HEALTH, SAFETY, AND WELFARE?

A Report on the Factors that Favor or Hinder the Flow of Local Food in the Chesapeake Bay Region

Abstract: The Chesapeake Bay watershed contains one of the most productive estuaries in the world. The purpose of this paper is to develop and describe a process to assess existing federal, state and local laws, policies and regulations and other factors of great importance that encourage or hinder the development of a regional food plan in the Chesapeake Region. For this project, the Chesapeake Regional Food Plan (CRFP) is considered to be a plan for the flow of food from farm and fishery to table in ways that strengthen farming and the regional food economy; protect our land, water, and air; and provide healthy, nutritious food that sustains the region's communities and cities.

A REPORT COMMISSIONED & SUPPORTED BY
THE HARRY R. HUGHES CENTER FOR AGRO-ECOLOGY, INC &
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Land Use. Land Preservation.
Land Conservation. Local Food Systems.

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EXECUTIVE SUMMARY

The creation of a Chesapeake Food System is nothing more than a notion, but could it be more than that? Could the Chesapeake Bay watershed provide the majority of the food for its residents if global supplies were disrupted? What if residents simply chose to buy most of their food locally - could the regions lands and waters supply the foods?

- Food is an ecosystem service and, for centuries, the watershed served as a food system for people. The Chesapeake Bay watershed is located in a temperate climate highly suited for food production on land and in the water. However, the watershed has not been treated as though producing food is an essential function, as water quality degraded, farmland was consumed by development, and its markets ceded to cheaper, global food sources. In the 20th century, the Chesapeake watershed lost over 90% of its food market to other regions of the world. In doing so, it lost jobs, industries, food security and a way of life for hundreds of communities. The watershed's role as a food producer lost its importance. Food could be supplied from the global food system.

- Today, a majority of U.S. citizens say that they are willing to pay more for locally sourced food (Rushing & Ruehle, 2013, p. 5). In the last few decades, government programs have been put into place to help local farmers to be more successful, but multinational food corporations have maintained their hold on market share. Local farmers only supply a few percent of all food consumed in the region and there has been no comprehensive study to determine whether or not the region could supply its own food.

Based on research conducted for this report, there are numerous obstacles to a food system capable of providing healthy, locally produced food for a majority of residents in the Chesapeake watershed. A few significant examples follow to illustrate their diversity and the likely complexity that will be involved in addressing them. Many others are discussed in Chapter 2:

- Local foods are excluded from the prevailing food system. Local producers and processors do not, for the most part, have access to the prevailing, vertically and horizontally integrated national and international corporate food system. This system supplies most food to consumers in the nation and the region and is based primarily on maximizing volume and minimizing cost at each step in the supply chain. It relies primarily on large farms and processing plants in other parts of the US and other countries, the national/ international aggregation, distribution and transportation systems necessary to sustain it, and the consolidated wholesale and retail chains that deliver products to consumers.

- There is little or no corresponding local/ regional food system infrastructure. There is no local food system analogous to the prevailing corporate system designed to move locally grown foods efficiently and profitably through a local or regional supply chain, from producer through processor, aggregator, and distributor to wholesale, institutional and retail customers. There are gaps at each step in the chain. Aspiring local businesses must, for the most part, create their own micro-systems – no small challenge for a farmer working to match products to markets, a processor trying to balance producers of ingredients with consumers of market-ready products, etc.

- Food safety regulations are built for the prevailing system, not for local foods. The food safety regulatory regime that has evolved over that past 100 plus years has created a labyrinth of federal, state and local

policies and regulations. It is built for large volumes handled through large facilities that are highly industrialized and designed to ensure that food created and delivered through this system is safe. When these regimes are applied to local foods, they impose significant costs and burdens on local producers, processors, and distributors, with little corresponding clarity about how necessary or effective they are to ensure safety from local sources.

- Federal trade agreements and rules for interstate commerce support the prevailing food system and discriminate against local foods. International trade obligations require acceptance of cheap, imported products during times of peak local production. This makes it difficult for local producers to compete. At the same time, they preclude "locally produced" labeling in the name of unfair competition. The interstate commerce clause of the Constitution precludes states from passing legislation that favors local foods, because producers in other states have the same right to access a state's market that a local producer does. These are just two examples of how federal policies focused on international and national objectives compromise realization of local food systems attempting to meet a growing demand for fresh, local, healthy food produced and processed by farms and facilities customers can identify.

- Local rules for land use, fire safety, and other public objectives can compromise the viability of local food, value-added, and other on-farm enterprises. Many zoning codes are designed to segregate land uses – commercial from residential and agricultural, for example. Such rules can cause extensive, costly delays and prevent producers from adding value to, marketing, and selling their food products to willing markets. Site plan regulations required for value-added processing and sales of local foods and beverages are written for urban settings, not for rural settings or rural buildings. The costs associated with such improvements can stop good projects.

- Long-standing private sector market practices also favor corporate over local foods. A good example is commercial property managers who exclude local food vendors to satisfy demands of supermarket tenants, denying many a small producer/ processor market opportunities integral to their business.

This array of obstacles from multiple sources and levels is formidable but is only a sampling (see Chapter 2). Survey results (Chapter 3) confirm the frustrations and challenges that farmers and value-added producers face.

To address the diversity of issues confronting development of a local/ regional food system, this paper includes numerous recommendations for an assessment process in Chapter 4, a few of which are summarized here.

First, establish a common objective: Create local food system infrastructure and relationships analogous to the prevailing multinational corporate system, but designed to move locally grown foods efficiently and profitably through local and regional supply chains to all who need them, while minimizing waste and maximizing recovery.

Second, operate at three scales: The assessment process should operate at three geographic scales: local, state, and regional. Local food efforts are already happening; all three are necessary to address obstacles and build the local/ regional food system infrastructure fundamental to widespread farm to table commerce.

