend 50% of their income on food, and are experiencing rising food prices and inflation. Today agriculture is at the intersection of many, if not all, of the major issues of



our day with “peak” fossil fuels, climate change, dwindling fresh water supplies, and what many people are suggesting as “peak food.” Agriculture is no doubt part of the problem, but farmers can provide significant answers to the problems of food security and accessibility, environmental and personal health, and energy.

Local and regional food systems offer an enormous potential for creating new economic development, addressing individual and community health issues, and creating local wealth. They also can significantly contribute to greater food security in the face of economic and natural disasters, and provide the desperately needed “resettling” of America.

The creation of local and regional food systems requires foremost, more farmers, and with them, the infrastructure, capitalization and market development that supports them. Local and regional food systems also must include across the board equity and parity for farmers and consumers alike. “Everybody Eats” is a phrase that CFA members use a lot because it underlines the fact that nobody is immune from where and how we get our food, and the public policies that determine the answers. As a nation and as a state, especially in a time of contracting resources, we must take a holistic and comprehensive approach to reach the potential that local and regional food systems promise. ———

A graduate of UK’s College of Architecture, Martin Richards has farmed his family’s land in Woodford County, been a partner in Prajna Design/Construction, and most recently was the economic development organizer for Kentuckians for the Commonwealth, working on energy and sustainability issues. Martin has been an active member of CFA for 17 years, serving as the CFA President in 1998. He was the first CFA Fellow during the passage of HB 611 that created the Kentucky Agricultural Development Fund. Martin became the director of CFA in November of 2010.

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- 7 High Costs Of Poor Eating Patterns In the United States. Elizabeth Frazão, Agriculture Information Bulletin No. (AIB-750), May 1999, <http://www.ers.usda.gov/publications/aib-agricultural-information-bulletin/aib750.aspx>
- 8 According the Kentucky Department of Agriculture annual reports, <http://www.kyagr.com/marketing/farmmarket/index.htm>
- 9 I would like to credit Marry Berry Smith for introducing to me the term of “resettling.” In an obvious reference to her father Wendell’s book *The Unsettling of America*, resettling is exactly what America needs to ensure the proper stewardship of our land, water, air and biodiversity – a philosophy that Wendell espouses and is shared by CFA members.

Local Food for a Healthier Kentucky

**Sarah Fritschner
Coordinator, Louisville
Farm to Table**



As a University of Kentucky student in Nutrition 101, back in the dark ages when dietary fiber was considered a “non-nutrient,” I was mesmerized by the direct link of food to health and happiness -- that kids in Africa needed only to eat sweet potatoes to prevent blindness, that pregnant women could improve the outcomes of childbirth by what they ate, that treating corn with alkali to make tortillas and hominy could prevent a horrible, disfiguring and lethal disease. Solutions seemed so easy, and only required me getting a degree and hitting the road to save people from themselves.

Food access and consumption has always affected quality of life, but my formal education took place in the formative years of what Michael Pollan refers to as “nutritionism¹,” a time when people learned to eat food like brown-rice-and-walnut loaf² because it was good for them, without regard to its taste.

Years later, still struggling from a tragic childhood with regular servings of canned asparagus and cabbage wedges doused with Russian dressing, I discovered fresh homegrown cherry tomatoes at an Italian farmers market and had an epiphany: food that is good for you can taste good. Tomatoes are sweet and acidic. Strawberries are juicy and tender. Apples are crisp and floral. And asparagus is lifted from canned infamy. The once slimy and stringy becomes crisp and bright.

That tomato taste began my decades-long crusade to bring local food into the city of Louisville. If good-tasting food were presented to them, I reasoned, people would choose to eat it over bad food, and I proved it with, albeit a small sample, my own children. If good-tasting food was ubiquitous, our health and happiness would improve concurrent with our consumption.

That personal trajectory is a microcosm of the local-food movement today writ large: the straight line of discovery to action. Local food is good for us and tastes good too, hence, why isn't it served everywhere? Hospitals should serve it – they are bastions of health care. Schools should serve it – they feed our children twice a day. Colleges and universities should serve local food – young adults are in prime “saving the world” mode and what better way to save at least a faltering agriculture economy reeling from the loss of its most lucrative crop (tobacco) and

not looking so swell on the thoroughbred front either. Why doesn't White Castle make little sliders out of Kentucky beef; there's more beef in Kentucky than any other state east of the Mississippi³. Why don't homes and restaurants and supermarkets and senior centers make and stock food raised and produced in Kentucky?

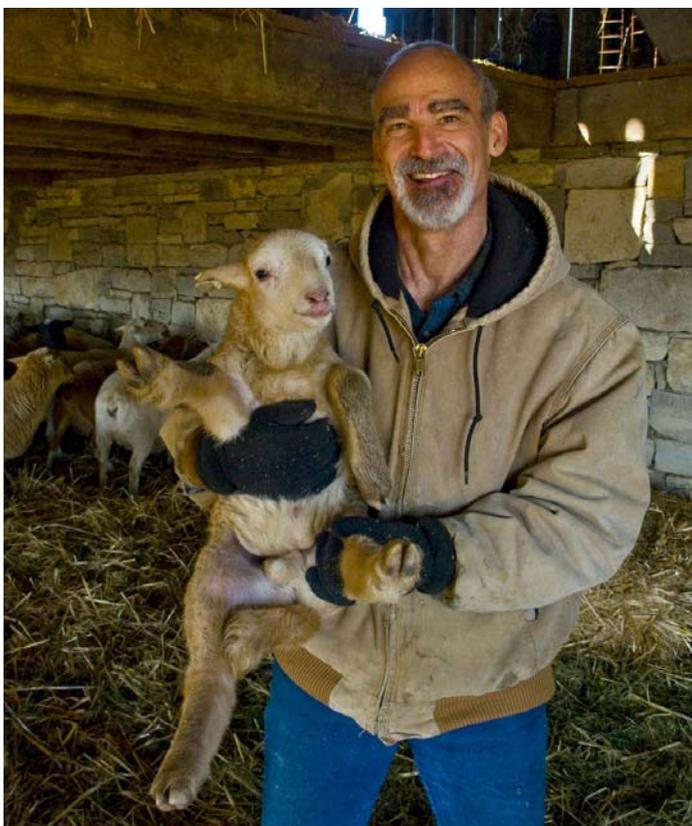
Like those troubled children in Africa whose eyesight suffered as much from unequal distribution of power and resources as much as food, the journey of squash from a farm in Shelby County to a school in Jefferson is not simple.

Tackling the complicated farm-to-table issues six years ago was a group of judge/executives from nearby counties, Louisville's mayor Jerry Abramson, private sector and agriculture representatives along with author and Henry County resident Wendell Berry⁴. These folks crossed jurisdictional and party lines to collaborate on the idea that food might be a solution to Kentucky's waning agriculture production. Could food, raised on a scale appropriate to the size of rural communities, support farmers and the citizens of Metro Louisville, they wondered.

Louisville Metro's Department of Economic Growth and Innovation, working on behalf of The Local Food Economy Work Group, commissioned a Regional Farmers Market Feasibility Study, which discovered that Louisville is a \$3 billion food market. The study recommended key elements needed to increase Kentucky farmers' share of Louisville's food market system. Specifically, the report called for a broker to create relationships and connect suppliers with consumers⁵.

That project is the Louisville Farm to Table program and I am its coordinator. LFtT has introduced me to the Byzantine world of food distribution and purchasing, and enlightened me to the harsh realities of changing that world. Here's a hint: putting local food on any table other than your own is not as easy as it looks.

Putting local food on your own table has gotten a little easier, at least during the summer months when more than 20 farmers markets around the Louisville area⁶ sell everything from cheese and honey to sausage and tomatoes and even Kroger stocks the



4Hills Farm farmer aggregates Kentucky lamb and sells it to Whole Foods and some Louisville restaurants. The farmer's name is Jim Mansfield

most common vegetables: corn, tomatoes, peppers and squash from Kentucky farmers. October to May, pickings are slimmer: Grasshoppers Distribution and the Root Cellar persevere with all-local products 365 days/year. To a lesser extent, Valu Market in the Highlands, Whole Foods and, allegedly, Earth Fare⁷ offer from among local cheeses, meats and eggs.

But to move the needle on the local food economy and to give consumers what they believe they are getting, the effort will require many individuals, non-profits, for-profits and institutions working together and individually.

People who prefer local food do so for a variety of reasons, not the least of which is a desire to improve the environment, health, food quality and the local economy⁸. Few studies directly support the assumption that local food will do all this for us⁹, however, and as a result there has been backlash against the local movement¹⁰.

Kentucky is in a unique position, however. For generations, farmers have depended on steady, predictable tobacco income to moderate the price fluctuations of other crops, such as beef and commodity corn. Tobacco economy allowed farmers to make a living off relatively small farms, accounting for why Kentucky ranks fifth in the number of farms nationwide¹¹. Today, tobacco income has declined more than 65% from its high of \$947.5

million in 1997¹², and the market that's left doesn't provide the guarantees it once did. Thousands of farmers are wondering if they can make money growing something else.

Louisville Farm to Table looks at the potential of food – as opposed to sod, or racehorses, or timber – as an alternative crop. The program helps farmers understand what the markets are, finds additional markets, and works with consumers to identify and organize markets. The work includes helping restaurants like Bistro 301, Bristol Bar and Grille, Decca and others find local food, but it also includes working with Jefferson County Public Schools to incorporate more local food into the 60,000 lunches they serve every day.

Because while shopping at farmers markets is an important and growing sector of the market, we will not change the lives of Kentucky farmers nor will we measurably improve the agricultural economy until farm production has access to the institutional markets. Primary, secondary and post-secondary schools nationwide spend \$41.5 billion on food¹³. Add hospitals, nursing homes, large-volume venues such as the Yum! Center, the Convention Center, the Kentucky Fair and Exposition Center, and you can begin to make a change in food systems that benefit both the environment and the farm economy.

Yet though we may be surrounded by the capability to grow the tastiest, most health-inducing produce; livestock raised without antibiotics or hormones; dairy animals that could rebuild Kentucky's once-booming industry, the large institutional markets that could support farm transitions from tobacco to food are mostly closed to us, unless we work alone and with partners to create change¹⁴.

A case in point: The largest food-service companies in the country are Aramark, Compass Group and Sodexo¹⁵. These multi-national companies are responsible for food at places like Churchill Downs, the University of Louisville, Norton HealthCare, Trinity and St. Xavier high schools, UPS, Jewish Hospital and St. Mary's Healthcare, Bellarmine University and many, many more locations.

These and other institutional food providers have long-term contracts with large food manufacturers that earn them cash rebates for food purchases¹⁶. These rebate schedules result in direct payments not only to the corporation, but figure into bonuses for on-site personnel, and to the institutions as well. Kitchen managers buy food from large corporations to earn bigger bonuses. Hospitals and universities get "facility upgrades" without having to pay for them, and earn annual cash commissions from their foodservice contractors¹⁷.

In short: No cook wants to buy from a local farmer, because it cuts down on the money he earns. A hospital administrator will lose commission and upgraded facilities if her foodservice contractor makes less money.



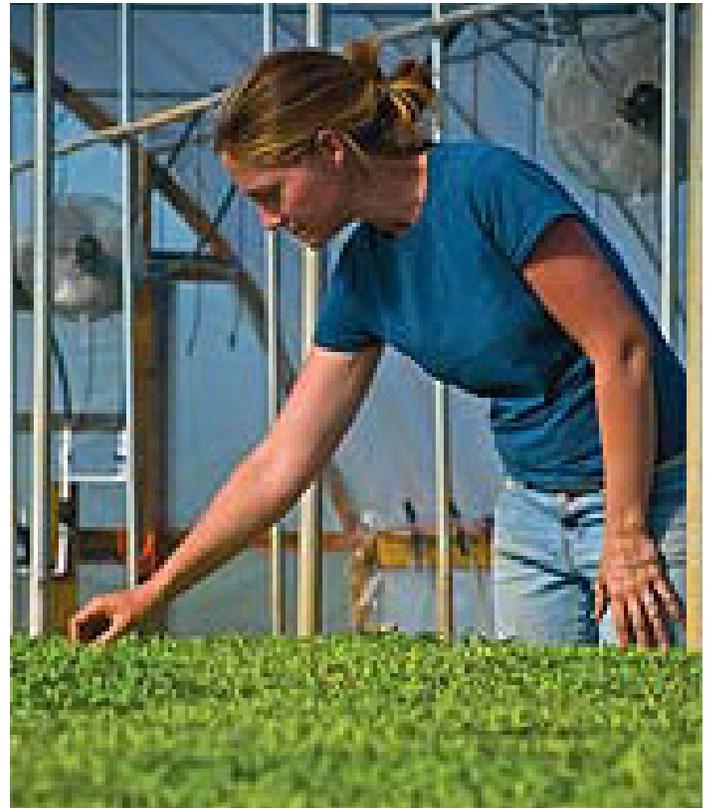
The carcasses are at Marksbury Farm, a meat processing plant, distributor and retailer in Garrard County. They are doing a great job of making antibiotic-free, hormone free, steroid-free and grass raised meat available to Kentuckians.

Individual consumers can and are changing the system through increased demand for local, more healthful food. The local foods movement has been, until recently, a grassroots movement. It was embraced by the federal government beginning in September, 2009¹⁸ (two months after the start of Louisville Farm to Table). Some of the large institutional players support change in some fashion¹⁹. The University of Louisville (which hired Sodexo to manage its food service) and Jefferson County Public Schools (which is self-operated) continue to increase their local food purchases: JCPS contracted for \$257,000 worth of fresh fruit and vegetables for the 2012 growing season, and U of L just spent \$8,000 on local food for its orientation events.

But each step leads to other barriers. JCPS can move literally tons of produce through its operations, but at current capacity, it's impractical for farmers to sell them a large amount of produce on one day – that is, if they plant enough green pepper plants to serve 60,000 children one day, those green pepper plants will still produce for the next 6 to 10 weeks (or more). Grasshoppers Distribution, Louisville's largest all-local-food distribution company, is working with JCPS to require less per day and to spread their purchases over the seasonal yield. It's not easy²⁰.

JCPS managers are happy to make burgoo using local, antibiotic-free beef, but it takes 18 months from the birth of an animal to processing. Currently, all but a few beef farmers send their heifers²¹ out west to fatten conventionally, standing in feed lots and fed antibiotics and hormones^{22, 23}. To provide JCPS with enough, say, beef round, to make a batch of burgoo for one school lunch might require 20 steers, give or take²⁴. A farmer would then be responsible for selling the remainder of the yield -- perhaps 350 pounds per animal of steaks, shoulders, brisket and, mostly, burger -- about 7000 pounds of meat. It would take him (or her) a very long time to sell that amount of meat at a farmers' market. A busy, 100-seat restaurant might sell 50 pounds of ground beef in a week. Large-volume buyers, or more medium-volume buyers, must come on line to create more even demand, must learn to be flexible about what they cook (short ribs rather than brisket; sirloin rather than rib-eye).

These are just some of the barriers to increasing the efficiency of the local food system. Aggregation, distribution and processing must all become more effective and efficient before the system can grow. Mayor Greg Fischer, in Louisville, is committed to finding solutions to some of these issues. In August, an open house in the Portland introduced entrepreneurs to a low-interest loan program and real estate opportunities in that neighborhood²⁵ in the hopes of attracting these businesses. Other businesses are growing: Capstone Produce Auction (supplying ValuMarket) in



Mary Courtney, in her Shelby County greenhouse. Mary provides produce to JCPS, hospitals, and some Louisville grocery stores.



Eli Harned, raises antibiotic-, steroid- and hormone-free beef in Nelson County. He sells at the St. Matthews farmers market and to restaurants in Louisville.

Henry County and Marksburg Farm meat processing in Garrard, add consistently to the supply of local food. Sysco food-distribution company, Creation Gardens and Grasshoppers are supplying local food to schools and restaurants and their sales continue to grow. Grow Farms can haul semi-trailers full of Kentucky produce to Kroger. Piazza produce company delivers a little produce to some Norton Healthcare hospitals, the Hyatt and Churchill Downs.

But there is more work that consumers can do. If they are parents, they can ask their school (preK, primary, secondary, higher ed) what is being served and if there are plans to change. Restaurateur Alice Waters began the conversation with Yale University when her daughter enrolled there, and now Yale has a large sustainable food program²⁶. Parents can teach children about how food tastes. They can sit in school cafeterias and model for the children (children are more willing to taste food if familiar grownups are present)²⁷. They can volunteer to coordinate and train other volunteers to hand out samples of new foods as the USDA is asking schools to increase their offerings of all produce, emphasizing dark leafy greens and deep orange vegetables this year.

If you have a meal catered – a banquet in a hotel or a party at your home or office – ask the caterer for local food. More local food is available to them than ever before, and often from their regular distributors. Uninspired catering representatives almost automatically reply to the request with a remark about higher cost. One caterer told me that his management would not appreciate the higher cost for local beef, and proceeded to describe a buffet he served them with (expensive) ahi tuna. There are many ways to reduce the price of a meal; we must all be prepared with resistance when local is dismissed as too expensive. There are many options: cut down on courses or portions, use underutilized and inexpensive cuts (dark meat chicken pieces) and use old-

fashioned ways to stretch meat (pasta, rice, soup, stew). Meals don't have to rely on boneless, skinless chicken breast to be good.

The move to a robust, local food system still depends on all of us, acting as individuals or groups to create the demand. Not everything will be available always, and we must adjust to the seasons reasonably – I buy carrots and celery and apples no matter what the season; I buy oranges in the winter, and yogurt from a large company. But meat, and grits, cornmeal and cheese, eggs and mushrooms, and many other products are always available. Changing the food system so that it includes these foods all the time requires time, compromise, persistence, patience and mistakes.

But the effort is working, and it's helping bring healthy, local, good tasting food to thousands of school students, hundreds of college students, and scores of others, improving our quality of life by giving us access to healthier, better tasting food and with hope of creating a better tomorrow for Kentuckians and Kentucky agriculture.

Sarah Fritschner is the coordinator of the Louisville Farm to Table project, working with farmers and consumers to increase Kentucky farmers' percentage of Louisville's \$3 billion food market. In that capacity, she works with Jefferson County Public Schools, the University of Louisville and others to bring Kentucky food to a broad base of consumers.

Prior to her work with Metro Louisville, she was food editor of The Courier-Journal for 24 years, and prior to that worked at the Washington Post and Florida Times-Union. Being a "food editor" for Fritschner meant making all aspects of food and eating easily understandable to average consumers. She worked with local farmers, helping develop and promote Louisville-area farm markets. In addition, she was the instigator of The Ohio Valley Harvest Festival, a food festival that paired restaurateurs with farmers to promote urban-rural relationships.

Concurrent with her work for the city of Louisville, she is editor of Edible LOUISVILLE and food writer for Kentucky Living. She is the author of four cookbooks, including *Sarah Fritschner's Derby Start to Finish* and *Sarah Fritschner's Holidays*.

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The Fresh Stop Project: An Oasis in a Food Desert of Louisville

Karyn Moskowitz
Executive Director, New Roots, Inc.



Food Justice

Food Justice is communities exercising their right to grow, sell and eat healthy food. Healthy food is fresh, nutritious, affordable, culturally-appropriate and grown locally with care for the well-being of the land, workers and animals. People practicing food justice leads to a strong local food system, self-reliant communities and a healthy environment. Just Food, NYC 2012

In 2007, I moved to West Louisville to help organize one of the first community-driven farmers' markets in a "food desert" neighborhood of this mid-sized American city. I had never before heard the term. Within minutes of walking around my new neighborhood, I got it, loud and clear. There was food apartheid in this town. The line people cross when they step west of 9th Street in Louisville not only segregates the City racially and economically, but also in terms of health and food equity.

At that time, I was not new to community organizing or to the local food movement. I had spent the early part of my career organizing around protection of public lands from logging and mining. However, my interest was piqued when I moved from Portland, Oregon, an area with a sophisticated local food movement, to a hamlet in southern Indiana in order to raise a family in a rural setting. I was surprised to learn that one of the few places to buy produce in this low-income rural community (besides a few, scattered Amish farms) was the new Wal-Mart. One day, after I had purchased a tomato that tasted like cardboard and had just traveled 2000 miles, I looked around at all the surrounding farmland, blooming with corn and soybeans, and had an AHA moment. Certainly if we organized the Amish and other farmers into a market, people would flock there to purchase the produce. Soon after, I helped to organize my neighbors into Orange County HomeGrown, which over the last 12 years has spun off three farmers' markets, a community-owned natural food coop, a music series, and a mural project.

Somehow the urban food desert struck a cord in me that hit me so hard I have never recovered. I grew up in New York City and central New Jersey, surrounded by food. Food and cooking have always been important in my life, and I am never really

content unless everyone close to me is eating their vegetables. The move to Louisville opened my eyes to the injustices surrounding food in our inner city cores. It also taught me just how dangerous food apartheid could be to the collective health of our community.

In 2009, a few of my friends and I created New Roots, a Louisville, Kentucky based 501c3 nonprofit organization, in response to food deserts. New Roots' mission is to develop a just and thriving food system in Louisville metro communities by improving education and access to fresh and local food for urban residents. The New Roots program has impacted the local food system through the development of the Fresh Stop Project, a community-driven fresh food distribution program. Fresh Stops "pop up" in churches in food desert neighborhoods, and are geared toward low-income households. Families pool their resources (food stamps and/or cash) to purchase fresh local produce from small farmers in the region. Our motto is "family's hearts and minds one at a time," meaning that each family has its own specific needs, desires, and issues. Using a community-organizing approach, we try to discover the people's passions, and how they might be channeled to rebuild the local food system. Our leaders are passionate, encouraging children to eat fresh food, reinventing soul food with healthier, fresh ingredients, learning how to negotiate with farmers, and spearheading policy campaigns to improve the produce offered at area grocery stores. Our leaders are simply passionate about food, and many see the Fresh Stops as their spiritual mission.

The food desert phenomenon is not peculiar to Louisville, nor is it new. The imbalance in terms of quality and variety of real food has been going on for decades and has crossed generations. This food inequity, which is reflected in an abundance of high carbohydrate, high salt and high sugar "food," yet with little availability of fresh fruits and vegetables, exacerbates and reflects the structural inequities of our local and broader economy.

In their 2007 report, "Bridging the Divide," the statewide grassroots group, Community Farm Alliance, found that in the lower income neighborhoods of Louisville, there is one grocery store for every 22,000 residents, while in the more affluent neighborhoods, there is one grocery store for every



Jonathan and Jacob Snyder at a Fresh Stop event. *ANDREW KANG BARTLETT*

6,000 residents. The grocery stores that are located in the “food deserts” offer far less variety of fresh fruits and vegetables than the grocery stores in other parts of town. Typically the produce is of very poor quality, with little in the way of organic items, and are located far enough away from so many families, who may not have easy access to transportation, that they are considered inaccessible.¹

The Louisville Metro Health Equity Report, “The Social Determinants of Health in Louisville Metro Neighborhoods,” published in 2011, found that Louisvillians in the poorest neighborhoods have lower life expectancies, sometimes by as much as ten years shorter than the overall Louisville Metro life expectancy; Louisville residents ages 40-65 who earn less than \$20,000 annually are significantly more likely to report that they have had a heart attack, and neighborhoods that have been labeled as “food deserts” have diabetes mortality rates that are two to three times higher than the total Louisville Metro rate, and that opportunities for physical activity in some neighborhoods could be impeded by hazards for pedestrians and bicyclists, or high rates of violent crime in or near public parks.²

These statistics have been tossed around so often that most people have become numb to what they are really telling us. But behind every number in these reports real people exist, living this reality, every day. I have found that a positive step with high chances of sustainability is for people who are suffering from these challenges to come up with their own solutions, i.e., a community organizing approach. A community organizing approach fosters the formation of strong, long-lasting relationships between community members, the farmers, and allies (people from outside the community) willing to listen, learn and act.

Community organizing is a process in which people who live in proximity to each other come together in an organization that acts in their shared self-interest. A core goal of community organizing is to generate *durable* power for an organization representing the community, allowing it to influence key decision-makers on a range of issues over time. Community organizers work with and develop new local leaders, facilitating coalitions and assisting in the development of campaigns.³

This model differs radically from both advocacy and service delivery approaches, which are both characterized by doing FOR people. Often professionals who work for government agencies or large nonprofit organizations will attack a problem on behalf of those perceived as unable to speak for themselves. Alternatively, community organizing is characterized by the mobilizing of volunteers or leaders. Staff roles are limited to helping volunteers become effective, to guiding the learning of leaders through the process, and to helping create the mechanism for the group to advocate on their own behalf. Community organizing strategies include meeting with corporate or government decision makers to hold them accountable for their actions, designing programs for others to implement that meet the needs of the community, and aggressive group action to block developments counter to local interests.⁴

New Roots uses a radical democratic community organizing and popular education model to act on the injustices we see in the local, state, national and international food system and rebuild infrastructure that is truly community owned. We believe that “to complain is human, but to act is divine,” and choose to do something about the health disparities documented in families living in the food insecure neighborhoods of Louisville. New Roots’ main vehicle to carry out this goal is the innovative Fresh Stop Project and Food Justice Class. New Roots has a community board, and at present, does not have any full-time paid staff.

A Fresh Stop is similar to a Community Supported Agriculture (CSA) project in that families get to share in the seasonal bounty of local farmers at designated times and places for pickup throughout the growing season in Kentucky. Where Fresh Stops differ from typical CSA’s is that they are organized by and for the community, share a focus on reaching low-income eaters, and are located in food insecure neighborhoods.



Shawnee Food Justice Class. *KARYN MOSKOWITZ*



I first learned about the Fresh Stop model in 2008, from City Fresh, an organization out of Cleveland, Ohio that had developed the concept in 2005. At that time, I was a community organizer with Community Farm Alliance in West Louisville. I had moved to the area in 2007 from southern Indiana to help start a farmers' market in the California Neighborhood. The challenge to creating the market was that we couldn't find any farmers who were willing to consistently come and set up and sell in the neighborhood. Since the neighborhood is considered low-income, farmers believed (and this turned out to be true) that they would not be able to sell their produce at the prices they were used to getting in the wealthier neighborhoods. Many farmers were scared away by the high crime rate (that first year we experienced a hostage situation in the store directly across the street from the market). Farmers are so hard pressed to make a living off of growing and selling produce that ameliorating food justice issues in Louisville is not a priority. Many of them simply go to where they perceive the market is, i.e., in the upper income neighborhoods.

In consequence, some of the youth leaders in the community asked me to train them on basic business concepts so they could buy produce from the farmers and resell it at the market. The problem with this model, and ultimately what caused its failure, was that to make a profit, ironically, the resellers needed to charge neighborhood residents considerably more than farmer-vendors. The youth ultimately lost interest, and the community, while appreciating the close access to fresh, local food, got frustrated with the high prices, and lost interest as well.

I reached out to neighborhood leaders to try and figure out another solution. Through frequent discussions with leaders, I learned that any food justice initiative would have a better chance of succeeding if it was based in Louisville's churches, where large groups of people gather and often break bread together (i.e., have already formed a "food community,") and do missionary or outreach work in the neighborhood. The other key components to a successful food access project are that the food be affordable, and that farmers could not be expected to come to the food desert neighborhoods to sell, nor be expected to take on the whole risk of selling to low-income consumers (who are wrongly perceived by the broader community to simply not care about purchasing fresh produce). And, of course, the project had to be community-driven.

What I learned from City Fresh is that if large numbers of families pooled their resources (i.e., food stamps and cash), the community would have substantial purchasing power. If neighborhood leaders could collect these resources ahead of time, and pay the farmer for exactly what the community wanted, then the risks to both the farmer and the consumers would be eliminated. Plus, with big purchasing power, the community would be eligible for wholesale prices. Neighborhood leaders could be recruited to develop the process, who in turn could recruit families to pay for their "shares," enlist and organize the farmers, and the rest would fall into place. But first I had to find



Nathaniel Spencer and pears. *KARYN MOSKOWITZ*

the right pastor and the right church, someone who would be willing to take a chance on this idea.

An intern and I interviewed about 60 pastors that first winter leading up to the 2009-growing season. One pastor, Jean Hawkhurst from the Fourth Avenue United Methodist Church in Old Louisville, along with Al Mortenson and other church and community leaders, were all willing to take a chance on opening up the church to become the first Fresh Stop organizing and distribution point. The Church saw the Fresh Stop as a component of its community outreach mission. At the same time, another church in West Louisville, the West Chestnut Street Baptist Church was interested, and they became the other Fresh Stop for that season.

That first season, the Fourth Avenue Fresh Stop connected with just one farming family. It turned out to be an unusually wet season, and much of the produce, which the church had prepaid for the entire season, was ruined. This forced the Fresh Stops to work together and recruit more farmers (and learn our lesson that Fresh Stops need multiple farmers to be successful), and to discover the three area produce auctions (two of them run by Amish farmers), and individual Amish family farmers, to work with. My ten-year old daughter and I spent that season living off of unemployment, and using my Subaru station wagon to haul produce from southern Indiana Amish and the produce auctions



Patrice Harris with Fresh Stop bag. KARYN MOSKOWITZ

in Daviess County, Indiana and Hart County, Kentucky. Working with the Amish was interesting and came with its rewards and challenges. The rewards were building wonderful business and personal relationships, and great prices. The challenges included communicating via letters, since they do not use telephones, and having to pick up the produce ourselves, since they do not drive automobiles and the 120-mile round trip was not feasible using a horse and buggy.

The next season, I connected with a local farm, Fox Hollow, which rented us a refrigerated truck to haul the produce. Soon we organized another Fresh Stop in Newburg, at an Apostolic church. The concept was catching on. Families, even low-income families without a lot of resources, were willing to pay up front, between \$6 and \$25 on a sliding scale, without knowing exactly what seasonal produce they would get in their share.

The first two years, even with the focus on community-organizing, were disappointing in the sense that I felt like much of the organizing work for the Fresh Stop was being done by me, or by people from outside the neighborhood. Much of the information on how to run the project—from how to connect to farmers to how to set up the EBT machine—was stuck in my head. This didn't seem to be a rebuilding of a new food system, owned and operated by and for the community. A lot of my

focus and the focus of our now-growing pool of volunteers was on produce distribution, and not on education and leadership development. Something had to change, or, I had to stop and admit defeat. I could no longer afford to run things the way I had been running them: a project run by “outsiders” was not going to be sustainable in the long run. The Fourth Avenue Fresh Stop was thriving with great church and neighborhood leadership, but not the others.

In 2011, just as I was about to give up on Fresh Stops due to financial pressures, I met someone from the Shawnee Neighborhood in West Louisville who was very passionate about food justice, Nathaniel Spencer. Nathaniel started to bug the heck out of me to start a new Fresh Stop in the Shawnee Neighborhood. I knew that this was a neighborhood with community leaders who were already starting to organize around the food justice issue. Pastor Tom Engels from Nathaniel's Church, Redeemer Lutheran, was very supportive, as were other church leaders and members of the Shawnee Arts and Cultural Center next door. It seemed like a good combination for a Fresh Stop. The Presbyterian Hunger Program provided two VISTA Americorps volunteers, Blain Snipstal and Seth Gunning, on a part-time basis. Both were experienced community organizers and had a lot of expertise in agriculture. They, along with my colleague Stephen Bartlett of Sustainable Agriculture of Louisville, immediately urged me to put my knowledge down on paper so I could better share my experience, and to switch New Root's focus from produce distribution to leadership development.

This is how New Root's innovative Food Justice Class was born. In one 24-hour period, I wrote down everything I had learned about the “Nuts and Bolts” of a Fresh Stop, as well as brainstormed with the VISTAs what might be needed to build a foundation of food justice knowledge. My hope was that if all of us—me, the VISTAs and any new community leaders we could recruit—spent two months together first, before the Fresh Stop season began, sitting down and collectively analyzing the problems of the conventional food system, and finished up with Fresh Stop nuts and bolts training, we would end up effective leaders who were truly invested in the project, and a solid, community-driven project. And that is exactly what happened. We started the Food Justice classes in April, 2011 with 15 leaders. We met at the Redeemer Lutheran Church for two hours a week for six straight weeks. Sometimes we would get on such a hot topic (such as the demise of the family dinner and its ramifications) that we wouldn't leave the room for hours. A year and a half later, we still have the same group and we are still meeting, every other week, all year round.

The Food Justice class uses a popular education model, one that is class-based in nature and rejects the notion of education as transmission or ‘banking education.’ It stresses a *dialectic* or *dialogical* model between educator and student. In addition, popular education was originally conceived as a means by which groups in society that face oppression could overcome it. It has a strong emphasis on equipping people for action.



With that in mind, our group set out to teach one another what we collectively knew about the history of oppression in West Louisville, the history of food access in families and neighborhoods, the “Color of the Food System,” i.e., who owns the food system in Louisville, how the local, national and international food systems all work together to create inequities, how grocery stores create unhealthy “traps” early in the month when SNAP benefits are distributed, and other topics that leaders chose.

In these conversations, people told their own food stories. For me, the most poignant were recollections of elders about their grandparents who worked as domestics for wealthy families in the city’s East End, and would bring home the leftovers. When one of our neighborhood leaders, who was a child at the time, asked her grandmother why the meat purchased at the East End grocery store looked so much fresher than the meat available at the West End grocery store, her grandmother told her to “shut her mouth and don’t cause trouble.” Others spoke of beautiful and abundant backyard vegetable gardens and nightly family dinners, which have become scarce among the current generation. We learned that African-Americans in Louisville, for the most part, no longer own their own grocery stores, corner stores, restaurants, or produce distribution businesses. We became experts on the ingredients and adulterants industry adds to our food—high fructose corn syrup, MSG, aspartame—unconcerned that these additives contribute to childhood obesity and other diet-related illnesses. We shared food, recipes, and hopes and dreams for our new venture together.

As the final step in the Food Justice class, leaders are asked for a commitment to run the Fresh Stop for a season. This core group of new leaders volunteered to become representatives on different Fresh Stop teams. One team was formed to create and maintain relationships with farmers who sell wholesale and are able to deliver to the Fresh Stop. This team used the group’s collective knowledge of farmers from all over the region and reached out to those likely to work with us. One young family farmer in particular, Mary Courtney from Shelby County, Kentucky, was willing to take a chance and agreed to sell us produce at wholesale prices and to deliver to the Church a few hours before each Fresh Stop. Robbie Adelberg, a young farmer who was based in Oldham County, grew a few items in large amounts. We connected with Catholic Charities Refugee Agricultural Partnership Program and started to work with Somali Bantu farmers, as well as the new urban farm, *The People’s Garden*, located in the neighborhood. The “Farmer Liaison Team” worked with these farmers all season long, negotiating prices, and scheduling deliveries.

Another Fresh Stop Team used grassroots organizing to spread the word and ask others to join them in pooling their money to purchase the produce. Shares are offered on a sliding scale, with higher income residents helping to subsidize lower income families; EBT/Food Stamps/SNAP Benefits are accepted, and no one is turned away for lack of funds. I had been working with the local Food and Nutrition Services (FNS) team at

the United States Department of Agriculture, the agency that administers the SNAP Benefit program, for nearly a year to convince them that federal regulations do allow us to accept these SNAP Benefits up to two weeks before the food is actually delivered (we’d learned this vital bit of procedure from the New York FNS team, an example of the importance of networking with agrifood agencies and organizations). Working out SNAP redemption also took a lot of negotiation with J.P. Morgan, the private contractor that offers the EBT machine for free to “retailers.” We had to explain that we weren’t going to use the machine all year round, only during the Kentuckiana growing season. That first year they disconnected our machine after it lay idle all winter, and its reinstatement required weeks of inquiry up the chain of command.

Food is purchased weekly, bi-weekly or monthly, depending on the Fresh Stop, three days before the produce is delivered. Each Fresh Stop is autonomous, able to organize its particular church and neighborhood needs. The Shawnee Fresh Stop is bi-weekly, the Fourth Avenue Fresh Stop is weekly, and the Wesley House Fresh Stop is monthly (and chooses to offer produce from all over the United States, not exclusively local). Shawnee and Fourth Avenue both offer sliding scale pricing. The sliding scale is key to our ability to purchase enough produce to feed each family. For example, in Shawnee, roughly 80 percent of the shareholders pay \$12 (low-income), and 20 percent pay \$25. This enables us to purchase roughly \$17 worth of produce for each family. Everyone benefits from having more food, and the families that are paying more do so knowing they are helping out their neighbors who wouldn’t otherwise be able to afford this local food. Not all produce purchased is organic, but we try to work with our farmers so spraying of herbicides, pesticides and fungicides is minimal.

On the day of the Fresh Stop, farmers pick the produce, drive it to Louisville, and drop it off. Volunteer shareholders descend on the site to organize the produce onto separate tables and divide it up so everybody gets the same amount of each item in their share. People fill up their basket with this bounty, are asked to re-order for the next Fresh Stop, pick up information on cooking and storage, and can taste the food that has been prepared by a volunteer chef. Most recently, the Shawnee Neighborhood Fresh Stop had Chef Kelly Lehman, who runs a personal chef business, and Chef Jim Whaley prepare samples of dishes incorporating just about everything in the week’s share. Favorites from the 2012 season included beet risotto and kale-potato cakes. In this way, the guest chef gets to publicize his or her business so there is potential small business spinoff in the neighborhood.

Each Fresh Stop feels like a family reunion, with people sharing their own cooking tips, life stories, support for each other and many smiles. After filling up their share baskets, families are offered veggie tipsheets (courtesy of Just Food in NYC) for cooking and storing the produce, and a community-generated newsletter with a description of the produce, recipes, food justice stories, and member highlights.



Strawberry Jamm Festival at the Shawnee Fresh Stop. *KARYN MOSKOWITZ*

It is the Fresh Stop's collective buying power, which allows them to ask for wholesale pricing from farmers, plus the sliding scale that ensures the produce is affordable. Our strength and our staying power are rooted in leadership development. Leaders are self-chosen, and rise to their areas of strength and purpose.

The nuts and bolts of a Fresh Stop may appear seamless to an outside observer. However, there are many moving parts consisting of hours of work driven by teams of volunteer leaders. The Shawnee Neighborhood Fresh Stop, for example, has a total of 11 teams—the farmer liaison team, community outreach, accounting, newsletter, education, distribution, chef liaison, media, and setup and cleanup.

With so many moving parts, some things go surprisingly smoothly, but some things are bound to go wrong. For example, we took on two new farmers at the beginning of the 2012 season. We feel that the relationships between the community members and the farmers are key to our success and we work hard at communicating our expectations of produce quality, quantity and price well before the season starts, and in fact, many of our farmers grow specific items just for us. However, the very first day we were disappointed to find an entire load of broccoli that arrived brown and withered, just two hours before the start of the Fresh Stop. At that point, it is difficult to replace the produce, so share baskets end up a little bit smaller than we had planned. Similarly, an early April frost stunted the 2012 blueberry season, forcing us to forego our plans to pick 80 quarts. Because we lack storage, we took a chance on purchasing peaches from a farmer at a Tuesday farmers' market, and storing them in a shareholders basement, only to discover they were overripe by Thursday.

As of the 2012 growing season, New Roots has either organized and/or helped to sustain three Fresh Stops: Fourth Avenue, Shawnee Neighborhood Fresh Stop in West Louisville, and the Wesley House Fresh Stop in Newburg. Via these groups, New Roots has reached approximately 750 families in Louisville and worked with over 12 family farms. Fresh Stops spent approximately \$20,000 with family farmers in 2011. Some of these farmers have told us Fresh Stops make up a small but critical portion of their overall farm income. All Fresh Stops attract 50 to 80 families on average. The opening day of the Fresh Stop season in May of 2012—The First Annual Strawberry Jamm Festival—attracted a whopping 160 families who purchased a total of 155 gallons of fresh local strawberries and spent roughly \$2,000 with one family farm. The Shawnee Fresh Stop is able to collect, on average, about \$1,400 every other week—this from a low-income community. We are opening new markets for farmers in neighborhoods they never believed they could profit from. The Shawnee Fresh Stop even organized a grassfed beef and pork Fresh Stop with farmers Stan and Lelia Gentile of Dreamcatcher Farm, who taught us about the health benefits of grassfed beef versus grainfed beef. We sold \$500 worth of meat to the community in one hour! The farmers were thrilled, reporting that it was easier to sell to a Fresh Stop than risking hours at a farmers' market.

The beauty of the Fresh Stop model is that it can be replicated anywhere. Yet this is not a “cookie-cutter” project that is forced onto communities by well-meaning advocates. Instead, the organizing process is organic and community-driven, and each Fresh Stop can make the program its own, with its own rules and hence, its own unique qualities. In May of 2012, New Roots was able to help a group form around the New York Avenue Presbyterian Church in downtown Washington, DC to organize food justice classes with the possibility of a Fresh Stop starting in 2013. The movement is growing.

However, community organizers need to be aware that this work is complex and there are many hurdles to overcome. One



of the biggest hurdles is funding for staff. Over the past three years, New Roots has raised nearly \$40,000, which has been used to pay for organizer's time, transportation, seed money to the Shawnee Fresh Stop for marketing and outreach material, chef's food, produce containers, and other necessary items. New Roots board is diverse and enthusiastic, yet it has been difficult to attract and maintain board members with fundraising experience, and despite many attempts, we have been unable, as of yet, to convince government on any level (local, state or federal) to invest in the Fresh Stops. However, many New Roots/Fresh Stop leaders are interested in scaling this model up and have shown their willingness to travel to other neighborhoods in Louisville and even to other cities to introduce the model and also to help step up fundraising efforts. It is obvious that more sustainable funding is needed if we are going to grow this movement and truly transform the broader food system. However, we are in talks with various funders who are beginning to see that with very few resources, Fresh Stops have already touched and transformed many lives and has the ability to transform many more, i.e., that New Roots is a great investment.

Another challenge is keeping leaders engaged and not burnt out, and continually working with leaders to recruit new leaders to share the tasks as the Fresh Stops expand. Purchasing produce is tricky. Local produce is not "plastic"—it is alive and many things can happen to it from the time a Fresh Stop asks a farmer to grow it, till it gets to the neighborhood, such as drought, early frost, bug infestation—all of which can limit supply. In Kentucky, policy makers are unsure if farmers can continue to meet this increased demand for local produce if more and more institutions and families desire it. Finally, the local food system is not clearly organized or advertised, and it often takes the farmer liaison team a lot of intense networking around the region to know who grows what, when and where and at what price, and it is a continual learning process.

I do see what we have presented as a valuable community-organizing tool that should help communities to begin the conversation about food justice. To date, we have not seen any other project in Louisville achieve the success with food access in the city's inner core that New Roots has. Where it will end I cannot tell at this point. My hope is that with focused efforts, more and more talented leaders and funders will be attracted to the project, so that, in the end, we do see palpable change in each and every family that wants to get involved, and we will be able to hire and accommodate staff and leaders to organize more and larger Fresh Stops.

We know we are making a "dent." But the question is, can we truly bring about long-term equity in our local food system and sustain it? I do know that many people have been touched by the Fresh Stop and have told me that their lives have been transformed. I can see many of our leaders blossoming and gaining strength, and the community building power. Some have sworn off fast and processed foods. Quite a number have met their weight loss goals. We have leaders who now feel

so empowered that they approach other community members in grocery stores and explain why they should consider not purchasing a particular product in their basket because it contains high fructose corn syrup. Others have started to take photos of rotten produce and the abundance of alcohol (one grocery store in West Louisville recently replaced its natural food section with liquor) in the stores and distribute via social media. Our leaders have become "mavens," in their particular area of leadership, i.e., experts in pricing, sourcing, and distribution of produce, media relations, finance, database organizing, etc. But seeing community members take a bite of a season's first ripe Kentucky tomato, cucumber, or peach, and watch the smiles explode over their faces, well, that's what it is really all about.

Karyn Moskowitz, the Executive Director of New Roots, lives in Louisville, Kentucky and has worked in the Ohio River Valley Region on food justice issues since her move to the region in 1998. In her spare time, she is a partner in GreenFire Consulting Group, LLC, where she consults with citizens from all over the United States on environmental law, economics, policy and organizing. She was named to the SISTER (Sisters Inspiring Sisters to Eradicate Racism) Hall of Fame in 2012, 1 of 12 Jewish Women in Environmental Activism, by National Women's Archive in 2010, 1 of 10 "Green Jewish Women" honored by Jewish Woman Magazine in 2009, has been a Terra Madre Slow Food delegate twice, received a Rockefeller Fellowship in 2002, is a proud mother of a middle schooler, and loves to eat her Kentucky-raised chard. She can be reached at 502-509-6770, or info@newrootsproduce.org. Go to www.facebook.com/newroots or www.newrootsproduce.org for more information on New Roots and Fresh Stops.

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Lessons from the Field, Garden, Board Room, Farmers Market and Corner Store



Marigny Bostock
 Certified Health Education Specialist
 Community Health Supervisor, Louisville Metro
 Department of Public Health & Wellness

Mike Bramer
 Director of Healthy Actions, YMCA of Greater Louisville

Josh Jennings
 Co-founder, Healthy in a Hurry
 Lead Associate, Wildflower Consulting

Theresa Zawacki
 Food Policy Advisor, Louisville Metro Department of Economic Growth and Innovation
 Chair, Green Convene of Louisville, Vice-Chair, Environmental Law, Louisville Bar Association.

Background

Local, farm fresh food is in abundance from May through November in Louisville, Kentucky, and during that period of time, one can find a farmers market open any day of the week.¹ Local food enthusiasts argue “local food tastes better.” Public health partners continue to debate whether local food is nutritionally superior to non-local food, but certainly in terms of its economic and environmental impact, local food seems to have the leg up. The demand for local food in Louisville consumer and retail markets is being studied by both the Louisville Metro Government and the Network Center for Community Change (NC3). While local, farm fresh food is plentiful in some areas of town, farmers markets and community supported agriculture shares (CSAs), two common ways consumers purchase local food, are not available everywhere, particularly in West Louisville and East Downtown. Full service grocery stores are also limited in low-income communities, while the concentration of fast food restaurants in these areas is among the highest in the state of Kentucky.² The disparity in availability of healthy, fresh, local food compounded with the low rates of vehicle ownership results in a phenomenon known as a “food desert” (see figure 1).

The prevalence of food deserts in certain areas of Louisville drew the attention of many public health advocates, government agencies and nonprofit organizations when Community Farm Alliance (CFA), a statewide nonprofit organization focused on small farmers and underserved communities, released a community food assessment in 2007 entitled “Bridging the Divide: Growing Self-Sufficiency in Our Food Supply.” This helped food justice partners to better understand the concept of “food deserts” in West

Louisville and East Downtown, the disconnect between rural growers and urban consumers, and to start thinking about policy solutions to create a locally-integrated food economy.³ For public health practitioners, the existence of food deserts seemed to be a correlative factor in the prevalence of diet-related chronic health conditions, such as diabetes and heart disease. Whether through locally grown tomatoes or bananas from Costa Rica, health advocates led by Louisville Metro Public Health & Wellness (LMPHW) began to strategize about increasing access to healthy food in underserved communities.

Community engagement is critical to success when it comes to community development and improving healthy food access. Building relationships with stakeholders and residents in communities to gain buy-in at the beginning of the planning

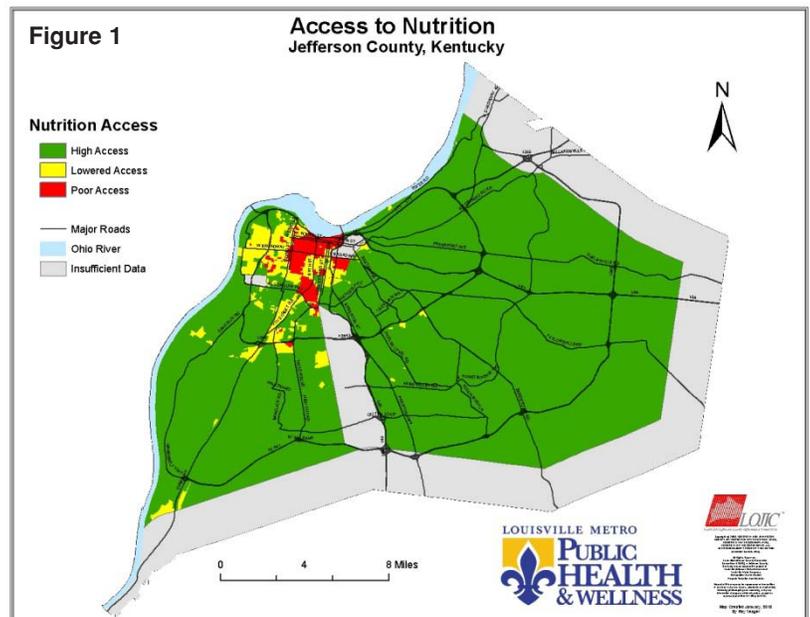




Figure 2: How FIN accomplishments fit into the Spectrum of Prevention

Influencing Policy and Legislation
<ul style="list-style-type: none"> <input type="checkbox"/> 2011-present Worked with Louisville Metro’s Food Policy Advisor to develop definitions for Community Gardens and Market Gardens <input type="checkbox"/>
Changing Organizational Practices
<ul style="list-style-type: none"> <input type="checkbox"/> 2009-2011 Seven Louisville Stores became part of the Healthy in a Hurry Corner Store Initiative which sell over 10,000 servings a month of fresh produce in areas designated as “food deserts” <input type="checkbox"/> 2012 Six Hi+H store owners have joined the Healthy Corner Store Business Association
Fostering Coalitions and Networks
<ul style="list-style-type: none"> <input type="checkbox"/> FIN partners include: YMCA, Center for Health Equity, Breaking New Grounds, Louisville Grows, Catholic Charities, Presbyterian Hunger Program, New Roots, Network Center for Community Change, University of Louisville, Cooperative Extension and others advocating for a just and healthy food system. <input type="checkbox"/> Convened an ad-hoc group of partners for collaborative grant writing <input type="checkbox"/> 2011-2012 Convened an ad-hoc group of urban agriculture partners to research and develop definitions for Louisville’s Land Development Code
Educating Providers
<ul style="list-style-type: none"> <input type="checkbox"/> 2009-2011 Trained Corner Store owners to carry fresh produce <input type="checkbox"/> 2012 – ongoing FIN partners will provide technical assistance for community garden development
Promoting Community Education
<ul style="list-style-type: none"> <input type="checkbox"/> 2010 Sponsored CFA’s 2nd Annual Food Summit with a screening of “Food, Inc” <input type="checkbox"/> 2007 – 2012 Cooking Demonstrations and Community Classes <ul style="list-style-type: none"> <input type="checkbox"/> Stone Soup Community Kitchen <input type="checkbox"/> Farmers Market cooking demos and Iron Chef Cook offs <input type="checkbox"/> 2008-2012 Produced and distributed over 60,000 annual farmers market guides
Strengthening Individual Knowledge and Skills
<ul style="list-style-type: none"> <input type="checkbox"/> 2009 Nutrition Education in Corner Stores (Partner: PACS NOW)

process and continuing that engagement through the project’s implementation will increase the likeliness that a project is well received. This is what the Mayor’s Healthy Hometown Movement (MHHM) strives to do through its mission to create a community-wide culture where healthy eating, active living and tobacco free environments are the norm and the healthy choice is the easy choice for all of Louisville’s residents.

Initially created by former Mayor Jerry Abramson and former Director of the Department of Public Health and Wellness, Dr. Adewale Troutman, in 2004, MHHM unites diverse community partners from businesses, schools, government, academia, neighborhoods and non-profit organizations to leverage resources and prevent duplication of efforts. MHHM communicates through a variety of methods to “get the word out” about the important public health work that is putting Louisville in the national spotlight and improving the health of Louisville’s residents. Much of the work of the MHHM fits into the Spectrum of Prevention as a model for obesity prevention. The Spectrum of Prevention was developed by Larry Cohen of the Prevention Institute. It was derived from practice and developed out of the conviction that complex problems require comprehensive solutions.⁴ See Figure 2 for the depiction of Louisville’s food access work fitting into the different levels of the spectrum.

Dr. LaQuandra S. Nesbitt, Director of the Louisville Metro Department of Public Health and Wellness has a new vision for the MHHM, which includes expanding the program’s focus from primary prevention of obesity to the management, or secondary prevention of chronic diseases and other co-morbidities of obesity and the addition of tobacco prevention and control as a core tenant of MHHM. Healthy eating is still one of the cornerstones of the work of MHHM, but now there will be a focus on connecting clinical care to community resources. (See figure 3).

Promoting Health and Healthy Eating

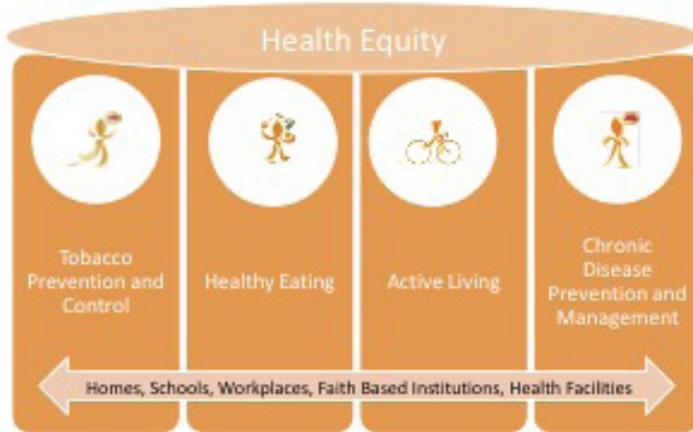
Louisville Metro Government has been directly involved in food system work for nearly a decade. Conversations in Louisville to improve the community’s food system began in 2003 with the expansion of CFA to Jefferson County. CFA

first made its mark in Louisville by mobilizing leaders in West Louisville, and specifically in the Portland neighborhood, to launch a farmers’ market aimed at serving low-income residents. In 2005, the Louisville Metro Housing Authority received a Healthy Eating by Design grant from the Robert Wood Johnson Foundation (RWJF) to supplement the work already underway in Louisville focused predominately in the East Downtown neighborhood of Smoketown. ACTIVE Louisville, a quasi-governmental partnership focused on healthy eating and active living, led the RWJF-funded effort by organizing partners like CFA to turn a vacant lot into a flourishing community garden at the former St. Peter Claver Church.⁵ Shortly after the Portland market closed, CFA became actively involved in starting a farmers’ market in Smoketown with funding and support from ACTIVE Louisville. With the addition of another farmers’ market in West Louisville’s California neighborhood, CFA’s reputation for organizing farmers’ markets was recognized citywide.

While these markets, and particularly the Smoketown Market, initially had an outpouring of support from community partners and nearby residents, all three markets are not currently operating. This has been a blow for many food justice advocates who had a hand in organizing those markets, or who attempt to connect small-scale farmers with low-income residents to build



Figure 3: The Mayor's Healthy Hometown Movement Structure 2012. DR. LAQUANDRA S. NESBITT, LOUISVILLE METRO DEPARTMENT OF PUBLIC HEALTH & WELLNESS



a mutually beneficial solution to food deserts. One possible problem in keeping these markets viable may be in the actual or perceived prices of available foods.⁶ Some consumers believe the cost of local food exceeds that of cheaper, albeit less-fresh, food available in discount grocery stores, or of “value” meals prepared in fast-food restaurants.⁷

In addition, many low-income families rely on Supplemental Nutrition Assistance Programs (SNAP) benefits for a large portion of their monthly food costs, but SNAP redemptions and acceptance at farmers’ markets has decreased steadily nationwide since 1993. In 2009, 0.01% of total SNAP benefits were redeemed at farmers’ markets, perhaps due to a lack of EBT machines available at markets.⁸ However, recent research shows that this trend may be changing. As wireless EBT machines become more affordable, SNAP benefits become more widely accepted, and innovative programs such as Double Value Coupons⁹ are funded to leverage federal nutrition benefits, making the price point less of a barrier.

In 2006, LMPHW created the Center for Health Equity to address the social determinants of health in Louisville with a focus on community organizing in low-income neighborhoods. The Center called together a Food Security Task Force (FSTF) in 2007 that included ACTIVE Louisville, Metro United Way, the YMCA of Greater Louisville, the Louisville Metro Economic Development Department, CFA and the University of Louisville. The goal of the Task Force was to use the information in the 2007 CFA report to advocate for better food policies and programs to address food deserts. After months of meeting to share research and evidence-based best practices, the group decided to begin planning community-wide forums to engage others in the effort.

The FSTF hosted a meeting in October 2007, facilitated by Mark Winne, a founder of one of the country’s first food policy councils in Hartford, Connecticut. There were over 60 individuals in attendance at the meeting, including members from the farm, business, government, education and health communities. Mr.

Winne’s expertise on food systems and food policy helped the FSTF position itself in Metro government to become an “ad-hoc” food policy council. In 2008, the FSTF voted to merge with the MHHM to become the Food in Neighborhoods (FIN) Committee. FIN’s mission has been to support community efforts to build a just, healthy and sustainable food system.

In 2008, the Department of Public Health & Wellness received an Active Living by Design transition supplement grant from RWJF to combine the efforts of ACTIVE Louisville and the MHHM, and to institutionalize improvements in food access and availability and the built environment. A few months later, with the support and input of FIN, LMPHW was also awarded the next round of grants from RWJF and became one of nine leading sites for the *Healthy Kids, Healthy Communities* (HKHC) initiative, which is now in its fourth and final year. This enabled LMPHW to build on the success of previous food access work, such as the St. Peter Claver Community Garden and the early years of the Smoketown/Shelby Park Farmers Market. HKHC expanded the focus area for MHHM’s work to twelve neighborhoods in West Louisville and East Downtown identified as “food deserts” in CFA’s 2007 community food assessment.

The main focus of HKHC is to develop and implement environmental, systems and policy changes to address childhood obesity. This grant was one of the first of its kind to change the paradigm of the traditional public health equation, “education + awareness = healthier choices.” Instead, the fundamental philosophy driving the grant is to build connections with neighborhood residents to increase the affordability and availability of healthy food, and to improve the built environment so that the healthy choice becomes an option. Strategies include promoting farmers markets that accept EBT, expanding community gardens and launching the Healthy in a Hurry Corner Store Initiative being developed at the time of the award. Additional grant funds were leveraged to build on these projects. See Figure 4 for a map of markets, gardens and participating corner stores.

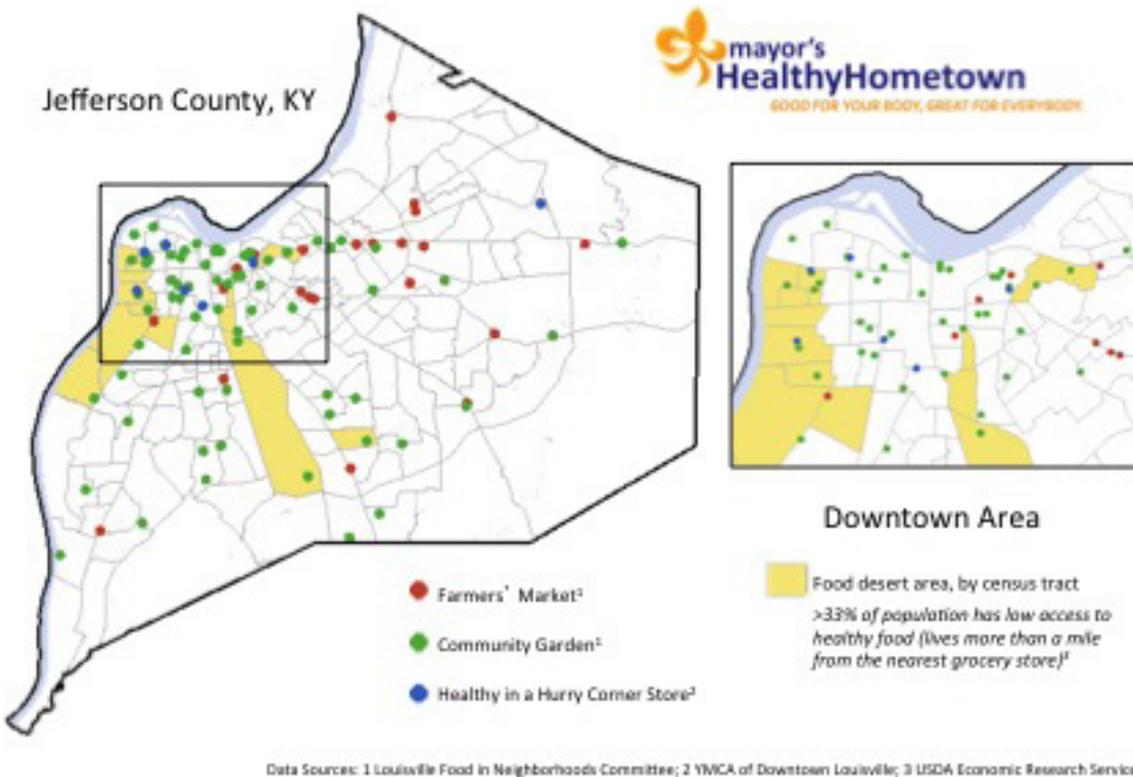
From Promoting Healthy Food to Addressing Food Policy

Due to the successes of the MHHM, particularly in the areas of healthy eating and active living, and in organizing efforts among partners involved with HKHC, in 2009 Louisville Metro Government was ready to apply for the *Communities Putting Prevention to Work* (CPPW) federal stimulus program available through the Centers for Disease Control and Prevention (CDC). The CDC required applications to focus on obesity prevention strategies, health equity and both systems and policy change.

When the grant writing team consulted potential partners, including JCPS, Metro Parks, CFA and others, for “shovel-ready” projects to enhance the food system, it became apparent that the FIN committee was a leader in the Louisville food justice movement. However, other community groups were also focused on food, and were working on projects that duplicated and were not coordinated with FIN’s work. Given the opportunity to better



Figure 4: Map of Louisville's Farmers Markets, Community Gardens and Healthy in a Hurry Corner Stores



coordinate efforts to enhance the local food system, FIN staff and partners recommended the creation of a Mayor's food policy council to assemble stakeholders from every facet of the food system. A recent report by Harvard Law School's Food Law and Policy Clinic named food policy councils as "innovative and much-needed mechanisms to identify and advocate for food systems change," and this tool was considered a way to advance Louisville's already-well-developed efforts to increase food access and equity.¹⁰

In March 2010, LMPHW was awarded a \$7.9 million CPPW grant. This included a full-time position housed in the Center for Health Equity through March 2012 to coordinate the Mayor's Food Policy Advisory Council (FPAC) that would advise on food policy issues. However, the form and structure of the Council was not identified in the grant award agreement. In working with members of the FIN Committee and CFA, a structural framework was developed, which later became a model for an Executive Order signed by former Mayor Jerry Abramson officially creating the FPAC.

From a total of 80 applications, 25 stakeholders in the food system were appointed by newly elected Mayor Greg Fischer to serve on the FPAC. Four of these members are ex officio, non-voting members representing government agencies. The FPAC voted to adopt by-laws, developed a meeting schedule and decision-making structure, and created workgroups focused on specific aspects of the food system. The workgroups were intended to be temporary in nature to address acute policy interests that could

be evaluated and acted on within a relatively short timeframe, as opposed to committees that would be more permanently embedded in the group's structure.

In addition to developing the structure of the FPAC, the first six months was dedicated to robust dialogue between members that created synergy between seemingly opposing viewpoints. For example, tensions were exposed between public health advocates whose priority was to increase the availability and affordability of healthy food in food deserts and local food advocates who predominately represented the interests of rural farmers. However, many attempts to bridge this gap were

made, such as convening brainstorming sessions on the USDA's Community Food Projects grant, organizing a workgroup aimed at strengthening the Louisville Farm to Table Program, which works to develop markets for local food across a variety of end consumers, and initiating early discussions about state and federal policy changes that benefit both farmers and low-income consumers, such as the WIC Farmers' Market Nutrition Program.

As the CPPW ended in early 2012, staff support for the FPAC shifted from the Center for Health Equity to Louisville Metro's Food Policy Advisor, a permanent position in the Department of Economic Growth and Innovation. This shift recognized both the need to continue the work of the FPAC and illustrated Mayor Fischer's understanding that all efforts to increase food access and equity have at their core an economic development component. Mayor Fischer announced four goals for local food in 2012, and requested the support of the FPAC in reaching them. These included the continuation and expansion of the Louisville Farm to Table Program and the development of a targeted revolving loan program for small-scale processing of Kentucky-raised foods, both of which received funding under a grant from the Kentucky Agricultural Development Board in March 2012. Additionally, Mayor Fischer asked that a study of demand for local food in Louisville be prepared, with the development of a strategic plan to increase the amount of local food being consumed in Louisville to follow the results of the survey.



Figure 5: The Shawnee Market Before and After Conversion

BEFORE



AFTER



The FPAC has met several times in 2012 to discuss the implications of the transition of the group from the Center for Health Equity to the Department of Economic Growth and Innovation. Meanwhile, efforts to support Mayor Fischer in his goals have continued at the committee level. In particular, the Farm to Table Committee of the FPAC is working with the Louisville Farm to Table Program to develop a guide for institutions interested in using more local food. The Louisville Agribusiness Loan Program was funded by the Kentucky Agricultural Development Board and is being officially launched in August 2012. Seed Capital, Kentucky, a local non-profit focused on farmer development partnered with the Louisville Metro Government and Karp Resources to conduct a consumer and commercial demand study that will inform a future strategic plan. The results of the study will be announced at the Idea Festival in September 2012.

FIN was one of the subcommittees of the FPAC in addition to being a pillar of the MHHM structure. It will continue as the “Healthy Eating” subcommittee of the MHHM under the leadership of Dr. Nesbitt. (See figure 3).

Two case studies exemplify the work of MHHM and the FPAC and are instructive for their focus on both systems and policy change affected by the work of these programs, and leading to greater food access across the community.

Food Access Case Study 1: Healthy in a Hurry Corner Stores

In response to the lack of regular and reliable healthy food in many of Louisville’s low-income neighborhoods, LMPHW, the Center for Health Equity and the YMCA of Greater Louisville worked with other community leaders as a “Pioneering Healthy Communities” team to develop the Healthy in a Hurry Corner Store Initiative. In 2007, key stakeholders traveled to Philadelphia to visit the Food Trust and modeled the program after their work in corner stores. With the Y as the lead partner, participating stores were provided with refrigeration units,

marketing materials, shelving and start-up inventory. The initiative has enabled seven storeowners in low-income food desert neighborhoods to renovate their stores, making them more attractive and enabling them to carry fresh produce and other healthy foods that previously were unavailable in the area. A map of the locations can be found in figure 4 along with Louisville’s farmers markets and community gardens.

The Healthy in a Hurry program partners quickly learned that the program is most successful when selected storeowners are both committed to improving the health of their community and want to make selling produce a sustained part of their business. Community outreach around prospective stores helped to determine if the store would be supported by the neighborhood residents. Challenges remain in encouraging community members to purchase and use the fresh fruits and vegetables available at the Healthy in a Hurry stores. And while there was initially a great deal of excitement about the availability of the fruits and vegetables, many neighborhood residents were not familiar with some of the items and needed education on how to prepare or process the foods. Some of the more popular items have been fresh greens, apples, bananas and oranges. In its first year, the Healthy in a Hurry section of the Shawnee Market sold over 15,000 servings, calculated at an average of 50 cents per serving of fresh produce. The annual revenue generated covered all of the direct cost of the produce with an additional \$4,000 to cover indirect expenses.

The Shawnee Market is a cornerstone of the Shawnee neighborhood with ample foot traffic, a key location in a neighborhood plaza, and a store owner responsive to the community’s concerns. Youth from the Shawnee Neighborhood Association helped survey residents to better understand the level of interest the neighborhood has for that store. Upon receiving positive feedback, construction began. The Neighborhood Association was critical in garnering support for the grand opening of the store, and a press conference was held to celebrate the new opportunities in the Shawnee neighborhood. The first week of sales topped the best month of sales at Smoketown DollarPlus, the flagship store. A before and after photo is in Figure 5.

The Healthy in a Hurry Corner Store Initiative has also brought about a systems change in the way that WIC items are labeled (the Supplemental Nutrition program for Women, Infants and Children). FIN partners worked at the state level to make the labels more attractive and this change allowed for co-branding



of healthier items on the shelves in addition to the fresh produce. See figure 6 for an example of the new WIC label. This will allow the Healthy in a Hurry program to expand to other stores without the produce kiosks, thus broadening the network of healthy corner stores in Louisville. The Healthy Corner Store Business Association has also been formed to ensure sustainability of the initiative and encourage other stores to come on board with or without the addition of fresh produce.

Food Access Case Study 2: Urban Agriculture Policy

Community engagement strategies, including walkability assessments and youth engagement through Photovoice and digital storytelling, which are processes for social change using photography and personal experiences, pointed to an overlap between the goal of these efforts and Louisville Metro Government's consideration of solutions to the problem of vacant and abandoned properties. Many West Louisville residents expressed an interest in converting vacant lots to community gardens. FIN Chairman, Mike Bramer convened committee members and other stakeholders to consider strategies to address this interest. A number of results came from this effort.

First, the FIN stakeholder group consulted residents in West Louisville and East Downtown who have limited access to land for purposes of growing food, and worked with Louisville Metro Parks to develop a process for leasing publicly-owned land to non-profit organizations for use in urban gardening. The first group to take advantage of this process was Louisville Grows at the former Shawnee Tree Nursery. The development of the People's Garden at that site has resulted in the planting of a one-acre market garden growing food for sale at Healthy in a Hurry stores, the construction of 25 community garden plots, a children's garden, a large compost operation, an education area, and two large high tunnels that will be used to extend the market garden growing season and to start seedlings to be used in backyard gardening by interested residents. Through August 2012, Louisville Grows has sold over 400 pounds of food from the garden to Healthy in a Hurry stores, and has made additional sales to Louisville restaurants.

The FIN stakeholders worked with Louisville's Food Policy Advisor to determine that while the comprehensive land use plan supports agricultural uses across the community, the Land Development Code, the ordinances that implement the land use plan, did not contain provisions to allow urban agriculture. FIN stakeholders spent over 200 combined hours researching legislation from other communities that addressed urban gardening and farming, and collectively developed an amendment to the Land Development Code to authorize these uses. The amendment designates community gardens and commercially-focused market gardens as permitted uses with special standards, meaning that if certain requirements are satisfied, these gardens are allowed as a matter of right with no additional level of review required. Commercially-focused market gardens allow on-site processing

of foods produced in the garden, a particular benefit for urban farmers interested in value-added processing or preservation of the foods they grow.

Certain components of the amendment were reviewed as part of a larger package of changes to the Land Development Code, and as of August 2012, these are pending before a committee of the Louisville Metro Council for final adoption. The remainder of the amendments will be reviewed first by the Louisville Metro Planning Commission and then the Metro Council at a later date. The result will be certainty for groups interested in urban agriculture that this use is allowed, and assurance for adjacent property owners that any potential impacts of these gardens will be mitigated.

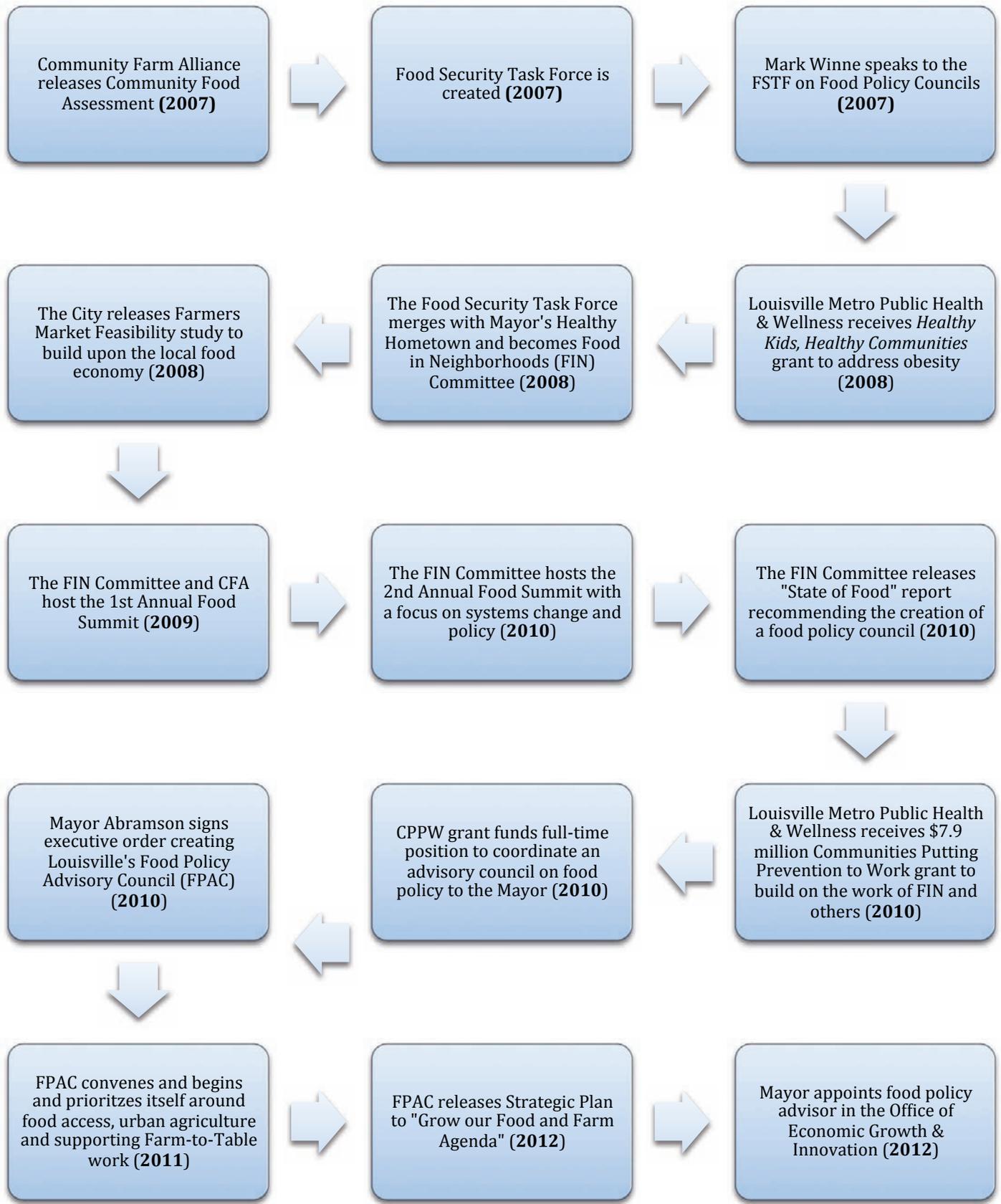
FIN has also been instrumental in encouraging partners and other community stakeholders such as the Jefferson County Cooperative Extension Service, to promote the importance of quality soil for urban gardening. Efforts to educate the public on soil safety have been useful in ensuring that gardeners are working safely to produce food in urban soils. As mentioned previously, the work of the MHHM fits into the Spectrum of Prevention and this case study brings FIN through many levels from Educating Providers and Fostering Coalitions and Networks, to Influencing Policy. Figure 2 outlines how FIN fits into this spectrum, touching every component of the Spectrum in some way.

Louisville's Next Steps

In 2012, Mayor Fischer set goals for the Louisville Metro Government. One in particular, "Invest in Our People and Neighborhoods, Advance 'Quality of Place'," speaks to the need to increase access to local food across the community. Mayor Fischer's focus on "compassion in government" extends to the issue of food equity. The executive order authorizing the FPAC is in need of reauthorization and work to complete the task that is underway. The FIN Committee has assumed a new role in MHHM, continuing its good work. Louisville Metro Government is developing partnerships with other organizations interested in working on solutions to food access in West Louisville, and hopes to announce a new effort to bring fresh food to these areas in Fall 2012. Coordinating related efforts to address local and healthy food across Metro Government and the community continues to be a challenge, but one that results in greater success for all involved in this movement. Louisville continues to gain notoriety for its work in local food, both from a health equity perspective and an economic development perspective. This comes as a direct result of the hard work, creativity and continued dedication of all partners and stakeholders as well as the policy initiatives and stated goals of Mayor Fischer's administration. Though there is much work ahead and many barriers to overcome, if the past is any indicator of success, the future of local food and food equity in Louisville is a bright one.



Appendix A: Timeline of Food Access and Food Policy Work in Louisville, KY





Appendix B

FIN Membership Over Time

MHHM Family & Communities Committee + 2005-2008	Food Security Task Force 2007-2008 =	MHHM Food in Neighborhoods Committee 2008-present
ACTIVE Louisville	Metro United Way	YMCA
Farmers Market Managers/ Neighborhood Associations	LMPHW/Center for Health Equity	LMPHW/Center for Health Equity
Rainbow Blossom	YMCA	U of L
YMCA	CFA	Presbyterian Hunger Program
PACS NOW	Dare to Care	Catholic Charities/KY Office for Refugees
EarthSave Louisville	Economic Development	CFA/Stone Soup
CFA	Making Connections (NC3)	UK Cooperative Extension
LMPHW		Louisville Grows
Chefs		Network Center for Community Change (NC3)
Whole Foods		Food Literacy Project
Citizens		Economic Development
		Junior League of Louisville
		Jewish Hospital
		New Roots
		Chefs/Citizens/Volunteers

Marigny Bostock is a certified health education specialist (CHES) and Community Health Supervisor at the Louisville Metro Department of Public Health & Wellness. Marigny has been the staff liaison and coordinator for the Mayor’s Healthy Hometown Movement since 2007 and is the project director for Louisville’s Healthy Kids, Healthy Communities grant, a national program of the Robert Wood Johnson Foundation. She volunteered and served on the board of the Food Literacy Project at Oxmoor Farm from 2007-2010 and has a passion for teaching youth about the source of our food. Marigny is also an amateur backyard gardener and frequents many of Louisville’s farmers markets.

Mike Bramer has served as the Director of Healthy Actions for the YMCA of Greater Louisville for the past seven years. During his tenure, seven Healthy in a Hurry Corner stores were initiated to address food deserts in Louisville. He has served as chair of the Food in Neighborhoods committee of the Mayors Healthy Hometown Movement since 2008. He also serves on the Food Policy Advisory Council. Prior to his role in community health initiatives Mike spent 15 years working in various positions at the Northeast Family YMCA.

Josh Jennings has over 6 years of experience working in public health, with a specific focus on food systems development. Josh began his career at Louisville’s Center for Health Equity in 2007 with an approach to public health centered on policy

advocacy, capacity-building, and evidence-based strategies for community food systems. As a co-founder of Louisville’s “Healthy in a Hurry” corner store initiative, Josh helped design and implement a nationally recognized model for healthy corner stores in low-income neighborhoods. This initiative has now expanded to six locations selling over 10,000 servings of produce per month. Currently, Josh is Lead Associate for Wildflower Consulting, a national public health consulting firm specializing in topics related to health equity, community development and program evaluation.

Theresa Zawacki joined the Louisville Metro Department of Economic Growth and Innovation in September 2011 as the city’s Food Policy Advisor, and coordinates Louisville’s Brownfields Program. Previously, she was an Assistant County Attorney with the Jefferson County Attorney’s Office where she represented the Louisville Metro Planning Commission, the Louisville Metro Board of Zoning Adjustment, the Louisville Metro Landmarks Commission, and the Louisville/Jefferson County Environmental Trust, as well as all Louisville Metro staff involved with land use, planning and zoning. She also advised and represented the Louisville Metro Council in planning and zoning matters. Ms. Zawacki began her legal career as an associate at the law firm of Greenebaum, Doll & McDonald (now Greenebaum Bingham Doll), where she practiced in both the land use and environmental practice groups.



Ms. Zawacki serves as the Chair of the Green Convene of Louisville and the Vice-Chair of the Environmental Law Section of the Louisville Bar Association. She is a frequent speaker and writer on issues involving local food and brownfields.

Ms. Zawacki received her BA from Transylvania University in 1998, and both her JD and Masters of Community Planning from the University of Cincinnati in 2003. She lives in Louisville and has both children and chickens.

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Garden with Neighbors: Louisville's Potential to Promote Food Security Through Community Gardening

Shelly A. Biesel and Christopher M. Sims
University of Louisville



At first glance, a trip to the supermarket may confirm the old truism that we in the United States live in the land of plenty. But is that really the case? And if it is, how long can we keep it up? Recently, books such as *The Omnivore's Dilemma* and *Fast Food Nation*, as well as documentaries like *Food, Inc.* and *Forks Over Knives* have exposed some critical problems with both the quantity and quality of our nation's food supply (Pollan, 2006; Schlosser, 2002; Kenner, 2008 and Fulkerson, 2011, respectively). The short story is this: agribusinesses and factory farms attempt to increase output at the expense of both the environmental and consumer health. Short cuts taken by these operations (such as feedlot farms and processed goods) create an unsustainable and impossibly "cheap" product. People everywhere rely on these poor-quality goods to inexpensively feed their families, while simultaneously exposing themselves to unhealthy foods. This set of conditions contributes to rising obesity rates and diet-related health problems in the United States (Patel, 2007, p. 225; Winne, 2008).

Perhaps what is less well known is the disproportionate effect poor quality food has on low-income communities. In the past 30 years, cities and towns in the U.S. have witnessed the mass exodus of supermarkets from urban centers to more affluent suburbs (Winne, 2008). This, along with joblessness and other influences, has led to widespread obesity, disease and food insecurity among the low-income communities left behind (Winne, 2008). Louisville is experiencing these ongoing health conditions, as many residents of West Louisville and other low-income areas must often rely on inadequate sources such as fast food restaurants and expensive convenience stores (CFA, 2007: 12).

Fortunately, city government is beginning to focus on food deserts. In 2007, the Community Farm Alliance compiled a report that highlighted some major contributors to the area's health

problems. Among them were poor accessibility to supermarkets, the low-quality-high-priced "fresh food" options of existing supermarkets, and the heavy density of unhealthy fast food restaurants and convenience stores in the area (CFA, 2007). CFA also made some recommendations, calling for a locally integrated food economy (L.I.F.E.), which would make access to quality, local foods a priority while also creating sustainable livelihoods for local farmers (CFA, 2007). This report springboarded the formation of a task force organized by the Health Department's Center for Health Equity. The group would partner with local institutions to help inform policy to eradicate food deserts (Jennings, 2011). The task force then merged with the Mayor's Healthy Hometown Movement in 2008 to become the Food In Neighborhoods Committee. In 2010 the efforts of MHHM and FIN helped Louisville receive a grant from the Center for Disease Control and Prevention, which funded the launch of the Louisville Food Policy Advisory Council (FPAC) (Jennings, 2011). Comprised of "stakeholders" who have different relationships to the local food economy, the council serves to make policy recommendations to the Mayor's office concerning matters of food justice (Jennings, 2011). Though FPAC and other organizations are exploring solutions to end our own urban food crisis, food deserts still exist in Louisville.

How can low-income communities sustainably access healthy foods? FPAC and FIN are looking at community gardening. In fact, many people are already using community gardens in and near West Louisville--there are around 13 known community gardens in the general area, not including school gardens. (Yeager, 2011). This paper looks at the benefits of community gardens both nationally and locally, and profiles specific gardens in West and Southwest Louisville. We hope to demonstrate the ways in which community gardening may sustainably rejuvenate Louisville food deserts, combat food insecurity, and address critical neighborhood problems.



Community Gardens in United States History

How do we know that community gardening can make a significant difference in food deserts of West Louisville? The truth is, we do not. As Mark Winne (2008) stated, “no one person, organization, or approach will close the food gap,” (p. 172). However, history tells us that community gardens have offered relief during times of war, depression and economic disparity. Gardens, according to Thomas Bassett (1981) have played a significant role in the United States during periods of crisis. For example, after the Panic of 1893, when former laborers had become despondent victims of an industrial downturn, the Mayor of Detroit came up with an inventive way to mitigate mass unemployment, deciding to allocate municipal and privately donated vacant property to citizens for growing their own produce (Bassett, 1981: 2). These “potato patches” were so successful in alleviating strains on the city’s poor that soon other cities followed Detroit’s lead (Bassett, 1981: 2). Two decades later, food shortages were rampant as the United States entered World War I (Bassett, 1981). Citizens were encouraged by the propaganda campaign of the War Garden Commission to garden anywhere and everywhere. Cultivating food in unused “slackerlands” became a patriotic duty (Bassett, 1981: p. 5). At the height of the campaign’s popularity in 1918, the War Garden Commission touted 5,285,000 gardens across the nation (Bassett, 1981, p. 5).

Like the “Potato Patch” movement, Relief Gardening during the Great Depression served as a pillar of support to a destitute population (Bassett, 1981). Land was leased or donated to the Municipal Garden Committees, which organized individual plots often as large as 50 x 150 feet (Bassett, 1981, p. 5). Other gardens were designed as an “industrial plan,” or a large parcel of land where many gardeners (managed by a foreman), worked toward the common goal of producing food (Bassett, 1981). Gardening was not only a form of subsistence, but also provided health benefits by increasing a sense of self-reliance (Bassett, 1981). Bassett (1981) asserts that today’s community garden movement resulted from increased focus on nutrition in the United States following WWII. However, he explains that community gardening is positioned to endure. Writing in the Eighties, Bassett (1981) quite prophetically observes,

Any development that diminishes consumer purchasing power, constrains mobility, adversely affects food production and distribution, or leads to a decline in the quality of life might accelerate the growth of the community-garden movement. (p. 8)

Current Benefits of Community Gardening in the United States

As predicted, the community garden movement has grown in popularity across the United States (Okvat & Zautra, 2011; Ferris, Norman & Sempik, 2001). Moreover, there is now a convincing amount of research extolling the various benefits of

community gardening. Ferris documents the diverse assortment of community gardens in the San Francisco Bay area (Ferris et al., 2001). Each type of garden (whether it be a school, prison demonstration, healing, or entrepreneurial garden, among others) addresses a specific need within the community it serves. For example, school gardens such as *Le Conte* or the *Edible Schoolyard* function as an educational tool that is integrated into a diverse curriculum, as well as an interactive way to promote food literacy and fruit and vegetable consumption among kids (Ferris, 2001: 562-563). Other gardens have different functions. For example, both the *Berkeley Youth Alternatives Garden*, as well as the *Strong Roots* gardens function to divert at-risk youths from gang and drug activity by providing viable job training in urban agriculture, and paying competitive wages through selling their goods to farmers’ markets and restaurants (Ferris 2001: 564). Similarly, The Garden Project hires ex-prisoners to plant trees and maintain a community garden in an impoverished neighborhood of San Francisco (Ferris et al., 2001, p. 564). By providing a living wage and focused self-esteem building, *The Garden Project* has kept 75 percent of its staffers from returning to jail (Ferris et al., 2001, p. 564). He argues that the overarching benefit to all who are active in community gardens is the “generated local and participative forms of neighborhood-level politics,” (p. 567). He explains,

The community gardens have grown up in the wake of the abandonment of inner-city areas by the white majority and especially the major employers. The middle classes have vacated the inner city to the so-called Edge City. At the same time service-sector enterprises and jobs have also migrated there. African-Americans and Hispanic people along with other “people of colour” have found themselves trapped in economically and environmentally damaged neighborhoods. The community garden movement in the USA is, in part, one of the positive responses in the struggle to restore these damaged neighborhoods to ecological and social health. (Ferris et al., 2001, p. 567)

In line with this observation, Joan Twiss et al. (2003) assert that CGs help “nurture community capacity,” or the resources a community can access and wield in order to confront problems and find solutions (p. 1435). This is especially beneficial for immigrants acclimating to life in the United States. By providing a domain within their new environment that they can control and manipulate, CGs can help ebb the pressures of acculturation (Twiss et al., 2003, p. 1435). Additionally, other studies show that people living near green spaces (especially women, the elderly, and the poor) are more likely to perceive their health and well-being to be positive than people living in non-green environments (Maas et. al, 2006).

And community gardens are certainly green; Okvat and Zautra’s (2011) comprehensive study of CGs broadens “community” to include “earth community”, as gardening has



many positive environmental impacts (p. 374). They mention a garden's "direct pathways" (the sequestering of greenhouse gasses) and "indirect pathways" (ability to educate and influence urban lifestyles) in addressing climate change (Okvat & Zautra, 2011, p. 380). One indirect pathway described is that availability of homegrown food lessens people's reliance on purchased items that have been refrigerated, packaged, processed, and transported (Okvat and Zautra 2011). Okvat and Zautra (2011) also argue that gardens influence climate-mitigating behavior by occupying people out of doors, therefore temporarily diverting them from driving their cars or from using energy indoors (p. 381). Another environmental advantage of gardens is that water flows back into the ground instead of into a sewage system where it requires energy for treatment (Okvat & Zautra, 2011, p. 381). Gardens also employ a cyclical use of yard scraps and food waste as compost which is returned to the earth rather than trucked to landfills (Okvat & Zautra, 2011, p.381). Okvat and Zautra also cite several studies which contend that activity near green spaces improve attentional behavior in people of all ages and backgrounds (Okvat & Zautra, 2011, p.376-377). Interacting with nature may also alleviate the stress of urban living conditions as well as abate "mental fatigue," and increase physical activity (Okvat & Zautra, 2011, p. 376-378). Community gardens bring together people from diverse backgrounds and age groups, allowing the exchange of knowledge (and materials) to advance social networks (Okvat & Zautra 2011, p.378). These combined positive effects lead to what Okvat and Zautra (2011) refer to as increased "community resilience," (p. 376). In other words, CGs can strengthen a neighborhood's ability to effectively respond to difficult situations and conditions.

Community resilience may be a contributing factor to "positive neighborhood attachment" explored in a study by Litt. (2011). Over four hundred households in the city of Denver, Colorado participated in a survey which revealed that positive neighborhood attachment is largely connected with fruit and vegetable consumption. In this study, "neighborhood attachment" is determined by many factors, including social ties through community participation and involvement, and positive neighborhood aesthetics (Litt., 2011). Why is this important? In sum, Litt's (2011) analysis demonstrates that beautifying neighborhoods and promoting community involvement can positively influence people's food choices. Community gardens bring green landscapes and people together. Litt found that "56 percent of community gardeners consumed fruits and vegetables at least 5 times per day, compared with 37 percent of home gardeners and 25 percent of nongardeners," (2011: 1468).

Community Gardens in West Louisville Neighborhoods

Bassett's (1981) description of food deserts can certainly be found in West Louisville, where the purchasing power of its citizens is choked by both poverty and a lack of options (CFA, 2007). Additionally, many West Louisvillians do not have access to vehicles, complicating access to well-stocked supermarkets and other desirable stores (CFA, 2007:14). Finally, quality of life



A California Neighborhood Community Garden. S. BIESEL

may be hindered by disproportionately poor health conditions that largely characterize the area (CFA, 2007, p. 17-18). Considering these conditions, the question becomes: can community gardens also benefit West Louisville?

Given the benefits attributed to CGs in other cities, it is perhaps not surprising that CG enterprises already existing in Louisville are reportedly benefitting diverse communities in many ways. What follows is a profile of several local community garden initiatives. Drawing on interviews with lead organizers and 2010 census data, we will characterize these gardens and gardeners, and attempt to connect participation in community gardens with particular social and economic roles.

One local advocate for CGs is Michael Dean of the California Collaborative, who established a youth demonstration garden in West Louisville and was instrumental in planning the California neighborhood garden. In an interview (December 2, 2011), he discussed the noticeable ability of community gardens to affect attitudes and behaviors in children. Inspired by Will Allen in Milwaukee, the demonstration garden was initially something Dean wanted to try with his youth group. He discovered that the kids who would participate considered gardening to be "old people work" (M. Dean, personal communication, Dec. 2, 2011). However, not long after planting the seeds, enthusiasm drastically increased at the prospect of growing vegetables.



According to Dean, the kids even began asking if they could sell at the farmers' market. Dean was quick to explain that economic incentive was not the only driving force behind their excitement. The Brandeis Demonstration Garden youth group got involved with the "whole process," from purchasing seeds, to planting and reaping, and even cooking and preparing vegetables. Soon neighbors were volunteering to take care of the garden when the kids were out for the summer. Dean emphasizes that exposure early on can positively shape attitudes toward food production and consumption. For example, in one anecdote he described three "frilly" girls who, on a service-day, volunteered with Breaking New Grounds (a local organization that composts coffee grounds and food waste from local restaurants and cafes) (M. Dean, personal communication, Dec. 2, 2011). Their job description for the day was to retrieve earthworms from compost piles (and relocate them to other compost piles), leaving only the nutrient-rich castings. The girls who volunteered were noticeably squeamish about handling earthworms. Still, Dean left the girls with the staff of BNG, and by the time they were picked up later in the day, he recalled, "They loved it! They were all in that compost!" (M. Dean, personal communication, Dec. 2, 2011). Another crucial reason to involve kids is their considerable influence on adult behavior. Dean offered the example of a group that sought to promote literacy among adults. Instead of telling the adults that they needed to learn to read, the organization encouraged the children of these individuals to join a book club, and asked the parents to participate for guidance and support. As parents began coming to the reading groups to get involved with their children, they began showing signs of improved reading skills. He applies an analogous philosophy to gardening, explaining that kids bringing home or asking for fresh vegetables will encourage healthier eating habits among their parents (M. Dean, personal communication, Dec. 2, 2011).

Dean's experience highlights other garden benefits. He noted that among the many difficulties West Louisvillians face is that of dilapidated, vacant properties which often house mounds of trash or even drug use and/or gang activity (M. Dean, personal communication, Dec. 2, 2011). Such eyesores bring down property value and encourage criminal activity. When the California garden was in the formulation stages, Dean canvassed the neighborhood to see what residents thought about a potential CG on an empty lot at 17th and Gallagher Streets. He was struck by the unanimous support for the garden, so long as the green space was conserved (meaning that no one wanted to see houses or buildings erected on the site). Dean explained that West Louisville cherishes its green spaces, because they are few and far between. He went on to say that residents have seen enough buildings abandoned and falling into disrepair. The hope of the proposed garden is that it will discourage litter, increase property value, and promote exercise and healthy eating among participants and their neighbors. More importantly, Dean believes the added benefit of getting people outside together, talking with different generations and genders, will promote a safer, more united community. Residents in West Louisville also want to see a reduction in crime, which Dean believes will drop as a result

of community enhancement through CGs. This point corresponds to findings from a study of Inman Park in Atlanta, which showed that greening neighborhoods led to a reduction in crime (Segrest, 1979). Dean explained, "when criminals are about to engage in a crime, the first thing they do is look around to see who's watching. If people are outside or sitting on their porches, they will no longer continue with that enterprise," (M. Dean, personal communication, Dec. 2, 2011).

The Portland Orchard Project

Similarly, neighborhood rejuvenation is a primary goal of the Portland Orchard Project. The POP is a self-sustaining urban apple orchard located at the corner of Main Street and Dr. W. J. Hodge Street in the Portland neighborhood of West Louisville. The orchard was the brainchild of homeowners who live near the once empty plot of land, who joined forces to beautify the space. Consisting of a corner lot measuring approximately 65 meters by 30 meters, the orchard features apple trees running lengthwise in irrigated rows. Over fifty trees of several varieties were planted, allowing for long harvest seasons. Wheeler Machine and Fabrication, Inc. owns this property, and was very supportive when the POP expressed interest in turning it into a community orchard. Equipment and materials for the garden were donated by several groups, including a 4,000-gallon rainwater catchment silo provided by Louisville Metro Sewer District. The rainwater catchment silo irrigates the orchard through a system of gravity-fed drip lines that are buried near the base of each tree.

Portland is one local example of a predominantly low-income, urban neighborhood that has been largely abandoned by



The Portland Orchard Project. S. BIESEL



super market chains. The Portland Orchard Project's intention is simple: provide access to quick, free and fresh fruit. Recently the POP was awarded a grant which will help them plant more orchards around the Russell and Portland neighborhoods.

Project members Aleasha Husted, Drew Watkins and Leesa Jolly explained that the importance of food access can be seen if one drives down 22nd Street in Portland. Options are limited to fast food restaurants or, "buying breakfast, lunch and dinner at Speedway." Many Portland area residents do not drive, so it is simply not realistic to go to a nearby supermarket. A resident is unlikely to want to go to the store anyway because of the poor quality of produce there. Aleasha Husted referred to another store as the "worst grocery store I've ever seen in my life," yet explained that people still go there because it is on a bus line.

At the time of this interview, the apple trees were too young to produce, however POP members say they have already witnessed the orchard's benefits to their community. The construction of the orchard unified people around a common goal by attracting cooperative participation among neighbors. Portland residents have supported the project with both labor and equipment since the project's inception. The orchard has also beautified the neighborhood; and people regularly stop or slow down to check out its progress. Husted thinks that the land is more respected and mentioned that kids no longer cut through the lot but honor the sign, flowers, and trees, and walk around. Why apples? The vision the Husted had for the garden was to provide something everyone likes, that does not require any preparation, so that anyone in the Portland neighborhood wanting an apple may go and pick one. And it is also more than that. The orchard represents potential for change and relief in the surrounding community. The young trees planted in 2011 represent concerned residents' long-term investment in the well-being of their neighborhood.

Refugee Gardens

Another group doing community gardening in Louisville is the refugee community. Lauren Goldberg of Catholic Charity's Refugee Agricultural Partnership Program (RAPP) detailed the benefits shared among gardeners, as well as those specifically relating to a refugee's unique identity. In operation since 2007, the RAPP has seen many families (the current number is just over eighty) participate in their gardening initiatives. This experience has created the following benefits. First, is (not surprisingly) increased access to healthy foods among families. On a larger scale, gardening has contributed to increased food security among communities, because many gardeners either share or sell their produce to extended family and neighbors. Additionally, gardening provides income to those those selling their goods. Another benefits the capacity for residents of various cultures to acquire familiar foods.. Goldberg cites the value of growing plants, medicines, and produce that refugees simply cannot otherwise obtain in this country. Community gardening allows participants to add value to foods by fermenting, pickling, or

processing them. Such items are typically expensive in shops. Yet another benefit of CGs to refugees is mental health. Many people in her program are not used to living in apartments or urban areas. Many of Catholic Charities' clients have grown up in rural areas, have withstood severe trauma, or lived in refugee camps for years (sometimes decades). In the alien U.S. urban environment, gardening may provide familiarity that could contribute to a more fluid integration into society. Once refugees are resettled, there is a huge emphasis on finding employment. In Louisville, refugees typically find jobs with companies like Swift or Mesa Foods, industrial, factory settings, which are also foreign to them. Many of the refugees who go home to work in their garden remark that it is the highlight of their day. Finally, family dynamics can be positively impacted by CGs. In refugee families, kids are quicker to acculturate, shifting the power structure within households. Kids who are culturally savvy direct their parents' purchases in American grocery stores, not necessarily choosing the healthiest options. On the other hand, gardening involves knowledge held by adults; it thus serves as an area where parents can regain control over family diets and educate their children (L. Goldberg, personal communication, Nov. 30, 2011).

Partridge Pointe Community Garden

Mason Roberts of *Louisville Grows* elaborated on the topic of family dynamics involved in refugee gardens (interviewed by authors, November 28, 2011). *Louisville Grows* recently partnered with Housing Partnership, Incorporated in order to build a garden in the Partridge Pointe neighborhood. Residents there are predominately refugees of Somali, Nepali and Russian descent. Often the elderly (men, especially) are used to being heads of the household, and suddenly they find themselves in a place where everything is unfamiliar. Because older refugees are less likely to find jobs or master English, they often cannot contribute as much financially to their households. They can, however, offer a lot to their families and community by transmitting knowledge of gardening traditions to younger people.

The community garden that serves Partridge Pointe is located at the western edge of the housing complex and is bounded to the west by a security fence and to the east by a children's playground. The rectangular garden measures ten meters by 30 meters and is oriented north-to-south lengthwise (see Figure 1). Several small in-ground garden plots (approximately two meters by two meters square), separated by mulch pathways, are contained within the galvanized metal grid fencing that outlines the exterior edges of the garden. Other features of this garden include a nine square meter storage shed located at the south end of the garden, two permanently fixed charcoal grills, a large pavilion with two picnic tables under a standing-seam galvanized metal roof over a concrete patio, and two 275-gallon rainwater catchment "totes" fed by the rainspouts on the roof of the pavilion. Various groups and businesses donated all of the equipment and material to Partridge Pointe and volunteer labor was provided for the construction of the community garden. The residents organize maintenance and participation in the garden.

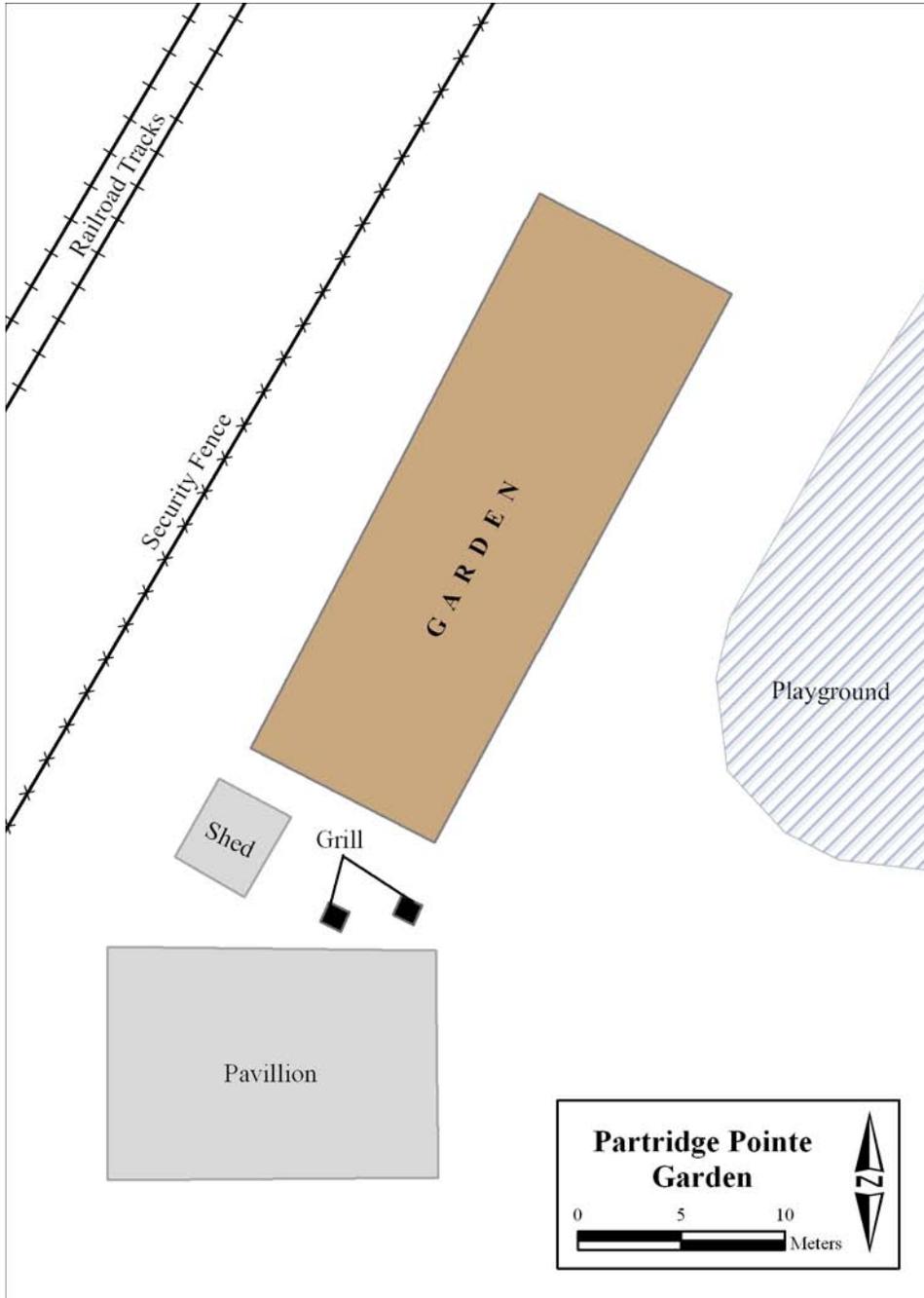


Figure 1: Site Map of Partridge Pointe Garden. NIKI MILLS

The food that is grown in the Partridge Pointe garden primarily feeds participating residents and their families. Crops from the garden are also shared among extended family, friends, and neighbors living in the nearby housing complex. The small size of the garden and the plots of the Partridge Pointe community garden does not represent a significant offset to economic or dietary deficiencies for the residents. The true significance of the Partridge Pointe community garden has more to do with rebuilding fragmented communities and restoring traditions of relocated families. Families and neighbors connect by working together in the garden and sharing food with one another.

Roberts believes that gardens in refugee neighborhoods may ameliorate conflict and/or communication disparities among ethnic groups. By creating a space for conversation, CGs help diverse gardeners overcome their differences and unite around a common goal.

Seventh Street Road Community Garden

The largest urban garden in Louisville is the Seventh Street Community Garden. Managed by the Jefferson County Extension Office, this garden is located in Louisville’s South End, off of Seventh Street Road in Shively. Situated almost entirely on a MSD storm water runoff causeway (see Figure 2), the garden is organized in two large rectangular plots. There is a main garden extending approximately 200 meters due east from the Jefferson County Extension Office trailer at Seventh Street, and a south garden that runs approximately 160 meters south from the eastern end of the main garden. A north garden is adjacent to the main garden at the northeastern portion of the Seventh Street garden. The north garden is the only property that is privately owned, however and the owner encourages gardening on that parcel of land.

The Seventh Street garden demonstrates diversity in participation, plants grown, and use of the food that is cultivated. Gardeners include refugees, low-income families, hobbyists, and others. They grow to supplement their family’s diet, share with friends and neighbors, or even to sell produce or flowers at markets or roadside stands. Melons and squash, tomatoes, peppers, herbs, corn, root vegetables, and leafy greens are some of the food plants grown there. Because it

can accommodate many participants, the Seventh Street Garden is a valuable resource to the Shively neighborhood. Though it is difficult to quantify output of the current crops at Seventh Street, its sheer size could potentially allow for very high volumes of produce.

The Shawnee “People’s Garden”

Community gardens are useful, rewarding, and enjoyable tools for education. In West Louisville, opportunities to learn about gardening seem to be as diverse as the gardens themselves.

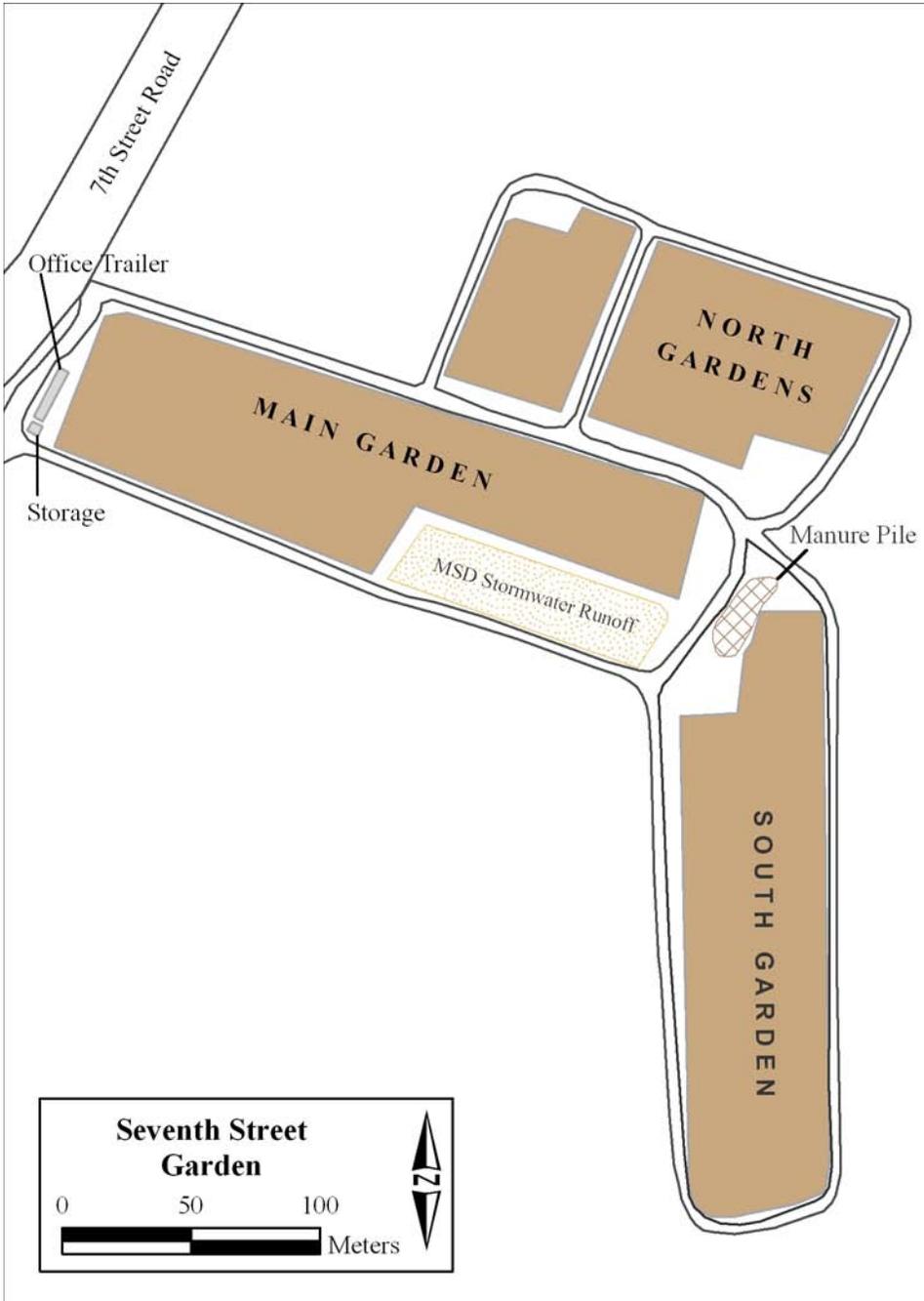


Figure 2: Site Map of the 7th Street Garden. NIKI MILLS

One example of an educational garden is the the Shawnee Park community garden. At the time of our field investigations in the Winter of 2011, a five-acre garden was proposed for the Shawnee Park neighborhood, directly east across Northwestern Parkway, near the Shawnee Golf Course. The Shawnee Park CG, also called the People’s Garden, was designed and executed by the non-profit group *Louisville Grows*, which is leasing the publicly owned land from the city of Louisville. The People’s Garden partners with initiatives such as the Shawnee Fresh Stop and Healthy in a Hurry Corner Store program in order to ensure that quality, affordable produce “finds its way to the plate of Shawnee residents” (Mason Roberts, *Louisville Grows*, personal communication, August

10, 2011). Though the People’s Garden is not yet complete, thus far, two acres of space feature two 3,000 square-foot high tunnels, an orchard with 60 fruiting trees and bushes, a one-acre market garden where demonstrations are held, a learning center, and 21 24x24 foot neighborhood garden plots. The People’s Garden hopes Shawnee residents will benefit from all of the advantages CGs may offer – education, community involvement, healthy food access, and beautification. Residents have the opportunity to learn about healthy eating habits, local foods, sustainability, and food justice while also getting the resources necessary to affordably grow produce. In its first season alone, the market garden yielded over six hundred pounds of organic produce, most of which was sold back to the Shawnee community at a subsidized rate.

Socioeconomic Considerations

Despite each garden’s individual characteristics, they all function at various levels to address a common problem: food insecurity. However, food insecurity results from more than just inadequate access to healthy food. Poverty is a condition that often keeps people trapped in a cycle of financial hardship. Poor people living in food deserts not only cannot afford to buy more expensive, better foods, but often lack the time or resources to travel to stores across town. We believe that financial hardship is a contributing factor to interest in community gardens among residents of predominantly low-income, urban neighborhoods.

To determine the socioeconomic roles of both gardens and the gardeners, we analyzed demographic data from each garden’s corresponding neighborhood.

This was accomplished by using Geographic Information Systems (GIS) to establish discrete vicinities encompassing the garden and its surrounding residents, or its area of potential effect (APE). Once the APEs were established, we could determine the mean household incomes of the specific neighborhoods by analyzing 2010 Census data for each APE. Figure 3 shows the number of households in each income bracket, which represent the communities likely served by the Portland Orchard Project, Seventh Street Garden, The People’s Garden (Shawnee), and Partridge Pointe. The data shows a high number of low-income households in all of the neighborhoods discussed.



Breakdown of Community Garden’s Socioeconomic Area of Potential Effect (APE)

The Portland neighborhood, enveloping the Portland Orchard Project, is comprised of almost exclusively of low-income households, with the exception of one to two outlying households representing each of the middle class income brackets. The lowest income brackets are occupied by the majority of the residents in this neighborhood, and households with mean annual incomes above \$100,000 are entirely absent from the Portland community.

It is difficult to accurately assess demographic characteristics of Seventh Street community gardeners because some commute from as far away as five miles. While the number of gardeners traveling further distances is lower than that of those who reside closer to the site, accommodating the APE for commuters still skews usage data. In this case, the area is adjusted to account for both gardeners commuting from a wider radius, as well as those in the immediate vicinity, therefore the larger radius may decrease the accuracy of target demographics. While the median household income overall is \$30,097, a significant segment of the overall APE is comprised of families with median household incomes under \$10,000 (US Census, 2010). Therefore, the Shively socioeconomic unit contains income brackets representing middle and upper-middle class families, but the overall trend shows that low-income families dominate the Seventh Street Community Garden APE.

The higher number of residents in Partridge Pointe compared to the other neighborhoods reflects the density of settlement in this fairly small apartment complex of refugee families. The Partridge Pointe community and the nearby surrounding

neighborhoods have an annual median household income of \$21,429, with a high number of residents earning less than \$10,000 annually (US Census, 2010). This places most of the refugees living well below the poverty line. Due to the isolation and unique demographic characteristics of the Partridge Pointe community, this census data represents a relatively precise figure compared to other neighborhoods where discrete demographics are more difficult to parse from GIS mapping.

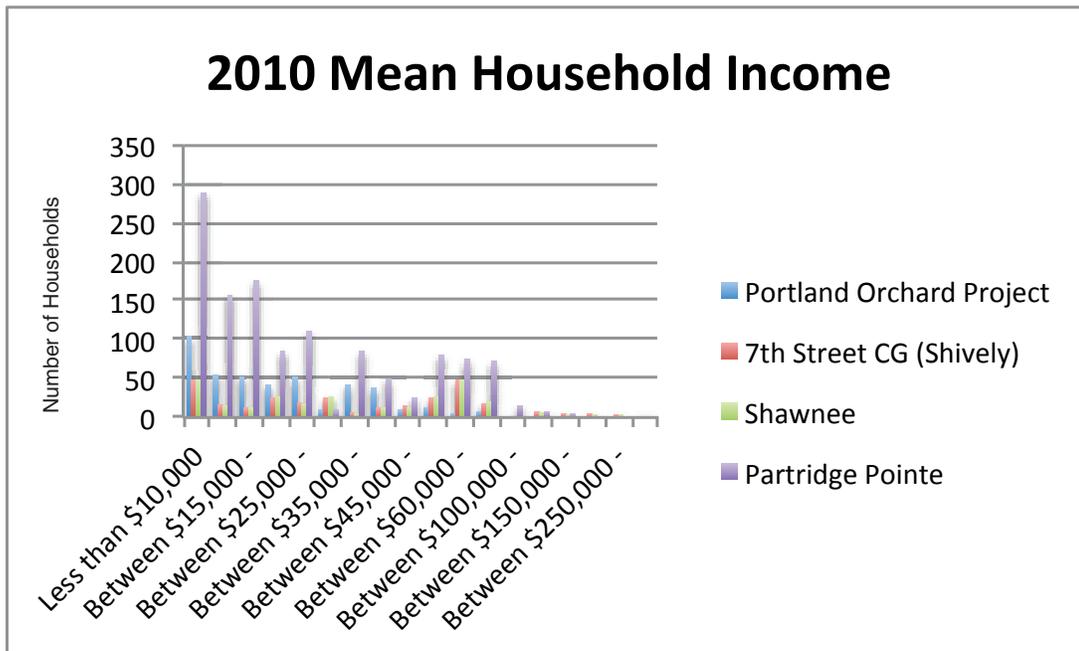
Contrastingly, there are a relatively low number of households in the Shawnee garden APE, probably resulting from larger amounts of parkland and green space near the People’s Garden. This area is also comprised of predominately single-family homes. The socioeconomic demographics of Shawnee Park residents are somewhat stratified, with the largest segment of median household incomes representing the lowest income bracket (under \$10,000), a flat trend through lower income brackets, and a significant portion of residents comprising middle and upper-middle class income brackets. Overall, the median household income for the Shawnee Park area is \$34,776 (US Census, 2010). The difficulty in assessing the income level of potential Shawnee Park community garden users comes from the close proximity to a golf course community, and the fractured nature of income distribution downtown.

High numbers of households in the lowest income brackets suggest the importance of community gardens for their potential and real impacts on food insecurity in each neighborhood. Indeed, all of these areas stand to benefit from the food that CGs can offer, as well as any potential remuneration for selling produce or elaborated goods from the gardens.

Conclusions

The West End of Louisville is characterized by many low-income neighborhoods, which are disproportionately affected by high levels of food insecurity and poor health (CFA, 2007). This area is traditionally subject to more crime than other areas of the city. Nonetheless, community groups and neighborhoods are taking food access matters into their own hands by organizing green spaces that can help feed families. Each garden in this article demonstrates unique demographic pressures and usage patterns affecting the gardens. The Portland Orchard Project is a response to the problem of over-priced, poor quality produce that is

Figure 3: Composite Mean Household Incomes of Community Garden Neighborhoods. US CENSUS, 2010





commonly found in substandard grocery stores in low-income communities. Just south of West Louisville, the Partridge Pointe refugee garden offers insight into the power of gardens to act as pathways for rebuilding community and family bonds. The Seventh Street garden illustrates the versatility of a large garden in serving many participants of mixed demographics for multiple uses. The People's Garden in Shawnee illustrates the potential of community gardens to both educate people about healthy, local food and sustainably provide for neighborhoods in need of affordable, fresh produce.

In sum, West Louisville is already benefitting from CGs, as demonstrated by their ability to meet local level neighborhood concerns. However, many more community gardens must be established if they are to provide a meaningful counter to food access disparities. Nearly everyone interviewed for this project reported a high demand for community gardens (and many people on wait-lists), indicating a significant body of public support. What is less clear is local policy surrounding CGs or on urban agriculture in general. At present, Louisville does not have any land-use or zoning codes that specifically correlate to CGs. However, an amendment to the Land Development Code is currently being revised which would include regulations for urban agriculture and community gardening (Theresa Zawacki, personal communication, August 10, 2012). Michael Dean attests to the "pro-garden" attitude of the current Metro Council. His sentiment was confirmed by an interview with Robert Holtzmann (Legislative Aide to 6th District Councilman James), who explained that the goal of CGs and the goals of Louisville metro government are mutually beneficial: greening landscapes, crime reduction, and strengthening communities (personal communication, Dec. 6, 2011).

Even so, community gardening is limited as a means to end poverty. The neighborhoods profiled here are positioned squarely amidst food deserts, where quality and affordable fresh foods are rare, and fast-food restaurants and convenience stores abound. As we have demonstrated, community gardens do have an impact in that they shift fruit and vegetable production to a household and neighborhood level, as well as play a role in mitigating food insecurity. But we also know that producing food is a responsibility that would be difficult for most people to manage year-round, and that it takes more than fruits and vegetables to feed families. What use then, are community gardens to low-income residents of Louisville? Gardens are far from a complete solution to food insecurity but their cumulative positive impacts must be taken into account. Indirect benefits such as increased health, decreased crime, beautified neighborhoods, improved quality of life, and strengthened community ties are, perhaps, just as essential as providing supplemental nutrition. As many urban communities in Louisville have been abandoned by good quality food vendors, community gardens are also an avenue for concerned citizens who, through stewardship of their own local food system, wish to positively reclaim their neighborhoods. —

Shelly A. Biesel and Christopher M. Sims are M.A. candidates in Anthropology at the University of Louisville.

Shelly Biesel earned her Bachelors degree in Social and Behavioral Anthropology at the University of Louisville. Her current research interests and graduate work focus around matters of identity, inequality, environment, industry and social movements.

Christopher Sims received his Bachelors degree from Appalachian State University in Boone, North Carolina, with a concentration in Archaeology. His current research primarily focuses on prehistoric human sites, however Sims is also interested in sustainable development and permaculture, local foods and economies, and community outreach.

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For more information about this article, please contact Shelly Biesel at shelly.biesel@gmail.com or Christopher Sims at chrissimsnc@gmail.com.

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The Black Farmers' Struggle and Its Importance to the Local Food Movement

Willie Wright
Doctoral Student
University of North Carolina



This work is dedicated to Harry Young of Utica, Kentucky and all the black and other socially disadvantaged farmers and farm families who, even in the face of death and the rejection of their demands for justice, have struggled to defend their land and legacies. It is also for those small white farmers, whose struggles, in many ways, mirror our own. My hope is that in the not too distant future we will learn to merge our efforts.

I began to make serious inquiry into the prevalence of land loss among black farmers while studying for a master's degree in Pan-African Studies at the University of Louisville. In 2009, about a year into my graduate coursework, I came upon an independent media news article entitled "82-Year-Old Black Farmer Arrested on Terroristic Threatening Charges" (Davis, 2009). The title was alarming, and the story that followed nurtured my already budding curiosity. An 82-year-old black farmer had been arrested for threatening his local Farm Services Agency (FSA), a unit of the United States Department of Agriculture (USDA) responsible for administering loans to farmers in need. According to the article, FSA officials reported that Mr. Young threatened to blow up his local FSA office. His supporters refuted these claims, citing the peaceful ways he had protested the agency's actions decades prior to his arrest. To my surprise, this farmer, the late Harry Young, lived in a small town two hours west of Louisville. I contacted the author of the column, who, as fate would have it, was a distant relative of Mr. Young and an advocate for black farmers. She gave me his phone number, and I called him immediately. My initial conversation with Mr. Young was brief. I informed him that I was a student interested in his story, black land loss, and the black farmer movement in general. He was interested in any meetings that would help give added voice to his cause. Our conversation ended as he agreed to meet with me the upcoming weekend at his home.

I met Mr. Young the following Saturday and spent the bulk of the day asking him a litany of questions and listening to him recall memories of his life on the farm. By the end of this eye-opening meeting my interest in black land loss went from curiosity to a personal and academic quest to advocate for America's black farmers. Subsequent interactions with other black farmers and small-scale white farmers have aided in my understanding of the similarities between the black farmer and local food

movements, and why members of each community would benefit from working collectively. Merging these coalitions is vitally important in Southern states where, for centuries, race and racism have been used to segregate black and white farmers, in spite of their commonalities.

In Kentucky, for instance, racial difference has affected collaboration between black and white farmers, and in some instances, has given way to racism. An exploratory study of contributors to land loss among black farmers in Central and Eastern Kentucky discovered that group and institutional racism affected the prices some black farmers received at cattle markets. This study also found, that as a result of their experiences with group and institutional racism, the success of some black farmer participants was dependent upon how well they negotiated localized acts of racism (Wright, 2010).

There are many gatherings within Kentucky that have the potential to facilitate collaborations between these detached farming communities. A few of these are the "Healthy Foods, Local Farms Conference," the "Bluegrass Local Food Summit," and an annual meeting facilitated by the Community Food Alliance (CFA). These meetings bring together many influential activists, scholars, and farmers from throughout Kentucky to share successes, engage speakers, and to discuss issues regarding the production, distribution, and consumption of local, sustainably produced foods. In addition to sharing invaluable resources, conference attendees use these gatherings to develop and broaden their personal and professional networks. Although black activists attend these gatherings, to my knowledge, neither of these conferences has addressed the particular needs of black and other farmers of color. This gap in service may be redressed through collaborations with Kentucky State University (KSU),

As a land-grant university and a Historically Black College and University (HBCU), KSU addresses the concerns of African American farmers, in part, by hosting the "Small, Limited Resource/Minority Farmers Conference" in Frankfort, Kentucky. This gathering brings together black and other similarly situated farmers from across the state to learn innovative growing and marketing methods. Though the meeting is open to farmers of all races, African American farmers make up the bulk of its participants. Because this annual meeting is facilitated by KSU, it serves as a safe space for black farmers to fellowship



while sharing and receiving information that may not be readily available in their counties. Individually, these four conferences provide invaluable aid to members of Kentucky's farming communities. However, if they were to merge their efforts, these groups could present a region-based model for racial inclusivity and interdependency among Kentucky's farming communities.

In this paper I argue that the struggles faced by black American farmers are important to the tenets of and the actors within the local food movement. Furthermore, I state that due to their similar bouts with political and economic barriers, justice-oriented work between proponents of the black farmer and local food movements would be beneficial to both causes. Next I discuss the socio-historical impact of group and institutional racism on the acquisition and retention of black-owned land. Evidence presented in this section helps to illustrate why there exist a cavernous gap in landownership, access to farm resources, knowledge of farming techniques, and social relations between black and white farmers. It will also support my argument that, in America, racial representation is a key component of a sustainable farming system. The second section lists some political and logistical issues faced by Kentucky's small farmers and calls for an alliance between those within the local food and black farmer movements based on principles of social justice. The potential benefits of this collaboration are presented using evidence from other justice-oriented food and farming movements in America. In third section I provide further evidence of the commonalities between the black farmer and local food movements by offering a regionalized example of how black farmers in Eastern North Carolina contribute to the local food needs of residents of rural and non-metropolitan areas. The concluding section reiterates the need for collaboration between these movements and provides suggestions for future research.

The Institutional Erasure of Black Farmers

Advocates of the local food movement believe small farmers are critical to the development of sustainable food and farming systems. Within this movement extra consideration is often given to the needs of white vegetable farmers and consumers, the use of diverse growing methods, and the diverse production of heirloom crops as indicators of a sustainable food and farming system. Unfortunately, the same care and attention are not given equally to promoting racial, ethnic, and gender diversity as necessary components of a more holistic food and farming system.

One way for the local food movement to move beyond its homogenized white image and promote a more comprehensive vision of sustainability would be to weave racial diversity and anti-racism into local food circles and literature. Movement in this direction could lead to an acknowledgement of the rapid decline of African American farmers and farmland from the agricultural landscape. The loss of black farmers and their land is of particular importance to the idea and realization of agricultural sustainability because their decline and the paucity of racial diversity within the American farming system has not

occurred by chance: it is the result of the intentional exclusion of black farmers. The remainder of this section will elaborate how institutional racism impedes the growth of black farmers and local food activists' hopes for a sustainable food and farming system.

Social science research and historical literature have provided evidence as to why the American farming system lacks considerable representation from black farmers. Many of these works show that group and institutional racism has stymied self-determination, economic prosperity, and landownership/land retention by black farmers. The seminal works of W.E.B. DuBois (1903) and Arthur Raper (1936) detail the impacts of racist policies and practices on land ownership in the Black Belt South. Regarding the impact of this culture of oppression on rural African Americans in the post-Reconstruction era, DuBois (1903) notes:

I have seen in the Black Belt of Georgia, an ignorant, honest Negro buy and pay for a farm in installments three separate times, and then in the face of law and decency the enterprising Russian Jew who sold it to him pocketed money and deed and left the black man landless, to labor on his land for thirty cents a day. (p. 170)

Although DuBois (1903) refers to the perpetrator of the system of debt peonage he witnessed as a "Russian Jew," it was the Jew's American whiteness, and the benefits thereof (i.e. racist white privilege) not his geo-religious affiliation that contributed to the subjugation and abuse witnessed and documented in this passage (p. 170).

Decades later, Raper (1936), responding to his own research on the living and working conditions of African Americans in Greene County, Georgia would state:

The Negro buys land only when some white man will sell it to him. Just because a white man has land for sale does not mean that a Negro, even the one most liked and respected by him, can buy it even if he has the money. Whether a particular Negro can buy a particular tract of land depends upon its location, its economic an emotional value to the white owner and other white people, the Negro's cash and credit resources, and, doubtless most important of all, his personal qualities in the light of the local attitude: He must be acceptable. [emphasis in original] (p. 122)

Similar to Dubois' (1903) analysis, Raper (1936) found that black land ownership in this region of Georgia had less to do with the availability of finances and was, in fact, subject to the whims of local whites. In addition to these academic works, the annals of African American non-fiction literature are awash with autobiographical accounts of the effects that group and institutional racism have had on the ability of African Americans to purchase arable farmland and provide for their families (hooks, 2010; Moody, 1967; Shaw, 1974). From Anne Moody's



(1967) accounts of how her stepfather was bamboozled into buying rocky, unusable soil by whites to hooks' (2010) more recent writing on her use of chicanery in order to purchase land in Appalachian Kentucky (her area of upbringing), race and racism has and continues to influence black American's access to adequate farmland.

The government has also documented the grave impact that institutionalized racism within the USDA's ranks has had on the ability of black farmers and would be farmers to acquire land and farm necessities via its assistance programs (CRAT, 1996; GSAC, 1967; USCCR, 1982). A report commissioned by the United States Commission on Civil Rights (USSCR) and authored by the Georgia State Advisory Committee (GSAC) (1967) illustrates large disparities in the number of assistance programs and loans extended to black and white farmers, would be farmers, and their families by the Georgia Cooperative Extension Service. The GSAC was one of fifty state committees designed to advise and provide recommendations to the USCCR on information specific to their states. Nearly two decades following this report, the USSCR revisited the black land loss dilemma. The 196-page report authored by the USCCR (1982) concluded that the added burden of racism, in addition to problems associated with economies of scale, expedited black land loss in America.

Following the filing of the class-action lawsuit, *Pigford et al., v. Glickman* (1997), the Civil Rights Action Team (CRAT) was commissioned by former Secretary of Agriculture, Dan Glickman. The CRAT conducted listening sessions around the country and gathered testimonies from black, native, Latino, and women farmers regarding the discrimination they experienced from local USDA agencies. During these listening sessions, farmers of color and women farmers detailed how their requests for financial assistance were unjustly refused and/or deliberately delayed by racist and sexist county officials. The CRAT (1997) report also includes testimony from government employees who shared that their county offices were ensconced with racism, sexism, and a common lack of accountability. These and other acts of the past have resulted in life-altering repercussions as many black farmers and their families deal with mounting debt and struggle to retain their farmland.

Decades ago the family farm of Gary Grant, a friend and ally, was targeted for foreclosure. The justification for the government's actions against the Grant family was similar to that used to confiscate the land of Harry Young; his family failed to pay back a farm loan. However, to this day the Grant family insists that local agricultural officials openly discriminated against Matthew and Florenza Moore Grant (Gary's parents) and that these discriminatory practices negatively affected their farm operations. Gary once shared his own bouts with racism from county officials. In particular he recalled a local white agricultural official who attended a meeting wearing a tie emblazoned with the confederate flag. In rural communities, such psychological attacks help to enforce a "Boy, stay in your place" mentality

among black farmers (Grant, Wood, & Wright, 2012, p. 15) and results in the safeguarding of white spaces where resources are readily shared between white farmers.

The Grant case is similar to that of other black farmers whose land and homes have been targeted for foreclosure and who have had their equipment confiscated due to purported failures to repay loans. Yet, what the general public rarely understands is that by deliberately delaying farm operation loans until during or after a growing season, county and state agricultural officials insured that black farmers would miss the narrow and crucial window of opportunity to plant their crops. Thus, many farmers were left with large debts from contracted (yet delayed) loans taken to cover the cost of farmland, seed, and other farm necessities. Without revenue to repay these debts many black farmers have had their land, homes, and equipment confiscated.

This overview of the effect of institutionalized racism on black farmers and land retention helps to explain how the sustainability that many in the local food movement seek is tied closely to the inclusion of black and other non-white, non-male farmers into America's farming system. The following section offers an avenue for the intersection of the local food and black farmer movements by appealing to their common political struggles and their connection to other justice-oriented food and farming movements.

For Liberty and Justice for All

Uniting the efforts of black and small white farmers across the country is paramount. Farmers of all colors have been faced with economic disadvantages due to policies favoring large-scale agricultural production and the sterilization of whole foods. In Kentucky, small-scale poultry farmers have fought for over a decade to lawfully self-process poultry. Federal meat processing policies are designed to support the operations of large-scale farmers (Imhoff, 2007), and unlike other states (House Bill 2872, 2011), Kentucky does not have a state exemption that allows farmers to process less than 20,000 poultry on-farm. Also, too few licensed processing facilities in the state process poultry from independent producers (Caudill, Muntz, & Weant, 2002). Without the proper inspections, small-scale farmers cannot directly sell poultry without running afoul of local health codes. As a result, limited resource farmers are stymied by regulations that directly and indirectly support factory farmers.

In 2001, following three years of advocacy and fundraising, the Safe Meat Marketing Alternatives through Research and Technology (SMMART) group, a multi-lateral partnership of farmers, non-profits and state officials resulted in the development of Kentucky's first mobile poultry-processing unit. To use the processing facility farmers are required to receive training on proper facilities management and pay a small operating fee. Once these protocols are met, farmers are given access to a state inspected facility with which they may process their poultry (Caudill, Muntz, & Weant, 2002).



More recently, Amendment (SA) 2180 to Senate Bill 3240 of the 2012 Farm Bill would have decriminalized the direct sale of raw milk and raw dairy products across state lines. Though the amendment was not successful in amending federal agricultural policy, the CFA and other Kentucky farm advocates lobbied hard, if unsuccessfully to pass a related bill, in the state's General Assembly, to make raw milk more widely available.

These issues are not only the concerns of the predominately white local food movement. Similarly, the issues addressed within the black farmer movement are not relevant to black farmers alone. These problems are connected and may benefit from cohesive rhetoric, literature, and collaborative actions. For instance, if the local food movement were consistently discussed in terms of providing justice, equity and parity it would extend beyond superficial and bourgeois terms like "foodie" and "locavore." It would also facilitate connections with black farmers and their supporters. If this connection were to happen and if those within the black farmer movement were to also reach across the table to lock arms with their white counterparts (as difficult as it may be) both could learn of many innovative production and marketing methods to help diversify and vitalize their farming operations, as well as, gain allies for their causes.

However, the realities of racial categorization and marginalization that separate blacks and whites in many walks of life (i.e. employment, housing, education, & social interaction) remain an ever present problem. To combat these differences, some community activists are creating spaces in which proponents of food justice may develop solidarity and help promote an economically, agriculturally, and racially sustainable food and farming system. Malik Yakini, the Executive Director of the African-centered Detroit Community Food Security Network (DCFSN) has written about the negative effects of white privilege, white supremacy, and internalized notions of black inferiority held by whites and blacks. In an article published in the progressive newspaper, the Michigan Citizen, Yakini (2012) writes:

Creating food justice and food security in our city cannot be separated from the larger struggle for social justice. Race, class and power are the critical factors in food insecurity. As we strive to create food justice and food security, we must create conditions in which Detroit's communities, particularly those that are African American, Latino and Asian, exercise self-determination. We must create a just social environment in which those communities are able to fully express their vision and aspirations. There can be no food justice without racial justice. (p. 1)

In this passage, Yakini declares that justice within Detroit's and other local food systems cannot be separated from racial justice. Therefore, the collaborations of different social movements is important to the development of sustainable food and farming systems. Scholars have also articulated the potential benefits of shared rhetoric and strategies between justice-oriented movements. In the article "Community Food Security and

Environmental Justice: Searching for a Common Discourse", Gottlieb and Fisher (1996) discuss the importance of merging these social movements:

Community food security and environmental justice are parallel social movements interested in equity and justice and system-wide factors. They share a concern for issues of daily life and the need to establish community empowerment strategies. Both movements have also begun to reshape the discourse of sustainable agriculture, environmentalism and social welfare advocacy. However, community food security and environmental justice remain separate movements, indicating an incomplete process in reshaping agendas and discourse. Joining these movements through a common language of empowerment and systems analysis would strongly enhance the development of a more powerful, integrated approach. That opportunity can be located in the efforts to incorporate community food security and environmental justice approaches. (p. 23)

Although this article speaks specifically to combining the community food security and environmental justice movements, one can extrapolate based on the common origins and goals of these two movements and those of the black farmer and local food movements, that these recommendations will hold true for the latter two. Gottlieb and Fisher (1996) are not alone in advocating for the advancement of sustainable food systems based on justice, ethical practice, and the collaboration of movements. Others agree that sustainable alternative food systems are to incorporate justice and ethical practices, along with other values (Kloppenburg, Lezberg, De Master, Stevenson, & Hendrickson, 2000). Kloppenburg et al., (2000) posit:

"A sustainable food system is one that guarantees just conditions and ethical treatment for all workers and all beings affected by the food system. Participants in the working groups emphasized that the food system should be characterized by justice for producers both within the United States and in other countries. A just food system would assure that people everywhere had the opportunity to support themselves and to thrive through work in farming and in the food sector. For this to happen, people must have access to land to farm..." (p. 183)

Throughout the country, groups are bridging the divide between distinct yet connected food and farming movements. Two examples are the Black Farmers & Agriculturalists Association (BFAA) and the North Carolina Environmental Justice Network (NCEJN). Both groups are located in North Carolina. Gary Grant helped form BFAA following the filing of Pigford et. al., v. Glickman (1997). This group of farmers, activists, and scholars were influential in organizing black



farmers to join the Pigford case. Following the development of BFAA, Gary became co-Director of NCEJN. However, if his county government had not considered placing confined animal feeding operations (CAFOs) in Gary's rural community, he may not have considered the commonalities between the struggles of black farmers and communities targeted by polluting industries. Although initially swayed by the promise of economic development, the Halifax County government rejected a proposal to permit the mass production of CAFOs once it learned of the potentially devastating environmental and human health hazards associated with factory farming. Members of BFAA and NCEJN join and support one another's causes, in part, because they understand that the systemic racism encountered by black farmers is not separate from the environmental racism experienced in marginalized urban and rural communities.

How Black Farmers Ensure Food Security: An Example from North Carolina

The final position as to why local food activists may find it important to support the movement to keep black farmers on the land is that many black farmers fulfill the food needs of rural communities. Thus, they contribute to the local food movement via their actions. From the summer of 2010 to the summer of 2011, I worked as a Research Assistant with the Research on Food and Farming for All (ROFFA) project. A great deal of the fieldwork for this study was conducted in Rocky Mount, a non-metropolitan city, approximately forty-five minutes east of Raleigh. While engaged in this research, I observed that African American residents' access to fresh foods often depends upon the harvests and roadside markets of African American growers.

The farming areas in and around Rocky Mount are primarily used to produce commodity crops (i.e. cotton, tobacco, soybean, sweet potato, and peanuts). However, the Rocky Mount Farmers' Market (RMFM) is one place where residents seek fresh, local produce. Although the market is open twice a week and food is readily available, the way in which the RMFM and the city of Rocky Mount is racialized impedes certain residents' access to this market. The remnants of Jim Crow racial segregation that relegated African Americans to life on one side of the town and whites to the other (the side where the farmers' market is located) influences what spaces blacks enter and from whom they purchase local produce.

Many of the black vegetable farmers in and around Rocky Mount do not sell their produce at the RMFM. Instead of participating in this highly regulated white space, many black farmers sell food to black communities from their homes or via roadside markets. Generally, their wares were culturally relevant products like collard greens, mustard greens (known as "salad"), turnips, and sweet potatoes. More often than not, if I witnessed African Americans purchasing fresh produce from a local farmer, it was from a black farmer operating a roadside market. Location, in addition to the race of the farmers, also

contributed to the access. Roadside markets staffed by black farmers are often located in predominately black neighborhoods. By locating their markets in African American communities, black farmers provide fresh food options to residents who, due to price, proximity, location, and race, do not benefit from the local farmers' market.

This mutually beneficial relationship helps provide supplemental income for growers, strengthens communal relations, and provides fresh food options to black residents. Just as important as these farmers' wares are to supplying the fresh food needs of black residents, the proximity of these markets to black communities also helps reduce household bills. They do so by decreasing the costs of travel to and from supermarkets. In the small communities around Rocky Mount where access to primary vehicles is limited, public transportation is often non-existent, and the nearest grocery chain may be ten miles away. The cost of travel is an important factor in a family's food budget. The actions of black farmers in this region of North Carolina, those in Kentucky, and others throughout the rural south are demonstrative of their importance to development of rural food security and sustainable food and farming systems.

Conclusion

The struggles of black and white farmers to provide for their families and to supply the food needs of urban and rural communities is one of a number of reasons for collaborative efforts between these two groups and their movements. An aging and embattled Harry Young remarked on the shared struggle of black and white farmers in the documentary, "Terrorism on the Home Front." He states:

They (the government) are in the process of putting all the little farmers out of business. Everything either has to go coop or big where they can control everything... The little white farmer, he's in the same boat that the black farmer's in. They [are] driving him out of business... driving him out of business. (2008).

In Kentucky and across the country, multi-lateral, justice-based partnerships between academic institutions, communal and advocacy groups are necessary if local food enthusiasts are to make their movement whole. Sustainability lies beyond organic methods of production, diverse marketing techniques, and the proliferation of exclusive farmers' markets. As evident by scholars (Gottlieb & Fisher, 1996; Kloppenburg et al., 2000) and activists (Yakini, 2012), sustainable food and farming systems embody racial inclusion and racial justice. If such theoretical and practical models are put to use within Louisville and Lexington, where there exists a number of engaged food scholars, food and farming gatherings, and strong local food communities, Kentucky may become an example, for the nation, of how to development sustainable local food and farming systems.



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COMMONWEALTH'S AGRICULTURAL BRAND IN POST-TOBACCO LANDSCAPE



How Proud is Kentucky Food? A Look at the Commonwealth's Agricultural Brand in the Post-Tobacco Landscape

Alicia Fisher
University of Kentucky

Introduction

Kentucky's recent agricultural story is one of a compulsory shift out of tobacco and into a new agricultural economy. This story of transition also fits in the conversation that has been brewing in the local foods movement as advocated by Michael Pollan, Barbara Kingsolver, and the 100 Mile Diet because consumers are seeking fresh, quality products to purchase directly from trustworthy family farmers in or near their community. Some consider Kentucky's history and experience with tobacco farming as the impetus for achieving a "new agrarianism" of positive outcomes for a local foods system based on a plan designed to support "diversity, sustainability, marketing, and agricultural innovation" in the Commonwealth (Urch 2012; see *Coming to Ground* 2012).

Now recall, Kentucky Proud (KyP) is the Commonwealth's agricultural branding campaign and is one of the programs that received funds from the tobacco Master Settlement Agreement. The program started in 2004 and currently serves approximately 2,800 members. The Kentucky Department of Agriculture (KDA) runs the program, and the monies from all grants and funding sources funnel through KDA and go directly back to the KyP program. The objectives of the program serve to promote member agricultural products that have been grown, raised, or processed in the state. The program offers resources that qualifying members can apply for: point-of-purchase grants; restaurant rewards; brand and advertising funds; tradeshow funds; meat grader training; retail negotiation training; and distributor coordination.

As an outcrop of the tobacco settlement funding initiative, the KyP program is part of the big picture to change the state of agriculture in the Commonwealth. Analysis for this paper uses the original vision and call to action that initiated HB611, specifically, *Cultivating Rural Prosperity*, or the blueprint, as a benchmark to examine KyP's role in contributing to a

new agrarianism for diversity, sustainability, marketing, and agricultural innovation (Hack 2002). The argument for this research asserts that Kentucky policymakers designed a political mechanism to support a "new agrarianism" designed around the principles of marketing, diversification, sustainability and innovation to improve social, economic, and environmental conditions for tobacco-impacted communities across Kentucky. Therefore, the KyP program should reflect outcomes that support the overarching objectives.

In an attempt to test how this "new agrarianism" is playing out within the KyP context, findings from a program evaluation on KyP are applied to the definition's principles of marketing, diversification, sustainability, and innovation. First, the paper provides historical context of Kentucky's farming landscape as it relates to the KyP program to set the stage to launch into the analysis. The discussion ends with a reminder of the starting point, or a benchmark, for policymakers to use to target programs and policies that improve social, economic, and environmental conditions for tobacco-impacted communities.

Kentucky Agricultural Landscape

The small family farm is entrenched in Kentucky's past and present agricultural narrative. The Economic Research Service (USDA-ERS) classifies small family farms as farms organized as proprietorships, partnerships, and family corporations that are not operated by a hired manager with a gross annual sales less than \$250,000. These small family farms make up the majority of the farm count in the U.S., and Kentucky currently ranks second in the U.S. for the number of small family farms. In 2010, Kentucky ranked in the top five nationally for having the highest number of farms within a state and reported an average farm size of 163 acres (NASS 2012). In comparison, the U.S. national average farm size reported 418 acres in 2010 (NASS).



The small family farm in Kentucky also portrays the significance of tobacco's impact on the state's agricultural landscape. According to the U.S. Census of Agriculture (2007), tobacco farms in the Commonwealth made up the majority of farms, at about 51%, in the year before the tobacco industry entered settlement with 46 states. In the 2002 census report, tobacco farms accounted for roughly 34% of the total farms in Kentucky. By the 2007 census year, tobacco farms made up only about 10%, or 8,113, of Kentucky's total farms. The number of farms growing tobacco in Kentucky decreased by 72% from 2002 to 2007. However, the 2007 report indicates that out of the 17 states growing tobacco, 50% of all U.S. tobacco farms are located in Kentucky (USDA 2007).

Outside of the numbers, tobacco-impacted communities speak to Kentucky's deep-seeded agricultural history eminently steeped in tobacco production. As one of the leading states in family farms per capita, numerous livelihoods throughout the Commonwealth have depended on growing tobacco. In *Tobacco Culture: Farming Kentucky's Burley Belt*, van Willigen and Eastwood relay the economic importance of tobacco through oral accounts of Kentucky tobacco farmers and found that farmers cannot come close to replacing their income from tobacco with alternative high-value crops, such as corn or soybeans (van Willigen 1998). For much of Kentucky's history, tobacco, specifically burley tobacco, was the state's primary cash crop until more recently when a culmination of events led to tobacco's steady decline in economic importance. Cheap international imports, growing health concerns, elimination of the government price support through marketing quotas program, and the National Tobacco Master Settlement Agreement impelled the Commonwealth to consider a future without tobacco.

Although tobacco is still a mainstay for many Kentucky farm families and corporate farms in western Kentucky, the crop is no longer a mainstay for the state's farm cash receipts. Poultry, along with other commodities, has edged out tobacco over the tobacco transition years from 1998 to present. Kentucky's agricultural landscape has moved from tobacco, corn, hemp, and horses to most recently poultry and corn followed closely by beef cattle and horses as the top contenders (CFA 2012). Programs, such as KyP, have received settlement funds to help make this transition out of tobacco happen.

Kentucky Proud: Planning for the Future

The history of the KyP program can be tracked back to the year 2000 when the state of Kentucky received an historical investment opportunity from the tobacco industry (Conway 2011). The tobacco industry settled with and paid 46 tobacco states under the terms of the Master Settlement Agreement. With no precedence stipulated from the agreement, Kentucky's state legislature delegated how the funds should be disbursed. In that same year, the state's General Assembly instituted the Agriculture Development Board and the Governor's Office of Agricultural Policy to implement a statewide agriculture project,

whereby 50% of the settlement funds were directly allocated for this initiative.

As an outcrop of this funding initiative, the KyP program is designed through the combined *political efforts* of the aforementioned agencies to improve the *economic conditions* of tobacco farmers and the communities that have been impacted by the tobacco transition by maintaining or achieving direct farm impact (Caporelli 2011). The vision of the KyP program is to increase direct farm impact for farmers and their communities by marketing Kentucky agriculture so that more consumers will purchase more Kentucky agricultural products. The program plan supports members to employ marketing *practices*, such as using the KyP label to differentiate their products and thus to increase their visibility in the market. Beyond member marketing services, the KyP program uses traditional marketing strategies targeted at consumers to increase awareness about Kentucky agricultural products.

Referring to the original long-term plan, *Cultivating Rural Prosperity*, the development board's vision reveals a plan that targets economic growth and diversification in Kentucky agriculture by addressing social, economic, and environmental conditions. The KyP program received agricultural development funds and can be linked to the overarching umbrella set forth by the first priority outlined in the Commonwealth's long-term agricultural plan: Marketing and Market Development. In order of priority:

1. Implementation of a statewide market development effort [economic],
2. Access to capital for farmers and value-added processors [economic],
3. Financial incentives for sound environmental practices [environmental],
4. Educational opportunities for farm families [social],
5. Assistance for local leadership [political],
6. Expansion of Kentucky's research and development capacity [political] (Hack 2002:16).

"The Agricultural Development Board has worked extensively...toward the development of the marketing infrastructure for Kentucky agriculture...Through cross promotion vehicles such as advertising, marketing and public relations, the goal is to educate Kentuckian's about the strong contributions...growers bring to the state and emphasize the continuing need for a strong agricultural economy" (GOAP 2003).

This framework is the foundation for creating a "new agrarianism," which encompasses the principles of "marketing," "diversification," "sustainability," and "innovation" to improve social, economic, and environmental conditions for tobacco-



impacted communities across Kentucky. To what extent does the KyP program reflect outcomes that support the overarching objectives?

Research Focus

This paper examines the extent to which KyP farmers demonstrate new agrarian principles for marketing, diversification, sustainability, and innovation to reach social, economic, and environmental outcomes. Findings for this paper draw on qualitative interviews of KyP staff and farmers, a quantitative survey of KyP members, and a website contextual analysis of agricultural branding campaigns conducted in 2011 to analyze the practices of KyP farmers that reflect a new agrarianism.

First, what are the characteristics of KyP farmers? As indicated by the descriptive statistics in Table 1, the findings from the KyP Member Survey show that 50% of KyP farmers have a present or past affiliation with tobacco. The majority of KyP farmers are white, or 92%, reflecting the demographic composition of Kentucky and male, or 58%. The average age of KyP farmers is 61.77 (SD = 12.82), which is slightly older than the U.S. average age for farmers. Kentucky Proud members are highly educated, with an average number of years of education at 14.90 (SD = 2.52), and the majority of KyP farmers, or 69%, reside in metro or micro counties with only 31% farming in rural counties.

Looking at farm operations, the average number of rented and/or farmed acres a KyP farmer works is 163 (SD = 2.94), which is in line with Kentucky’s average farm size but smaller than the national average for farm size as indicated previously. As for Good Agricultural Practices (GAP) certification, only 37% of KyP farmers have met the training requirements for one of the state’s measures for sustainability, which suggests that the KyP program does not actively promote environmental stewardship

as outlined in the original blueprint for prosperity. Given these descriptive characteristics for KyP members, analysis turns to marketing, diversification, sustainability, and innovation practices.

Marketing

Clearly, KyP is a marketing program. According to both KyP members and KyP staff, the KyP program is a vehicle to market, brand, and advertise Kentucky agricultural products in order to increase consumer awareness. A random probability online and mail survey of KyP members was conducted in the fall 2011, and respondents indicate that their top motivation for joining the KyP program is to “increase consumer awareness for my product.” Table 2 provides a closer look at the KyP marketing strategy and reveals, according to member responses, that the KyP marketing campaign has effectively increased consumer awareness for KyP products and has been fairly effective in providing members with the necessary education and tools to increase marketing skills. The marketing campaign is designed to use traditional marketing tools, such as media, print, a website, and branding promotion through the KyP label, to target consumers. In addition, the program offers resources that qualifying members can apply for: point-of-purchase grants; restaurant rewards; brand and advertising funds; tradeshow funds; meat grader training; retail negotiation training; and distributor coordination. The challenge for the program is too few staff with approximately 465 KyP members per staff member.

Interviews with Kentucky Department of Agriculture (KDA) staff support the member survey responses that KyP is an agricultural marketing program, as outlined in the blueprint’s first priority. The staff recognizes the power of branding, and the KyP label is a tool that embeds a message directed at consumers. Accordingly, consumer demand for fresh, local

Table 1. Descriptive Characteristics of Farmers (KyP Member Survey Fall 2011, N = 433)

	Percentage	Mean	SD	Range
White	92%	-	-	-
Female	42%	-	-	-
Age	-	61.77	12.82	(17 - 97)
Education (# of years)	-	14.90	2.52	(8 - 20)
Income (thousands)	-	82.82	79.68	(0 - 1000)
County (Rural)	31%	-	-	-
Tobacco	50%	-	-	-
GAP Certification (yes)	37%	-	-	-
Farmland (hundreds of acres)	-	1.63	2.94	(0 - 2500)



food that supports the local farmer and local economy while minimizing transportation costs feeds into the KyP message. The results from the most recent KyP Consumer Awareness Survey administered by the Program Director indicate that the top reason to buy KyP products is freshness, and the consumers who are more apt to purchase KyP products on a regular basis tend to be older females who are highly educated with an upper-income status and who are more likely to read labels (KDA5, staff meeting, June 10, 2011, Frankfort, KY).

Kentucky Proud is a branding and marketing logo program to bring a larger sense of potential and quality to their own product, that customers can feel assured, and give the customer a sense of place and security when they purchase the product (KDA6).

The logo has achieved a high-level of consumer awareness that benefits members who use it. The KyP program has directed funds to expansive and expensive marketing campaigns, such as radio, TV, and print. Critics assert that the campaigns designed around University of Kentucky sports stardom confuse the message for consumers because sports have nothing to do with agriculture. Regardless of the message, logo awareness has been achieved through a repetitive, all-out marketing strategy. The KyP name invites consumers to participate in being proud of Kentucky, whatever that might mean.

The branding you can tell is actually working...People, our producers are seeing the benefit and stores are seeing the benefit because customers are coming in and asking for it. And they can see that the Kentucky Proud product may have kind of that competitive edge versus a non-Kentucky Proud. So it's at a point now to where we can kind of see that this is beneficial, this does have merit, and producers are seeing that (KDA4).

[The Pilgrim Pride \$90,000 deal] that's an economic stimulus to west Kentucky, just by Kentucky Proud being on one restaurant chain menu. So that has a huge economic development impact (KDA6).

[Being all-inclusive in membership guidelines] is one of the most difficult things that we [at KDA] have wrestled with. Because on one hand, the more you have in the program, the better for the reach and the brand equity and consumers seeing the name. And a lot of those are your bigger manufacturers or

your bigger players. And if they're willing to put their own money in and promote Kentucky Proud and feel that there's some benefit to that, there is a plus to Kentucky's economy from the standpoint of, that company is here in Kentucky, they employ people in Kentucky, **but they may not have the farm impact** (KDA3, emphasis added).

The Program Director's future vision for KyP is market development, which adheres to the other half of the blueprint's first priority. The goal of the market development project is to expand KyP beyond the triangle and to target other markets in Kentucky by creating another triangle, such as Bowling Green, Owensboro, and Paducah. However, this project began at the end of the Richie Farmer administration under a Director who is no longer in office. The limited time and resources on the market-expansion project may not have left behind a footprint to gain the necessary traction to move forward.

Naturally, marketing strategies include awareness and response to consumer demand. The staff consistently purport that the KyP label signifies support for economic and social conditions. The staff recognizes the bottom line first followed by the intrinsic value of the KyP label. For staff, the KyP message

Table 2. Survey Responses to Questions on Marketing Knowledge and Skills (N = 433)

	Percent (Yes)
Consumer awareness of Kentucky agriculture has improved since KyP started.	82%
Will use KyP logo on products in future	81%
Use KyP logo on products now	71%
I can market my products better now than I could before participating in KyP.	65%
Since being a member of KyP, my knowledge of marketing my products has increased.	63%
Based on my experience with KyP, I feel more positive about my abilities to succeed in marketing my products.	59%
Will use KyP logo in outside marketing in future	56%
Since being a member of KyP, my ability to market my products has increased.	47%
Use KyP logo in outside marketing now	46%



denotes support for the local economy, specifically direct farm impact. The staff use identical phrases described by consumers, such as “quality,” “safe,” and “nutritious.” In addition, staff use “homegrown” to embed superior quality based on trust for knowing the origin of the product and the labor.

According to our research, the logo means supporting my community and supporting farms...By an overwhelming margin, consumers, when they see it, the first thing they think of are what I call patriotic benefits...Seeing a Kentucky Proud logo means I’m helping my fellow Kentuckian be successful...The second thing is helping local farmers, and then the third thing is freshness...the functional benefit is far outweighed by the patriotic benefit of helping a fellow Kentuckian (KDA5).

All bundled up as a package, the KyP logo conveys a sense of community. For staff, the essence of local food embodies a community connection, which entails a high level of trust in an economy of small farmers and businesses. Following the KDA staff logic for what the KyP label encompasses, knowing and being from ‘here’ means that community members benefit. To be a community member who receives potential benefit, an individual needs to participate in the program as a member or a consumer.

And in my opinion, what Kentucky Proud is all about the idea that everyone in this community is tied together in ways that we don’t really understand...And by participating in Kentucky Proud, a consumer is helping his or her community by helping individual members of that community make a living...Kentucky Proud is based on food and farm because it’s the foundation of civilization (KDA5).

Diversification

Agricultural diversification is a strategy used by state agencies to adjust to the changing and challenging farming environment (Dimitri 2005). The United States Department of Agriculture (USDA) along with state governments view farm diversification as a way to maintain farm income as price supports for agricultural products are cut and measures to control supply and demand are implemented. Quantitatively tracking diversification, the Census of Agriculture measures farm-related income sources outside of commodity production and includes government support, direct-to-consumer sales, and value-added and specialty products sales. In 2007, agri-tourism and recreational services provided the highest average income (USDA 2007).

According to the USDA-ERS, the size of a family farm has a direct relationship to diversification in that as the size of the family farm increases, the level of diversification increases. Subsequently, the USDA associates diversification with small-scale farmers who use alternative and sustainable farming

products and practices, such as aquaculture, exotic and heritage livestock, specialty fruits and vegetables, alternative uses of crops for industrial production, value-added products, and agri-tourism. For these small-scale farmers who want to diversify their operations, the USDA outlines “Alternative Marketing and Business Practices” to “increase a customer’s perceived value of existing agricultural products” (AFSIC 2012).

As the tobacco settlement unfolded, the governor’s office engaged a wide-range of political leadership and agricultural stakeholders to map out a vision for the future of Kentucky agriculture. The objectives target family farm preservation because farm families make a significant economic contribution to the Commonwealth. The vision considers the “survival and success” of family farms as a way to preserve rural culture.

In order to achieve prosperity, the Commonwealth responded to the tobacco settlement changes in market conditions by setting marketing diversification as the first priority. The blueprint assumes that diversification should take place within agriculture and not in other industry sectors. The plan tasked the farming community to use funds to change from tobacco production to another crop or farming activity. According to one of the KDA regulators, diversification is not necessarily about product mix; instead, the goal of diversification is to help tobacco farmers figure out how to keep the farmland in operation (KDA7, meeting, February 8, 2012, Frankfort, KY).

The Commonwealth’s vision for agricultural diversification includes adaptation, quality, and variety. Throughout the analysis, measures for diversification refer to economic impact, number of jobs in agriculture, number of new products, increase in sales and personal income, increase in value-added-Kentucky-grown products, and increase in direct-market sales. This definition for diversification reflects a quantitative, economic value that requires “intangible [social] values...strong work ethic, a confident sense of independence, good decision making and commitment to family and community” (GOAP 2000).

Through interviews, the KyP farmers state that the transition from the tobacco buyout has enabled many small farmers (both tobacco and non-tobacco alike) to diversify into other products and has created new markets (e.g., the goat industry, aquaculture, grapes for the wine industry, specialty vegetables and herbs, and value-added products). Some farmers envision this ability and attraction to diversify in a smaller scale.

[Farmers] can easily transition into Kentucky Proud type setup, a smaller farm...It’s looking at reestablishing small farms back into Kentucky, and giving more diverse things instead of just corn and beans or being thousands of head of cattle type operation, a factory operation. It’s forcing people, giving them the option to diversify their farms...In fact, [small farms are] better on scale [for making a profit], much better than what somebody farming eight times the acreage (Hancock, personal interview, July 25, 2011).



For some of the farmers, sustainability means economic viability. The types of market outlets used by members illustrate the level of participation in sustaining in a market economy. Results from the KyP member survey suggest that an informal economy outside of the traditional market economy exists and contributes to market outlet diversification. Table 3 shows that an overwhelming majority, or 72%, of KyP farmers state that they sell farm products through “other direct sales to consumer” market outlets. Based on the options not included for direct sales to consumer, the only direct-consumer market outlets remaining would be roadside stands, on-farm sales, you-pick farms, and internet sales.

In an effort to provide for the community, one farmer shares the importance in trading and swapping out with other producers:

[An associate] and I worked out a deal where I traded, he wanted some chicken litter...and he grows for me the seedless watermelon and the cantaloupe and the pepper plants that I need for my operation. And we swap out like that. So there’s not a lot of money exchanged in either hand, but it really enhances his operation...And it helps...So, you know, those kind of things I’m really into and really a strong believer in (anonymous personal interview, summer 2011, KY).

As indicated in Table 3, the predominant form of agriculture for KyP members is vegetables and/or fruits sold directly to consumers at farmers’ markets and presumably at roadside stands, on-farm sales, you-pick farms, and internet sales. Survey responses indicate that KyP farmers are not so much interested in selling direct to local schools. Instead, KyP farmers aspire to sell products at farmers’ markets. The growth of and resources targeted to farmers’ markets in Kentucky help contribute to this limited vision of the possibilities for other market outlets.

In considering KyP farmers who have a present or past tobacco affiliation, findings show that KyP tobacco farmers are more inclined to use fewer market outlets but are more likely to produce and sell more farm products than their counterparts with no tobacco affiliation (see Fisher forthcoming). “This suggests that the history of tobacco farmers’ use of markets has not transitioned to

a diversified outlet base because most tobacco farmers are used to selling to one outlet, either to one of the tobacco co-operatives or the tobacco wholesale warehouses” (Fisher).

The statutes that regulate the KyP program reveal that the definition extends agriculture beyond the borders of Kentucky under the qualifying conditions that “any agricultural

Table 3. Survey Responses to Questions on Farm Products and Market Outlets (N = 433)

	Percent (Yes)
Farm Products as Income	
Vegetables/Fruits	53%
Beef	39%
Hay	34%
Alternative Livestock*	23%
Poultry	16%
Grains	15%
Other	14%
Agri-tourism	13%
Tobacco	9%
Swine	7%
Horses	7%
Dairy	3%
Aquaculture	>1%
Markets Used to Sell Products	
Other direct sales to consumer	72%
Farmers' Market	50%
Direct sales to local restaurant	21%
Direct sales to retail grocer	20%
Other	17%
Contract	17%
Consumer Supported Agriculture (CSA)	12%
Local grain elevator/wholesaler	12%
Direct sales to local school	8%
Industry operation	8%



product grown, raised, produced, *processed*, or *manufactured* in Kentucky” (see KRS260 2002). Based on the Kentucky context, definitions for diversification deviate from the literature and include value-added processing of out-of-state agricultural products (see Barbieri and Mahoney 2009; see also Watts, Ilbery, and Maye 2005). In considering the case of the KyP program, the explicit definition for diversification expands to include product type, market outlet type, and production type. Thus, the “inclusive” definition for KyP opens the doors for businesses other than farmers to participate in the program, such as schools, restaurants, processors, and manufacturers.

In practice, the regulators interpret the guidelines by stipulating that the product needs to be agriculturally related in some way in order to be KyP. The all-inclusive definition has sparked controversy amongst regulators and consumers as to what constitutes a KyP product. For example, coffee can be KyP as long as the coffee is processed in Kentucky. Obviously, coffee does not grow in Kentucky. Not so obvious is the example of salsa. All the main ingredients to make salsa – tomatoes, onions, and peppers – grown in Kentucky. Salsa company A sources all ingredients from Kentucky and processes the product in Kentucky; salsa company B sources all ingredients from out-of-state and processes the product in Kentucky; both company A and B are qualified to be KyP; the label on both the salsas is identical, so the consumer is not able to distinguish where the actual ingredients come from (see Figure 1).

If diversification in Kentucky is an attempt to find innovative ways to produce, process, and distribute agricultural products through a range of entrepreneurial activities in order to generate farm income, then which salsa, from the example above, generates the most direct farm impact?

Sustainability

Many researchers of agricultural systems suggest an emerging dichotomy between conventional versus sustainable agriculture based on a shift in practices, ideologies, values, attitudes, and norms (Beus and Dunlap 1990; Chavas 2001; Goodman 2003).

The manifestation of alternative agriculture has been a counter-response to conventional worldviews that have dominated the agricultural landscape in the U.S. since World War II. This call for an alternative system to conventional agriculture stems from an increasing awareness of its negative consequences of conventional practices on health, environment, and communities.

Research shows that alternative agriculture reflects the construction and practice of sustainability in a particular setting and that no singular ideology can be defined because implementation is contingent on location (Feagan 2007; Hand 2010; Hinrichs 2003). In this sense, sustainable agriculture does

Figure 1: Examples of Products Eligible fore Kentucky Proud

	Import KyP-Lite	Kentucky Ky-Damn-Proud	Export KyP-Lite
Producer Farmer	tomato onion pepper coffee beans	tomato onion pepper beef cattle	
Processor Finishing Packaging Manufacturing		value-added salsa coffee	KY-raised beef
Seller Wholesaler Retailer Institution restaurants schools state parks		tomato onion pepper value-added salsa beef coffee	
Consumer		tomato onion pepper value-added salsa beef coffee	tomato onion pepper value-added salsa beef coffee

Note: Ky-Damn-Proud is a neologism created by one of the KDA regulators and means a product that stays in KY from farm to plate; KyP-Lite means the product has spent part of its chain time outside of KY



not have ready, fast rules or guidelines that must be followed. Instead, sustainable agriculture consists of a sundry of farm characteristics and farmer practices. Sustainable attributes often include small farm size; increased diversity of crops; inclusion of livestock; and rich and fertile soil - all of which many of the KyP farmers demonstrate (Jackson, Berry, and Colman 1984). In addition, sustainable agriculture tends to emphasize less mechanized and labor intensive practices; less dependence on synthetic agricultural inputs; and engagement in local food economies (Chiappe and Butler Flora 1998).

In considering measures for sustainable agriculture, ideologies and practices tend to target social, economic, and environmental outcomes (see Beus and Dunlap 1990; Kloppenburg, Lezberg, De Master, Stevenson, Henrickson 2000; Morgan, Marsden, and Murdoch 2006). For example, farmers who practice sustainable agriculture tend to demonstrate an independent nature and do not rely on externalities, such as chemicals, genetically modified seed, or livestock supplements. Another key element of sustainable agriculture is the notion that farmers work with natural processes and are more apt to compost, save seeds, and follow biodynamic or permaculture practices that maintain a natural ecosystem based on healthy soil.

Results in Table 4 reflect a continuum as opposed to a dichotomy between alternative and conventional farming practices because a majority of the farmers fall in several categories across alternative techniques and conventional methods. In addition, 30% of KyP farmers classify their operation as “organic, not certified”, whereas only 4% indicate “certified organic” practices. This shows that perhaps a barrier to applying for certification exists for these farmers. For example, cost, confusing paperwork, time for soil transition, infrequent use of prohibited pesticides, and discord with government control are reasons cited by some of the farmers in interviews.

In a program evaluation of KyP, findings show that farmers who practice sustainable methods and farmers who use conventional methods both have a positive relationship with diversification measures, such as number of market outlets used to sell products and number of farm products sold for income (Fisher). In considering a farmer’s

tobacco affiliation, the report found that tobacco farmers are more likely to use more sustainable practices, conventional farming methods, and conventional farm inputs compared to farmers with no tobacco history. Yet, tobacco farmers are less likely than their counterparts to feel a responsibility to the community to provide chemical-free foods. Essentially, tobacco farmers are using some of the crop’s best practices, such as seed saving, composting, cover crops, and crop rotation, while still relying on past

Table 4. Survey Responses to Question on Growing Methods Used in Operation (N = 433)

Alternative	Percent (Yes)
Cover crops	54%
Grass-feed livestock	50%
Composting	48%
Rotational intensive grazing	39%
Seed saving	37%
No-Till	36%
Organic, not certified	30%
Holistic management	15%
Biodynamic	9%
Permaculture	8%
Certified organic	4%
Conventional	
Tillage	53%
Conventional	48%
Spray	47%
Irrigation	35%
Conventional Farm Inputs	
Livestock feed purchased off the farm	59%
Livestock supplements	54%
Soil amendments	54%
Pesticides	53%
Herbicides	48%
Antibiotics for livestock	45%
GMO seed	21%



practices that do not fit a current sustainability framework, such as chemical fertilizer inputs. The contradictory results reveal the complex relationship between Kentucky's tobacco history and the present landscape promoting sustainability and diversification as outlined in the blueprint's vision.

Agricultural Innovation

Without defined parameters, agricultural innovation can be assumed to support the marketing, diversification, and sustainability principles. Moreover, innovation in achieving social, economic, and environmental outcomes as stipulated in the vision laid out in *Cultivating Rural Prosperity* can be assumed to apply. This part of the analysis focuses on innovation in marketing for KyP members since the program is an agricultural branding campaign that serves approximately 2,800 members. Per the blueprint's first priority, the goal includes development of market infrastructure along with implementation of branding and advertising vehicles.

Based on a contextual analysis comparing state-agricultural branding websites conducted in the summer of 2011, the KyP program can be ranked as an innovative leader in program messaging and consumer awareness. Specifically, the findings indicate that the KyP branding campaign offers consumers a suite of knowledge to better understand what the program is, why the program is important, where to find KyP products, news and events, and educational resources. Also through the website, the scope of the branding message seeks to address social, economic, and environmental conditions within tobacco-impacted communities. The all-encompassing message for the KyP brand is an attempt to appeal to all interests, which can be potentially confusing to stakeholders in the long run because some of the KyP products and practices do not necessarily match a consumer's definition for point of origin of local foods and can not be distinguished easily between "Kentucky Damn Proud" from "Kentucky Proud Lite." Despite the program's wide-ranging message, the campaign leverages its website to connect, educate, and motivate consumers and producers to participate in the program.

Interestingly, the KyP brand has embedded three messages that are not advocated by the majority of the state-government campaigns. The three messages reflect the Commonwealth's attempt to transition out of tobacco while keeping its connection to the culture of tobacco. According to the KyP website, local foods are not only "fresh" and "nutritious", but also the KyP definition includes "safe" foods. Here, the message is moving away from the state's connection to tobacco by advocating safe products. The KyP message also states that local food practices are an "investment in Kentucky's land, people, and its future." The discourse embeds a message that looks to the past to *preserve community or tradition* and looks forward to *ensure the future*. These messages reflect the importance of striking a balance with the state's history in tobacco.

Discussion

This paper examines the principles for a "new agrarianism" defined broadly as marketing, diversification, sustainability, and innovation practices within the KyP context. Findings from a program evaluation help better understand how a "new agrarianism" plays out amongst KyP farmers who participate in a program that receives funds from the tobacco settlement. The direction for a new agrarianism stems from the Commonwealth's past socio-economic relationship with tobacco and its need and vision to transition into a future without tobacco to *Cultivate Rural Prosperity*.

Since tobacco settlement funds are disbursed to programs across Kentucky to improve tobacco-impacted communities, then tracking the practices of KyP members, specifically farmers, helps confirm the reach of the funds. The stated objectives of the KyP program are directed at improving the economic conditions of tobacco farmers and communities. Yet, the original vision to cultivate prosperity calls for agricultural programs that address not only economic factors but also improve social and environmental conditions in the Commonwealth. Findings from a previous evaluation of the impact of the tobacco settlement funds indicate that the KyP program has an overall positive impact on the economic conditions of KyP members (Infanger 2008). However, the KyP program falls short in targeting environmental conditions in KyP member communities. Since the program objective does not explicitly target social and environmental conditions, this finding comes as no surprise. However, this reflects how the original priorities have been disconnected from a program that receives funds.

In reflecting on the focus of this paper, the extent of a "new agrarianism" amongst KyP farmers, the results show both optimistic and opportunistic indicators of practice. On one hand, marketing through consumer awareness strategies is the guiding principle of the KyP program. Logo recognition is high, and the program offers marketing resources and services for members to participate in branding their products. In addition, the agricultural branding campaign demonstrates a higher level of marketing innovation in messaging and communication compared to other state agricultural branding websites. Somewhere in the middle, diversification efforts for KyP tobacco farmers are making strides in some areas, such as product development, but lacking in others, such as market outlets.

On the other hand, the range and mix of sustainable to conventional growing methods used in an operation points to the complex relationship between Kentucky's tobacco history and the present landscape promoting sustainability. The good news is that tobacco farmers have a propensity to engage in seed saving, rotation, and the use of cover crops as practices advocated by alternative and sustainable agriculture proponents. On the other hand, the findings show that farmers with a tobacco history are partial to depending on conventional farm inputs, such as chemical fertilizers, practices shown to have negative



consequences on the health of the soil, farm workers, consumers, and community members downstream. Further research is needed on farmers who practice a mix of sustainable and conventional growing methods to better understand the ideologies for engaging in what appears to be conflicting types of farming practices.

Whether KyP is deemed as a program that concerned with direct farm impact or a broader program that supports community development efforts, policymakers need to keep in mind that the program emerges out of an overarching vision that targets social, economic, and environmental outcomes. Policymakers and the public alike tend to envision economic growth as an unlimited opportunity that needs to be achieved. What does unlimited growth look like, and how does unlimited growth bode well for sustainability? Perhaps the vision should be more in line with what localization advocate, Michael H. Shuman, refers to as an “infinite growth of ingenuity” to guide the principles for marketing, diversification, sustainability, and innovation for a “new agrarianism.” The Commonwealth has demonstrated a budding ingenuity in its vision for prosperity, so the time has come for policymakers to re-establish benchmarks and indicators for agricultural practices that holistically align with social, economic, and environmental outcomes.

Alicia Fisher received her MA in Sociology from the University of Kentucky in the spring 2012. As part of her project, she submitted a policy paper to the Kentucky Department of Agriculture titled “How Proud is Kentucky Food? Local Food Meanings and Practices for Stakeholders.” Her research was supported by the Department of Sociology University of Kentucky Beers Summer Fellowship, the Rural Sociological Society Master’s Thesis Award, and an internship at the Kentucky Department of Agriculture. Continuing on with the PhD, Alicia plans to explore agricultural policy, standards and regulation, and marketing and knowledge through local food hubs, sustainability certification, and branding campaigns.

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Aquaculture's Present and Future Roles in World, Domestic, and Local Food Systems

James H. Tidwell
Professor and Chair, Division of Aquaculture
Aquaculture Research Center, Frankfort, Kentucky

Introduction

Aquaculture. What is it? Aquaculture is the culture of aquatic plants and animals under controlled or semi-controlled conditions. In its simplest terms, aquaculture is underwater agriculture. While long ago people transitioned to agriculture for its land sourced foods, in the area of aquatic foods, humanity has largely remained at the hunter and gatherer stage until recently. Aquaculture is now the world's fastest growing food producing sector. In Kentucky, aquaculture is a relatively new enterprise for farmers. As tobacco production has waned, farmers have searched for alternative production options. Aquaculture development in the Commonwealth has focused on development of new species, evaluating local products and by-products as feed ingredients, and development of market outlets which recognize and appreciate the quality and environmental benefits of locally produced foods. These topics will be discussed in more detail later.

Seafood demand

Fish is a vital component of the human food supply and most important source of high quality animal protein. (As used here, the general term "fish" includes fish, mollusks, and crustaceans consumed by humans). It is estimated that world-wide about 1 billion people rely on fish as their primary source of animal protein (FAO 2001) and it provides more than 3 billion people with at least 15% of their average per capita animal protein intake (FAO 2009). It is a particularly important protein source in regions where high-quality protein from terrestrial livestock is relatively scarce. For example, in 2005 fish supplied only 8% of animal protein consumed in North America and Europe, but 19% of animal protein in Africa and 21% in Asia (FAO 2009).

Consumption of food fish from all sources is increasing, having risen from 40 million tonnes in 1970 to 115 million tonnes by 2008 (FAO 2010). Global per capita fish consumption has increased over the past four decades, rising from 9.0 kg/person in 1961 to an estimated 17.1 kg/person in 2008 (FAO 2010). Based on projected increases in consumption rates alone (assuming no increase in the human population), it is estimated that the demand for seafood will increase by more than 10 million tonnes per year by 2020 (Diana 2009).

While increases in per capita consumption account for a portion of the increase in total demand, it is human population growth that is the driving force for this steadily increasing demand for food fish. The global population reached six billion in 1999 with predictions it may exceed nine billion by 2050 (Duarte *et al.* 2009). That figure is approaching the maximum human population some research calculates the earth can sustain (Cohen 1995). This is at least partially based on predicted shortages in both food and water that will constrain the growth of terrestrial agriculture in the future (Duarte *et al.* 2009). Disturbingly, most of the population growth is predicted to be in poor countries within Asia, Africa, and South America.

Seafood supply

In 2008, the total world supply of fish from all sources was about 142 million tonnes (FAO 2010). Capture fisheries produced about 90 million tonnes of which about 27 million tonnes was destined for non-food uses, primarily as fish meal in animal feeds (20.8 million tonnes). The other 75% of total fishery production (115 million tonnes in 2008) was for human food (FAO 2010).



Sources

We once thought that the oceans, which cover $\frac{3}{4}$ of the earth's surface, contained an unlimited source of seafood and fish and was the only important food source where a large portion is still gathered from the wild. However, while demand for fish as food increases >10 million tons each year, sustainable harvests of wild fish are not able to expand significantly. For marine capture fisheries, FAO reports that in 2008 only 3% of the stock groups were under exploited and 12% were moderately exploited and could perhaps produce greater yields (FAO 2010). However, 53% were fully exploited, 28% overexploited, 3% depleted, and 1% were recovering (FAO 2010). This means that 85% of marine fisheries are biologically incapable of sustainably supporting increased yields (FAO 2010). In fact, global marine capture fisheries production has been at best stagnant for over 25 years. The 80 million tonnes produced by global marine capture fisheries in 2008 is less than the 85 million tonnes produced in 1992 (FAO 2010). The maximum yield capture fisheries can take from the world's oceans have likely been reached. In fact, by some estimates, current ocean harvests may already be greater than levels considered sustainable (Coll *et al.* 2008).

Status of aquaculture

As we look to the future, we see the demand for food fish increases each year while the supply from wild harvest is not expected to increase. So where do we get our fish in the future? The fact is the only other source for food fish is aquaculture and as a result global aquaculture growth has been extraordinary (Figure 1). In the 1970s aquaculture contributed less than 4% of total seafood production, but by 2008 contributed more than 47% (Figure 2). By 2015 aquaculture will pass capture fisheries as the leading source of food fish for the human population and that proportion will continue to increase each year thereafter (Lowther 2007).

Aquaculture is growing more rapidly than any other animal food-producing sector, with an annual growth rate of 6.6% since 1970 (FAO 2010). This is contrasted with a growth of only 1.2% for capture fisheries and 2.8% for terrestrial farmed meat production over the same period. It is estimated that the land devoted to row crops and grazing will need to increase by 50-70% by 2050 to meet food requirements for the projected human population (Molden 2007). However, the amount of land devoted to terrestrial crop production actually **decreased** from 0.5 ha/person to 0.25 ha/per person during the period 1960-2000 (Molden 2007). Extrapolation of population growth with the availability of cultivable lands creates "a likely scenario in which Earth's capacity to support the human population may be reached within the next decades, at population levels below currently proposed estimates" (Duarte *et al.* 2009). This raises the real question – can the human population feed itself in the coming decades?

Figure 1. Annual world aquaculture production (in million tonnes) since 1950.

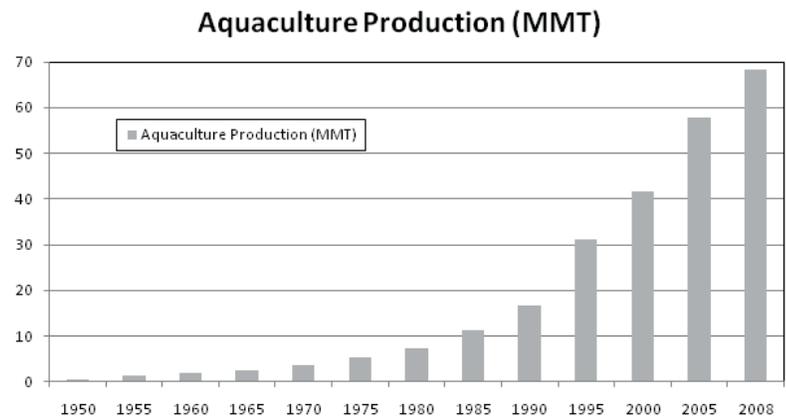
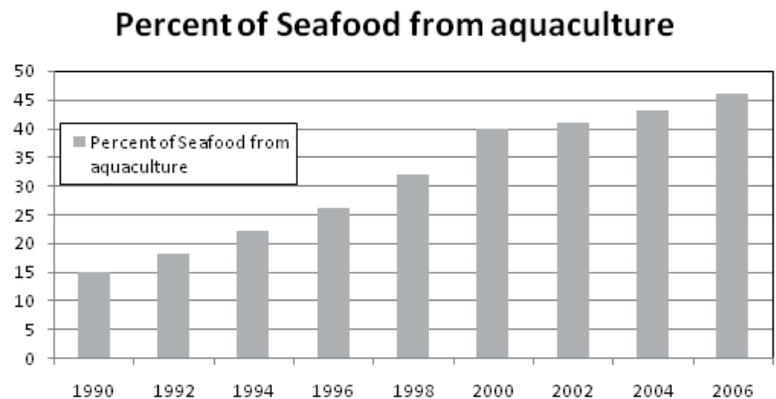


Figure 2. Aquaculture production as a percentage of total seafood supply.



These projections only bolster the case that a prudent development of aquaculture is essential. In 2008, total aquaculture production of food fish was 53 million tonnes (FAO 2010). It is anticipated that to keep pace with demand, aquaculture production of food fish will need to increase to 85 million tonnes (> 75% growth) in the next 20 years (Subasinghe 2007).

Centers of Production

So where is aquaculture production occurring? Currently, Asia dominates the industry (Table 1). In 2009, Asia accounted for 89% of world aquaculture production by quantity and 79% by value (FAO 2010). China alone produces more than 62% of the world's aquaculture by volume and 51% by value (FAO 2010). Of the top ten countries in aquaculture production in 2006, only two (Chile and Norway) were not in the Asian region and they account for less than 3% of world production. However, as illustrated by Table 2, there are rapid increases in production occurring in some countries outside of Asia.



Table 1. Top ten aquaculture producers of food fish supply in 2008: quantity and growth.

	2000	2008	APR (%)
China	21,522	32,736	5.4
India	1,943	3,479	7.1
Viet Nam	499	2,462	16.4
Indonesia	789	1,690	7.0
Thailand	738	1,374	8.1
Bangladesh	657	1,006	5.5
Norway	491	844	7.0
Chile	392	843	10.1
Philippines	394	741	8.2
Japan	763	732	0.5

Note: Data excludes aquatic plants.

Diversity of Aquaculture Animals and Production systems

Terrestrial animal agriculture relies on only a few species. In cattle, milk and meat production use one species (*Bos taurus*) and (maybe) a second species (*B. indicus*). In pigs, all commercial production is based on one species (*Sus domestica*). In poultry we have hundreds of varieties of chickens but they are all actually one species (*Gallus gallus*), and we also have the turkey (*Meleagris ocellata*). These animals are all warm-blooded and differ at only the genus or class level. However, in aquaculture we raise well >400 species (Duarte *et al.* 2009), all are cold blooded, and many differ at class or even phylum level. Although data on production

Table 2. Top ten aquaculture producers ranked in terms of production (tonnes) and their annual percentage rate (APR) of growth over a two year period.

	2004	2006	APR (%)
Uganda	5,539	32,392	141.83
Uganda	5,539	32,392	141.83
Guatemala	4,908	16,293	82.20
Mozambique	446	1,174	62.24
Malawi	733	1,500	43.05
Togo	1,525	3,020	40.72
Nigeria	43,950	84,578	38.72
Cambodia	20,675	34,200	28.61
Pakistan	76,653	121,825	26.07
Singapore	5,406	8,573	25.93
Mexico	104,354	158,642	23.30

systems are not yet widely tracked, it would be safe to say that the majority of fish and crustaceans produced for food by aquaculture are currently raised in ponds. However, systems vary widely and include spring fed flow-through raceways, large cages floating in the ocean, high density indoor recycle systems and new systems such as Aquaponics which combines recycle aquaculture with hydroponic plant production.

The future and the challenge

As we have seen, the demand for fish increases each year. To even maintain the current level of per capita consumption, the fish supply will have to almost double in the next 20 years. That translates into almost 40 million tonnes of additional supply per year and basically, all of it **has to come from aquaculture**.

As Melba Reantso of FAO described it, “aquaculture is now known as the emerging new agriculture, the catalyst of the ‘blue revolution’, the answer to the world’s future fish supply, the fastest growing food producing sector, and the future of fisheries.” Still, the task ahead is daunting. Aquaculture is expected to supply global seafood security, nutritional well-being, poverty reduction and economic development by meeting all of these demands, but also accomplishing this with a minimum impact on the environment and maximum benefit to society.

Sustainability Aspects of Aquaculture

While it has been popular among certain groups and in the popular press to criticize aquaculture, I believe an objective evaluation shows that it is, and can continue to be, one of the most eco-friendly methods to produce high quality protein for human consumption. Fish are inherently more efficient than other farm animals. Much of this is based on the fact that fish are cold-blooded (poikilothermic) animals. This means that they do not expend any energy maintaining their internal body temperature. They also do not expend energy fighting gravity (also giving them less investment in skeleton). Aquatic animals also excrete waste products more efficiently than terrestrial animals. These add up to fish converting feeds to flesh much more efficiently than other animals (Figure 3). Better conversion efficiencies also mean less

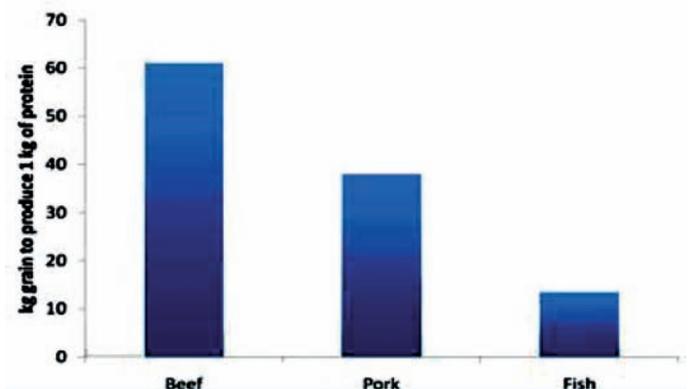


Figure 3. Relative conversion efficiencies of different farm animals. The bars indicate how many KG of grain are required to produce on KG of protein.

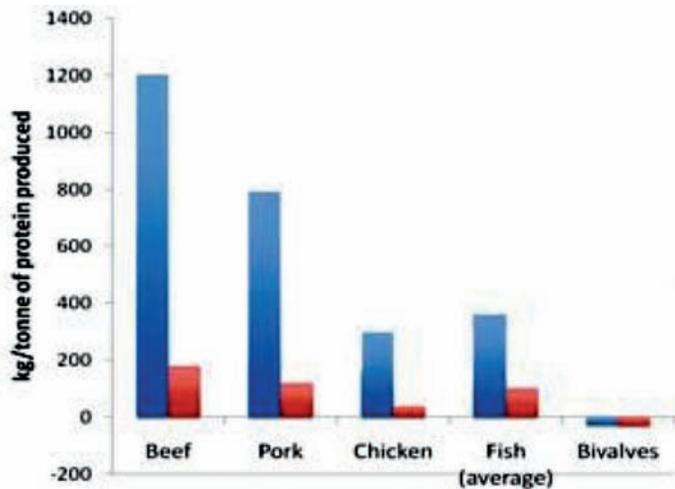


Figure 4. Waste produced (nitrogen[blue] and phosphorus[red]) per ton of protein produced by different animal crops. Shellfish species (bivalves) actually harvest and remove nutrients.

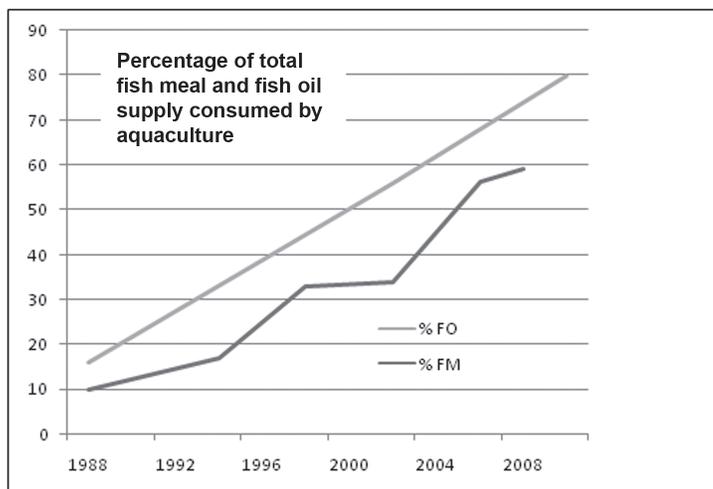


Figure 5. The percentage of fish oil and fish meal supply consumed by the aquaculture industry from 1988-2008.

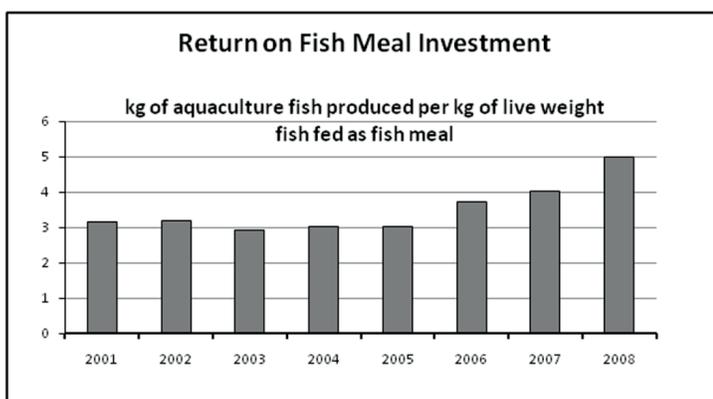


Figure 6. The amount of total fish generated by aquaculture divided by the whole fish equivalent of fish meal (i.e. the return on the fish meal investment) from 2001-2008.

waste produced. On average, fish have a lower potential to cause environmental impacts from nitrogen or phosphorus wastes than other types of farm animals (Figure 4).

Fish meal and fish oil supplies

One of the issues which has received much attention in recent years is the use of fish meal and fish oil in aquaculture diets. Indeed, aquaculture has continued to absorb an increasing proportion of the supply of these important, if not essential, feed ingredients. In fact, when the trends of consumption are projected into the future (a statistically dangerous practice), we can get results which indicate that aquaculture will surpass *all* fish meal production (Figure 5) in a very few years. This projection has been termed the “fish meal trap” (New 1999). To be more accurate it might be better described as the “fish oil trap” as fish oil supplies are projected to decline before fish meal does.

In 2006, aquaculture consumed 3 million tones or 56% of world fishmeal production (Tacon & Metian 2009). That same year aquaculture used 87% of the world’s fish oil production (Tacon & Metian 2009). These numbers and projections are indeed troubling. As we have seen, this “trap” could represent a major impediment to aquaculture growth and expansion which as stated are needed to provide the increasing demands for food fish. Many environmental groups have used these figures to make claims that aquaculture is causing the collapse of these fish meal fisheries and actually producing fewer fish than it uses. However, recent reexamination of these models and calculations shows that feed based aquaculture produces at least *twice* as much fish as it uses (Tacon & Metian 2009). If the large numbers of aquacultured species, which do not depend on manufactured diets are included, aquaculture as an industry actually produces 3-5 times as much fish as it consumes (Figure 6).

If we look at trends for these “industrial” fishmeal fisheries (Figure 7), we see that they are some of the best managed fisheries in the world (Tidwell & Allan 2001). With ongoing management they can sustainably produce approximately 30 million tonnes per year for years to come. Even if aquaculture continues to grow, management controls will not allow harvest pressures to be increased, or allow these fisheries to be depleted.

Also, much has been made of “fishing down the food web” (Pauly *et al.* 1998). By some estimates, over 90% of the oceans’ large predators have been removed by human fishing activities. Populations of predatory marine mammals have also decreased. With these factors considered, proper cropping of these short-lived, highly fecund fishmeal species might actually be needed to prevent over population in the absence of predatory pressures

Another criticism by environmental groups has been that these harvested “fishmeal” fish could be better used as direct food for humans rather than feeding them to other fishes. As with many issues the answers are complex. There have been examples where the increased demand for fishmeal species for the animal

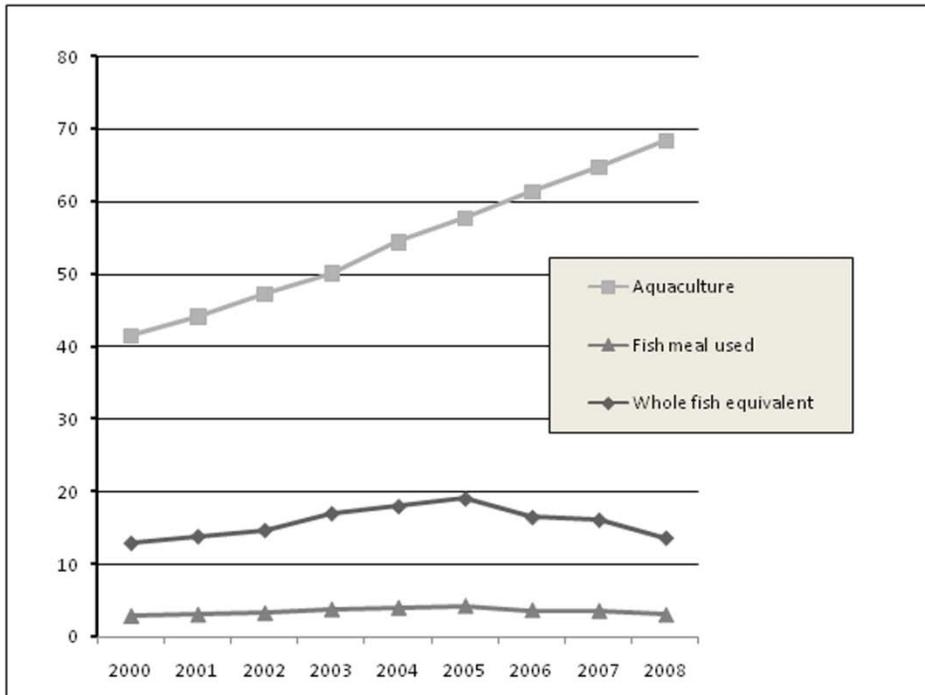


Figure 7. Total aquaculture production, fish meal used, and whole fish equivalent based on fish meal used by aquaculture from 2000-2008.

feed industry has decreased the availability of fresh fish for poor communities (Hasan 2007). However, several studies have shown that fishmeal fisheries can also benefit locals by contributing to land-based animal production which generates jobs and improves living standards and food security (Hecht & Jones 2007). Actual impact differs based on the region being considered. In Africa and Asia, the species used for producing fish meal have potential for human consumption, while species used in Europe do not (Huntington 2007).

Will this “fish meal/fish oil trap” stifle aquaculture development? Not necessarily. Research indicates that once we understand a species’ nutritional requirements, the fishmeal and fish oil content of aquafeeds can be reduced substantially. For salmon, it is estimated that at least 50% of the fish meal and 50-80% of the fish oil can be replaced with vegetable substitutes. For marine fish, 30-80% of fish meal and 60% of fish oil used could come from alternative sources (Royal Commission on Environmental Pollution 2005). This can include use of terrestrial protein crops such as soybean meal, but also increased use of by-catch from commercial fisheries as well as wastes and offal from fish processing (Hardy *et al.* 2005).

When we don’t know species specific nutritional requirements, nutritionists tend to “over formulate the diets.” That usually means including excessively high protein and fish meal levels in feed to ensure that it more than meets the animals’ requirements. However, once a species nutritional requirements are known, specific diets can be formulated which improve nutrient retention efficiency and use alternative ingredients. One example is

research on diets for the largemouth bass (*Micropterus salmoides*). The diets being used by commercial producers contained 40% fish meal, while our research has determined that fish meal could be reduced to $\leq 8\%$ without decreasing growth or feed conversion efficiency (Cochran *et al.* 2009).

KSU Program

So where does Kentucky fit into this rapidly growing industry? Kentucky State University became involved in aquaculture in the mid 1980’s. It was initiated based on the large number of information requests coming in to the Cooperative Extension program. The Aquaculture Research Center was constructed in the late 1980’s and has continued to grow and expand (Figure 8). The Division of Aquaculture at KSU is now widely considered one of the Top-5 aquaculture programs in the United States. The goal of the KSU Aquaculture Research Program is to increase the knowledge-base in aquaculture, and thereby increase farm income and the productivity of on-farm

water resources in Kentucky and around the world. This is accomplished by examining and developing fish and crustacean species and production technologies suitable for the climatic and physiographic conditions prevalent in Kentucky and similar regions. The KSU Aquaculture Program is widely recognized as being the lead program nationally and internationally in the areas of paddlefish culture, freshwater prawn culture, production of largemouth bass on-feed, and fish meal replacement research for catfish and hybrid striped bass. What follows are examples of research initiatives at KSU and their relationship to issues of sustainability.

Local Production

Consider the fact that much of the seafood in the US is imported. Currently that number is 87%! Seafood contributes over \$10 billion to the US trade deficit each year. As we look at sustainability issues, the distance from production to consumption is an increasing consideration in terms of carbon footprint. Kentucky’s own Wendell Berry has long advocated producing food closer to home and reducing the miles that food travels before reaching the plate. The most commonly quoted number is 1,500 miles from the source to the plate. However, since the vast majority of aquaculture products consumed in the U.S. is currently produced in Asia, the average travel distance for those products is more like 8,000-9,000 miles, six times the distance recommended as sustainable. The most popular seafood product in the US is shrimp, and over 90% of that shrimp is imported. Consequently, several research projects at KSU focus on the production of freshwater shrimp.

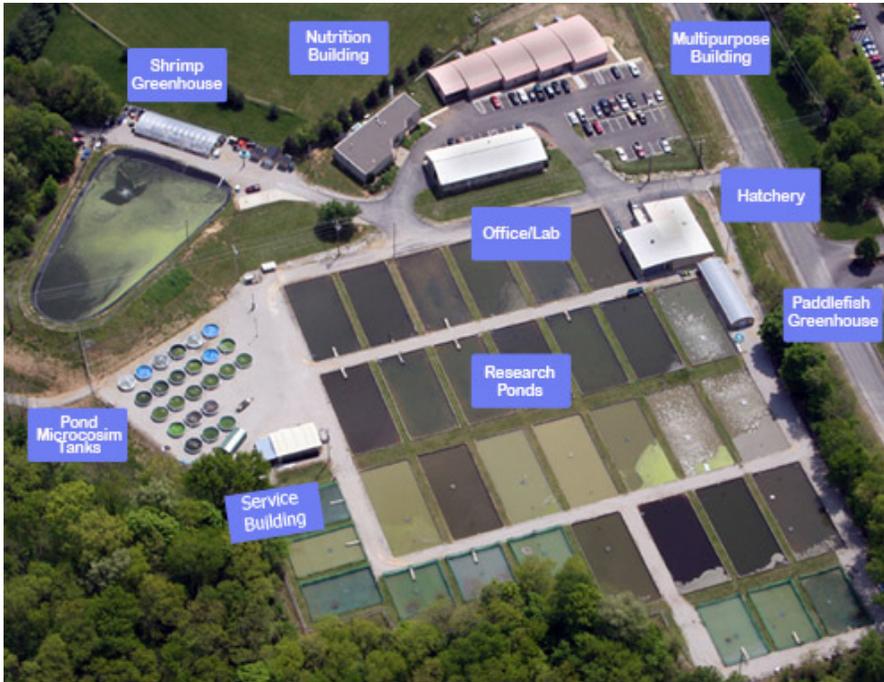


Figure 8. The Aquaculture Research Center at Kentucky State University.

Freshwater shrimp

Freshwater prawns or freshwater shrimp (*Macrobrachium* sp) can be produced inland without the need for access to saltwater or expensive coastal lands and do not require high levels of fish meal for feed. These factors make freshwater prawn production a good choice for long-term sustainable aquaculture production (Tidwell and D’Abramo 2010). Prawns appeal to Non-Governmental Organizations (NGO) and consumers concerned with environmental sustainability and different seafood products. The Seafood Watch Report produced by the Monterey Bay Aquarium FishWise program evaluated freshwater prawns on five criteria of sustainability including 1) use of marine resources (i.e. fish meal), 2) risk of escaped fish to wild stocks, 3) risk of disease and parasite transfer to wild stocks, 4) risk of pollution and habitat effect, and 5) management effectiveness. They rated the freshwater prawn as “Low Environmental Concern” in all



Figure 9. Kentucky freshwater prawn farmers marketing fresh prawns at the Franklin County Farmer’s Market.

five categories. They awarded the prawns a “Best Choice” designation and stated the prawns were “one of the most sustainable seafood choices available”. The freshwater prawn is best suited for small-scale producers and lends itself to local producer/ direct sales marketing (Figure 9). Best marketing and profitability opportunities are likely in regions with a strong local foods movement. Production of prawns in these regions offers “localvores” a desirable protein and/or seafood option not previously available in many regions.

Aquaponics

Aquaponics is the integration of aquaculture and hydroponics. Fish are raised at high densities in tanks. The water containing their waste products is circulated out through hydroponic beds where the fish wastes act as fertilizer for the plant crops. Their removal by the uptake of plants cleans the water which is then cycled back to the fish in a closed loop system. Aquaponics is a model of sustainable food production (Diver 2006) based on the following principles:

1. The waste products from one biological system serve as the nutrients for a second system.
2. The integration of fish and plants yields multiple salable crops from one system.
3. These systems are very water efficient, using 1% of the water needed to produce the same number of fish in a pond.
4. Local food production both increases access to healthy foods and enhances the local economy.

There are currently commercial scale Aquaponic units in Milwaukee and a new one near Knoxville. Smaller units are currently being developed or evaluated in both Lexington and Louisville. These systems hold promise for urban agriculture where the food production is brought even closer to the consumer. Also, KSU is evaluating these systems as a potential tool to service urban “food desert” communities, i.e., communities that lack markets and stores and consuetly access to food.

Use of By-Products in Aquaculture Diets

In modern aquaculture operations, feed costs can account for more than 50% of production expenses and protein is generally the most expensive component of aquafeeds. Due to its nutritional properties, fish meal is generally the most desirable protein source of aquaculture diets. However, as discussed earlier, the supply of fish meal is finite.



In recent years, there has been a growing interest in evaluating other protein sources as alternatives to fish meal (Gatlin et al. 2007; Rust et al. 2010). This has been driven by both the high cost of fish meal (generally between \$1,000/ton and \$2,000/ton) (IMF 2011) and its future uncertainty (Tidwell and Allan 2001; Finley and Fry 2009). Alternative protein sources could potentially include algae, animal by-products, seafood processing by-products, soybean meal, soy protein concentrates and/or isolates, canola meal, pea meal, and other vegetable-based ingredients.

Spirit distillers dried grains with solubles (DDGS) may be another viable food source and DDGS has a long history in Kentucky. Early bourbon distilleries practiced nutrient recycling in the eighteenth and nineteenth centuries by raising pigs and cows onsite to consume the DDGS. DDGS is also a byproduct of the production of fuel ethanol and as the push for biofuels has increased its availability has skyrocketed. A bushel of corn (25.4 kg) produces 8.2 kg of ethanol, but also 7.7 kg of DDGS (Jacques et al. 2003). During the last 10 years, DDGS market prices have been between 5% and 20% that of fish meal (ERS 2011; IMF 2011). It is estimated that in the next few years nearly 35 million tonnes of DDGS will be available each year in the marketplace (RFA 2011).

Low Impact Aquaculture – Reservoir Ranching

Another area of research at KSU, that is based on a low input, low impact approach, is reservoir ranching. Reservoir ranching is an extensive culture system in which young fish are stocked in existing freshwater impoundments to feed on naturally available foods. Ranching can provide an alternative supply of freshwater food fish for rural communities as well as a commercial crop under eco-friendly sustainable conditions. Small (<100 ha) and medium (100-670 ha) size reservoirs are best suited for ranching purposes because they generally have higher primary productivity, supporting more fish biomass per ha, and are easier to harvest than larger reservoirs. Species selected for production should be native to the region (or unable to reproduce), easily propagated, feed low on the food pyramid (i.e. plankton), grow rapidly, are able to be harvested efficiently using conventional fishing gear and be desirable in the marketplace (Mims and Onders 2012).

In the mid 1990s, the United States Department of Agriculture funded a pilot research project in which paddlefish (*Polyodon spathula*) were stocked in small reservoirs (14-40 ha) in Kentucky, (Onders et al. 2001). Paddlefish are members of the sturgeon family and are zooplanktivores. Their eggs are used for caviar and the meat is white and boneless (Mims et al. 2006). This 18-month project showed that paddlefish would survive and grow in reservoirs when Phase I (>100 g) juveniles, and could be harvested with conventional gear. Private individuals have now contracted with municipalities and stocked over 800 ha of small reservoirs throughout Kentucky. The reservoirs range in size from 20 to 270 ha and were stocked at up to 50

paddlefish/ha. A minimum stocking size of 150 g was selected to minimize mortality from predation. After three years, sampling has produced paddlefish up to 6 kg. Researchers at KSU are monitoring two of the largest reservoirs for any changes that may occur in the water quality or sport fish populations that would indicate negative effects. The paddlefish themselves are also being monitored for survival, growth and progression to sexual maturity (≥ 8 years), when the females can be harvested for roe.

Aquaculture to Improve the Environment

As we think of aquaculture's role in environmental sustainability, it is not raising human food in a manner that reduces the environmental impact of production. Aquaculture can in fact be a major tool for direct positive impacts on the environment. One example is the effort in KY to reproduce endangered freshwater mussels so that they can be restocked back into their nascent streams. This is known as remediation aquaculture

The Southeastern United State is home to the most diverse populations of freshwater mussels in the world with 297 species recognized. Freshwater mussels are also considered the most imperiled animals in North America with 213 species (72%) listed as endangered, threatened or of special concern (Williams et al. 1993). This is due to overharvesting and environmental degradation by dam building, sediment runoff, pesticide runoff, and stream degradation. The Kentucky Department of Wildlife and Fisheries has a Center for Mollusk Conservation lab in Frankfort. They are supporting joint projects with the KSU Division of Aquaculture to develop aquaculture technologies that reproduce the mussels as well as grow them to sizes suitable for restocking into restored streams.

Another example of aquaculture as a remedy to environmental ills comes for Senegal, Africa. In the 1980's a dam was constructed on the Senegal River for flood control and irrigation projects. Despite an environmental impact study predicting no problems, within a few years an outbreak of the disease schistosomiasis occurred in the region. Ecologists and epidemiologists from the University of California–Santa Barbara (UC-SB) conducted field studies which found that the construction of the dam had blocked the spawning migrations of the local species of freshwater prawn. As older prawns gradually died out, they were no longer grazing down the snail populations in the river. These snails serve as an intermediate host in the schistosomiasis parasite's life cycle. As the snail populations increased, parasite populations also increased leading to the disease outbreak. Researchers at UC-SB approached KSU about developing aquaculture technologies needed for reproducing the native prawn for restocking. Prawns were shipped from Africa to KSU and have now been spawned and raised to juveniles in KY. Additional funding is now being sought for technology transfer to African cooperators.

As you can see, aquaculture will play a major role in providing high quality protein to the world's growing population for decades to come. It also has inherent characteristics which



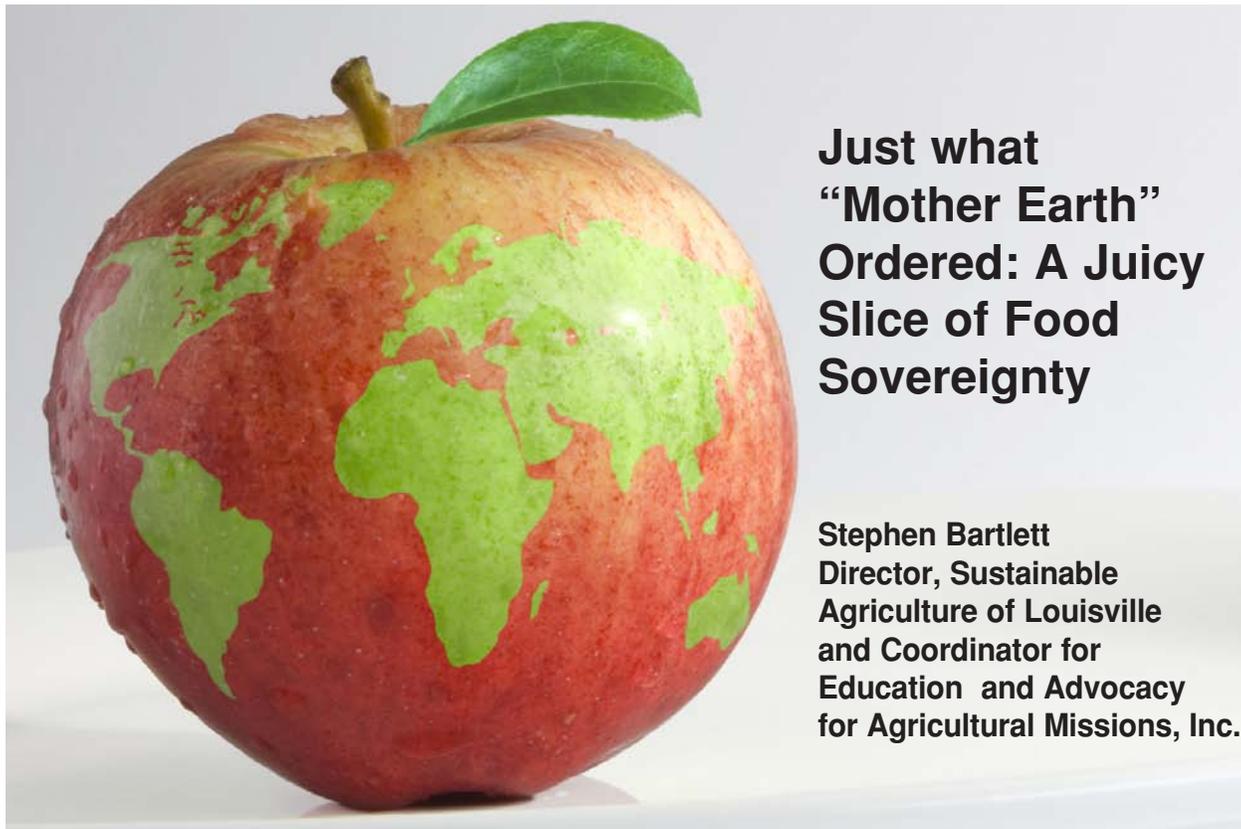
make it the most efficient converter of food while reducing waste outputs. It can even be used to remediate the environmental impacts of other human activities and provide local consumers fresh locally raised seafood right here in Kentucky, far from the ocean. As the saying goes, “Go green – buy local!”

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Just what “Mother Earth” Ordered: A Juicy Slice of Food Sovereignty

Stephen Bartlett
Director, Sustainable
Agriculture of Louisville
and Coordinator for
Education and Advocacy
for Agricultural Missions, Inc.

As the record-breaking heat waves of 2012 continue to crash on the shores of the Ohio and Kentucky Rivers, the question of where the next crop, meal, or nourishing bite to eat will come from becomes more, shall we say, *poignant*. As someone who has spent years walking, squatting or stooping, tool in hand, in the fields, forests and agro-forests of my dreams observing the effects of weather on soil and communities of flora and fauna, the theme of feeding our communities inclusively while cooling the planet has become a CENTRAL theme of life and livelihood. It is becoming very clear that in order to save ourselves as a species we have to show a lot more respect for the ecology of our biosphere and in order to manage that to somehow transform or at very least restrain the predatory economy being imposed upon us and our neighbors.

And so I have to ask myself daily: Just what does “Mother Earth” require of us as part of the food justice and sovereignty movement of Louisville, Kentucky? And the answer that comes to me, after an afternoon harvesting and peeling (and eating) fresh apples (from a gala apple tree planted 8 years ago) and cooking all kinds of delectable apple dishes from apple sauce to apple pie, is this: **What “Mother Earth” has on order from on high and from down low is a juicy slice of food sovereignty!**

Yes, the concept and practice of *Food Sovereignty* is **that overarching** and covers matters spiritual as well as economic and political, not to mention sweet, crispy and delicious. Food Sovereignty is the banner of struggle lifted up in the 1980s by the planetary family farmer movement known as Via Campesina (www.viacampesina.org), in the context of the fight for local control of markets and against the predations of corporate-driven trade regimes. Liberalized trade regimes have wiped out millions of small-scale farmers from their lands, whether they

are victims of the original Uruguay Round/ GATT, that morphed into the World Trade Organization liberalization agenda of the various corporate-driven so-called “free” trade treaties such as NAFTA and CAFTA and bilateral agreements with countries like Chile, Colombia, and Peru. These treaties allowed the flooding of global south markets by commodity exports from the United States and the European Union at subsidized prices below the cost of production. One victory along the way for social movements was the defeat and, to quote Hugo Chavez, “burial” in Mar de Plata Argentina, of the ambitious Free Trade Area of the Americas (FTAA) that would have deepened these regimes. This real victory was achieved by media-friendly mass mobilizations, peoples’ summits, and firm assaults on the barricades and militarized zones of Quebec, Quito, and Miami as well as in protests in nearly every country of Latin America and the Caribbean.

Farmers on the ground in Kentucky, such as members of the Community Farm Alliance (CFA) pushed effectively from the 1980s on for the democratization of the food system. With passage of KY House Bill 611, more than a decade ago, farm policy and decisions about funding for agricultural diversification (using proceeds from the tobacco settlement) were grounded in county councils where real farmers could debate and if necessary veto proposals by the Kentucky Agricultural Development board. By this means, many of the proposals of “biotech” and agribusiness companies to monopolize tobacco settlement funds were resisted, and many good projects were funded and investments made that benefit small-scale family farmers. What we are calling food sovereignty today was originally dubbed “L.I.F.E.” by the CFA (CFA is a member of the National Family Farm Coalition which is a member of Via Campesina). L.I.F.E. stands for a Locally



Integrated Food Economy, and much progress was made along that path during more than a decade of organizing and local farming such that today the “foodie” movement of Louisville has adopted much of the language and at least superficially the concepts of “LIFE/Food Sovereignty,” most recently with the food processing economic development initiative being spun by the new mayor as an urban “Life” Zone.

The local food movement in Kentucky (and in most places across the country) has made significant strides. The amount of food being marketed or directly consumed from local farms has been steadily rising, in farmers’ markets, in restaurants, from community gardens, and from the efforts of ordinary household gardeners. This progress, however, has been limited by the difficulty of transitioning real life Kentucky farmers from a cattle and commodity production focus and transitioning them from the discontinued federal tobacco program to local food production (The tobacco program was the last vestige of the supply management programs that emerged from the disaster of the depression of the 1930s as part of the Roosevelt administration’s New Deal, that originally covered most major crops and led to decades of relative prosperity for family farmers. Contrary to misinformation in a context of anti-smoking fervor, the tobacco program did not cost taxpayers a penny but through a cooperative quota system maintained high prices for the (high quality) burley tobacco produced in Kentucky and other neighboring states).

On the macro level it remains a huge challenge to make a living as a family farmer, and we know from personal friendships with local farmers, that this way of making a living is certainly not a career path for the slow-witted or faint of heart. On the contrary, the successful local family farmers we see at local markets are arguably the strongest, most persistent, and intelligent of people in society. There is little help from the government for “scaling up” family farming. Most small-scale farmers receive little or no commodity subsidies, as compared to the large scale 500 to several thousand acre spreads of corn, soybeans, and wheat. Getting a new generation of farmers activated and *on the land* remains a daunting challenge. Native Kentucky farmer and food movement guru Wendell Berry was absolutely correct in saying that the most difficult and best possible crop that the land can produce is a “good head” of farmers. This difficulty remains a challenge for the food sovereignty movement. Since 60% of farmers earn less than \$10,000 on the farm, and earn nearly all of their average \$75,000 income off the farm¹, imagine how difficult it would be to buy land and succeed economically for a start-up farmer!

If it were not for immigrant farm workers who come from farming backgrounds outside the U.S., the situation would be even more dire for all manner of farms in the U.S. As the loss of crops across Alabama and Georgia we saw this past growing season due to the anti-immigrant bills passed there show, various sectors of US agriculture are highly dependent on the presence of skilled farm workers from south of our borders. There are efforts to increase the support of USDA for the immigrant and minority

farmers, a program called “Support for Socially Disadvantaged Farmers and Ranchers” by means of grants provided in the 2008 and the proposed 2012 Farm Bills, but the budget crisis on the hill in D.C. has threatened this grant program, such that there is currently an even steeper uphill battle for organizations such as the Rural Coalition who helped lobby for this program to maintain funding levels. Overall, the wholesale attack on undocumented immigrants in the U.S. by the political right threatens the ability of many farmers to succeed. This highlights an important economic reason for passing comprehensive immigration reform and legalization, something the AGJobs Bill (a bipartisan Senate proposal) attempted for undocumented farmworkers as a sector.

More wholesome food produced organically or using fewer chemicals and smaller economies of scale is finding its way, however sporadically and slowly, into supermarkets, but too little of it is locally produced or produced at a small-holder scale. The price differential remains a divide for most people of low incomes who in some cases, even with a higher awareness, simply cannot afford to invest in quality produce now (typically available at an inconvenient distance from their homes) in order to avoid expensive diseases later on. Nevertheless, despite the odds stacked against them, marginalized and oppressed communities suffering from chronic diet-related diseases associated with obesity and poor nutrition are beginning to organize themselves to access healthy local foods and re-learn and re-teach the arts of cooking. The “Fresh Stop” programs in Old Louisville and Shawnee neighborhoods spearheaded by New Roots and gradually taken over by local organizers is a successful example of this, a solution emerging from the ruins of many failed strategies thanks to culturally and politically-sensitive community organizing approaches. In 2011 the Shawnee Fresh Stop leveraged approximately \$10,000 from a marginalized community to purchase food from area farmers at wholesale prices, thereby supplying dozens of families with fresh produce.

The root problems that plague our health and future well-being and that continue to fuel global warming remain daunting and limit the gains to be made through the local food movement. This problem can be summarized as *the systematic, policy-driven abandonment of local agricultural production, processing, and marketing of foods across the national landscape in favor of industrial-scale production based on hyper-mechanization, land concentration and chemical inputs*. In the 1980s, this was openly called the policy of “get big or get out” and later “freedom to farm” (which was dubbed by some call “freedom to fail”) lobbied for by corporate agribusiness interests in Washington and Frankfort, KY. These policy frameworks as embodied in various farm bills of infamy continue to be written by agribusiness corporations. Subsidizing commodities, for example, is actually a stop gap measure to keep **someone** growing grains on a large scale, commensurate with the “productionist” policies that have dominated the system for decades and have lowered prices below the cost of production. (This price scenario is now changed a bit for the moment with the onset of ethanol production from corn but mostly due to the impact of deregulated commodities future



trading that has artificially added approximately 40-50% to the price of basic staple grains. This effect could be temporary, but price volatility seems to be endemic now with three years of erratic price rises and falls).² Also worrisome is the long-term political abandonment of national agricultural economies across the global south over the decades, as a result of structural adjustments imposed by the World Bank and International Monetary Fund. To reverse several decades of that policy framework will likely take several decades of building an alternative agricultural, processing, distribution, and *financial* system and ethos, as well as curtailing corporate influence on national political processes and the international financial institutions that impose this framework.

One essential strategy and value of the effort to reverse the harm done by agribusiness is that of solidarity and collective work. We at Sustainable Agriculture of Louisville (SAL) are inspired by the indigenous and peasant cultures across the world, which remain a bulwark against the wholesale removal of peoples from the means of agricultural production: land, water, seeds, marketing infrastructure. Like these indigenous and peasant movements, SAL is working toward an ethic of collective thought and action. Politically, we call this effort “movement building.” It means that when we consider what to do, we try to envision our work as part of a horizontal, inclusive collective effort. This means that individual persons or organizations see beyond their own particular benefit and make decisions with a broader “social movement” lens and consciousness. It means encouraging collective organizing and farming. Often it means putting aside the limited interests of the person or particular group and taking a solidarity stance that benefits a wider circle of the community. One example is the collective community gardening and farming we at SAL are involved in, as well as the solidarity efforts we have made in support of other organizations and associations.

At our community garden in Crescent Hill (behind Crescent Hill Presbyterian church which has generously provided land for the past 15 years for a diverse garden/mini-orchard), we do the work voluntarily and collectively and the garden itself is considered part of the *commons* (that is a common good for everyone). The fruits, leaves, and roots of the garden are shared by all who work there voluntarily and by others in need. No one is denied access to the food in the garden. My role is as principle gardener and agronomic advisor and as garden coordinator.

On land we are working in Prospect, Kentucky, we are involved in a collective farming effort. On this land, provided by a politically and socially-conscious landowner, more than 10 families or work-groups share the work and the production of a few acres of land. Each family decides upon the three or four crops they will grow each season, with the understanding that the surplus will be shared with others. This means that growers do not have to grow all the things they like to eat, but can specialize in on, say, potatoes, while their neighbor is growing peas, or sweet potatoes, beans or melons, and enjoy the fruits of all the diverse efforts. It also means we do work collectively on overall

land management, fencing, water, composting, and it also means that if someone needs extra hands to help with a task, such as weeding, watering or harvesting, the labor can be supplemented by others in the collective. We call this the MINGA, which is a Quechua word from the Andean region of South America that means: shared group effort, a traditional definition of the concept we have embraced.

Similarly, we are engaged in a voluntary crop share on the land of Adam Barr (president of the board of SAL) out in Meade County, about an hour outside of Louisville, where we are growing about 1/4 acre of the “Three Sisters,” which is a traditional indigenous intercrop of maize, beans and squash/pumpkins. Participants past and present in SAL such as aspiring farmers, urban agriculturalists, food justice advocates, and other volunteers travel together for sowing, weeding, corn hilling and harvesting work days, and after the crop is in, we also take part in corn meal grinding and distribution (and preparation) of the crops enjoyed from the harvest.

Related to that is seed saving and crop sharing for biodiversity. Indigenous farmers we have established a relationship with out west in Oklahoma have entrusted some of their traditional corn varieties to us for two seasons now, to lessen the risk of losing those crop varieties, despite the recent crop destroying heat and droughts suffered in that region. Each spring, we send and receive seed corn through the mail and then grow out those varieties, as a hedge against a threatened loss of crop seed diversity for the drought-stricken folk in Oklahoma. This is another form of solidarity farming SAL is engaged in.

Providing access to land, compost, seeds and water to refugee families is another big success for the Louisville food sovereignty movement. The Refugee Agricultural Partnership Program (RAPP) was organized by the Kentucky Office of Refugees. I had the privilege of working as a consultant for that program for more than two seasons and SAL also raised funds at one point to support the program by supplying bicycles to refugees who live about a mile from their gardens. More than 90 families of recent refugees from Bhutan, Burundi, Burma, Sudan, Tanzania, and Congo produce substantial quantities of crops on plots 30 by 30 feet on 4 plots of land amounting to about 5-6 acres, saving at least \$1,000 average per family on grocery purchases and improving the family diet by avoiding much of the “fast food” U.S. media entices them to consume. These crops also supply their families with traditional food stuffs important for their cultures and are bartered and exchanged among extended family and neighborhoods. It provides a joyful and productive entree point for experienced agrarian people into life in their new homeland and is an inestimable boon psychologically and socially for the participants. It, too, is an example of movement in defense of “food sovereignty” for those families and communities, despite their having been violently displaced from their homelands.

Admirable efforts have been made by Grasshoppers, Inc, a farmer-owned local food distribution company to expand the



markets available to area farmers in the Louisville area. Having a place to sell surpluses of a given crop or meat/dairy product and to expand the acreages producing food, greatly benefits the local small farmers. The Farm to Table marketing program has also expanded market access for many KY farmers, as well as the many restaurants and caterers who buy local produce and meats. These are examples of the synergies being created through the diverse efforts of many people in market places, in offices, meeting rooms, and of course, in gardens and fields.

In my own experience, much of the consciousness about “food sovereignty” has also come as a result of advocacy organizations and coalitions working on consciousness-raising and using media for educational purposes and advocacy.

For example, teaching children about food is yet another aspect of re-creating a state of “food sovereignty.” The Food Literacy project, located on Field Day Farm, brings gardening and cooking directly to the minds and bodies of children from the public schools and other programs. With their added outdoor kitchen facility, food preparation has become a popular activity for the field trips and classes that include children and adults from diverse backgrounds hosted out in the farm wedged between an interstate highway and a country club golf course.

Sustainable Agriculture of Louisville (SAL) just completed its 10th year of summer gardening day camps, which through experiential learning in the garden, in food processing and cooking and storytelling, has created a way of being and thinking transmittable to future generations. Despite the danger of occasional bites from the nearly invisible chiggers that inhabit our highly diverse garden, the camp has had a strong attraction for hundreds of children over the decade.

What does all this work attempt to do? To recover what is humanity’s birthrite: a healthy diet from the land where the community dwells through its shared work and knowledge. In a nutshell: “food sovereignty.”

A key element of the work toward food sovereignty is to avoid thinking of the local food movement as uniquely an “economic development” project. Food deviated from what I believe is its harmonious role in human culture the minute it became monetized, or inserted into a capitalist economy. Mainstream US notions of land as individually held private property are not universally accepted around the world, particularly in communities where the majority of residents rely on the food they produce through their labor and the fertility of the land. Food is so much more to society than a price per pound label at the supermarket or a price item on a restaurant menu. Today the prices paid to farmers for their crops have virtually no relationship to the ultimate retail price of their food. Therefore, I would argue that we can confidently say that the logic of capitalism in respect to the means of production as well as the product itself, is failing humanity. The massive industrialization and commodification of food are anathema to the goal of food sovereignty. Compensation for farmers ought to meet and surpass the costs of production, no

matter what the market dictates. After all, the market is governed by real people, not invisible hands. Workers, whether the farmers themselves or the farm laborers they employ, must receive a decent livable wage. For most U.S. farmers this means a fair price for their products. The implementation of concrete policies would move us toward greater equity for farmers. For example, supply management approaches to stabilizing crop prices for farmers were successful following the New Deal and led to decades of prosperity for family farmers, by guaranteeing a fair price by limiting production in an orderly and collective way.³ The rebuilding of non-profit farmer-managed grain reserves would be a huge boon to the family farmer movement in the U.S. and help wipe out price volatility and a plethora of predatory financial instruments that have plagued commodity futures markets. This involves re-regulation of the financial markets of Wall Street, and limiting food commodity speculation. Many analysts assert that the food riots and toppled governments of 2008 and 2010, 2011, and 2012 resulted in part from the volatility of rising prices, particularly for the rural poor, of this deregulated futures markets. The World Bank and International Monetary Fund need to reverse their actions of the past and allow (and dare I say encourage) governments in need of credit to re-establish their national agricultural councils, their grain reserve programs, their government-regulated agricultural credit banks, and re-invest in national educational institutions such as departments of agronomy and agro-ecology.

At local levels, municipalities and cities can greatly encourage thriving local food economies by providing leadership in terms of establishing ag-friendly policies of land use in urban areas that favor food production close to home. Currently the Food in Neighborhoods (FIN) committee in Louisville is working on such an urban policy framework for Louisville.

Once communities take back democratic control of their local food economy (like taxing or banning soda pop, and other nutritionally harmful foods such as factory farmed meat and dairy products, as well as foods with excessive packaging waste from the public sphere such as schools, public institution procurement, etc..., limiting access to foods grown in ways that harm the land or the farmworkers or farmers doing the backbreaking work, putting in place land use policies that reverse the plague of “suburban sprawl” in order to preserve land and water resources near to the concentration of eaters who rely on that food) we will accelerate the movement toward food sovereignty. Some say we need 10,000 new farmers in Louisville; others would settle for 10,000 backyard gardeners. The fact is we need to change nearly everything at the same time to achieve food sovereignty. Ironically, changing *everything* becomes more likely when we begin changing *something*. I believe we will reach new thresholds for more dramatic progress once the many small changes converge with a broad change in consciousness about the need to humanize our economic system and act on a basis of the fundamentally “cooperative” potential of humanity. A thoughtful look at our current reality requires nothing less. Faced with the grave threats of global warming and ecological meltdown, the



time has come for some serious cooperative spirit, a shrinking of our carbon footprints and a re-”greening” of small-scale family farming, both in terms of soil fertility and in terms of economic viability.

As Via Campesina members and spokespersons say to whomever will listen; “Family farmers feed the hungry and cool the planet.” Who better to return excess atmospheric CO2 to the land than farmers and foresters practicing agro-ecology? In fact, if farmers don’t do the work of sequestering CO2 in the fertility of land and forest, I am having trouble imagining who will do it? If not the people who love the land, then who? And considering that 3 of 4 hungry people in the world live in rural areas⁴ and that about one half of humanity are rural peoples and still rely primarily on locally-produced food, who will feed the hungry, if not the hungry themselves, activated upon the land, or in partnership with those cultivating the land? Let’s wrap this up then with a word from our sponsor: “Mother Earth’s” Pending Order: A Juicy Slice of Food Sovereignty. Here it comes: a juicy slice of homegrown apple pie a la mode! Coming Right Up! Land for All Who Work It. No Privatization of Living Things (including seeds). Globalize Struggle! Globalize Hope! ———

Useful websites for more information:

- www.familyfarmdefenders.org
- www.usfoodsovereigntyalliance.org
- www.viacampesina.org
- www.communityfarmalliance.org
- www.nffc.net
- www.foodfirst.org
- www.agriculturalmissions.org

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- 4 www.wfp.org/hunger/who-are

For a PREZI slide show introducing Sustainable Agriculture of Louisville, go to: http://prezi.com/p-k1jfcqpnx2/present/?auth_key=sziycyw&follow=zsuxp3_12oec

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