Third, form a Chesapeake Regional Food Council. We recommend formation of a Chesapeake Regional Food Council to collaborate with state and local stakeholders and, if possible, food councils at those levels as well. The regional council would:

- Network with state and local partners confronting challenges to local foods, both to learn from them and assist them.
- Collaborate and organize to fulfill appropriate responsibilities with private and public sector stakeholders, universities and government agencies in the region.

- Carry out regional responsibilities, and assist state and local teams that wish to collaborate at those levels, convene their own assessment teams, or form state or local food councils.

Fourth, use a Three Part Assessment Process. We recommend three principal steps to comprise a food system assessment for the Region:

- Conduct a Chesapeake regional foodshed assessment. Estimate the ability of the region to feed its population, and the growth potential for local production, processing and marketing.
- Inventory existing food system infrastructure in the region. Examine assets in each step within the local/ regional supply chain – production, processing and added value, aggregation, distribution, and marketing and sales to wholesale, institutional, commercial, retail and individual consumers – to determine where there are gaps, shortcomings, obstacles, and therefore needs for improvement or changes in the system. Policy assessment is included in this step, which can be conducted at all three recommended scales.
- Identify scale-appropriate opportunities. Evaluate the potential to provide scale appropriate opportunities to change aspects of the system, address gaps and shortcomings, and increase market shares of local foods in the system.

CHAPTER 1. INTRODUCTION

A. Thoughts on the U.S. Food System

A food system includes all processes involved in keeping humans fed: growing, harvesting, aggregating, processing, packaging, transporting, marketing, consuming, and disposing of food and food packages.

From the dawn of humankind until the dawn of agriculture in Mesopotamia, food was an essential ecosystem service. No food, no life. In particularly arid or cold regions, the quantity of available food obtained through hunting and gathering governed the size of human population. Growing and storing of grain and other foods allowed humans to venture further from food sources, but not too far.

That is no longer the case. Today, food travels around the world to consumers, without respect to geography or climate. The global food system freed people from needing their local ecosystem for food, fiber, drink, and other services once deemed essential to survive.

However attitudes are changing. Many are calling for a more localized food system. Some are concerned about the impact of climate change on weather patterns and food production, resulting in predicted global food shortages before the end of the 21st Century. Others raise concerns about political instability around the world and the fear that war or cyberattacks could break food transport systems. Finally, many people simply don't trust international food corporations to produce and deliver food that is humanely and sustainably grown. They are beginning to think that local food should be thought of as an essential ecosystem service and the closer to home the better.

A regional watershed is a reasonable place to start. If we could sustainably feed ourselves from the lands and waters of our watershed, it would mean that we have developed a food system that addresses societal, economic and environmental issues for the long term. It would mean that we have successfully regulated food production and food provision in a way that addresses health, safety and welfare issues without impeding agriculture and food businesses. It would result in jobs creation and it would keep more money circulating in local economies. It would create a society where its residents are better connected to the land and water.

It doesn't mean that the population would not drink coffee or eat oranges. There will still be trade. However, a strong regional food system would mean that in the event of major weather disasters or even world wars, our region could better help feed itself or even help feed other regions that experience calamities.

However, while many are calling for a more vibrant regional food system, it has been difficult for farmers to gain a foothold. National and international corporations control over 90% of all food purchased by consumers. Furthermore, government regulations make it difficult for farmers to bring to the market food that can be directly consumed, as opposed to commodity crops used to feed animals.

Food was not always regulated by governments. At the beginning of the twentieth century, there were hundreds of thousands of local stores and tens of thousands of mills and food processing facilities in the U.S. and their operations were not subject to government scrutiny. The Food and Drug Administration's modern regulatory responsibilities began with the passage of the 1906 Pure Food and Drugs Act. It regulated interstate commerce of adulterated and misbranded food and drugs. The regulations were intended to address concerns over new chemicals being added into foods to add flavor or extend shelf life or new elixirs that were developed with unrealistic promises or risks to health. As assembly lines were added into food production to increase efficiency, concerns over worker health and safety were raised.

New government policies and regulations hurt smaller farming operations and small scale manufacturers disappeared. They lost the ability to create value-added products (e.g. from milk to cheese, from grapes to wine, and from grain to bread). They were too small to go through the regulatory hurdles to bring their products to market.

In the last few decades, governments at all levels

have attempted, with limited success, to reverse the decline of agricultural operations in the hope of protecting a way of life, rural working landscapes, jobs, and access to fresh local food. More recently, concerns have been raised about the health and safety of processed foods, food security and the impact of the new "conventional" agriculture on the environment.

Government rules must always be evaluated to determine if they are still needed and if they address current needs and concerns. Ultimately, the regulations intended to address health, safety, and welfare, as a result of an industrialized food system, have had unanticipated impacts on the environment, on rural economies and on America's farmers.

To alter current food systems, which totally dominate all provision of food in the U.S., requires a thorough understanding of how current systems were developed. It also requires a more thorough understanding of how land is now managed and how that regulatory framework affects changes in food systems.

The Chesapeake region has productive soils and an estuary capable of producing plentiful seafood when it is healthy. A century ago, the region could easily feed itself. Food supplied from land and water was more than enough to supply the population. With a temperate climate and adequate rainfall most years, the farms were productive and supplied a wide variety of foods. The Chesapeake Bay watershed contains one of the most productive estuaries in the world. Fish, oysters and crabs were supplied to the region and were exported to other regions.

However, as U.S. agriculture industrialized, Chesapeake Bay farms became less competitive in most farm sectors. Urban sprawl consumed farmland along the I-95 corridor and beyond. The Chesapeake Bay suffered from over-harvesting and over-nutrification. Some of the components of food systems (growing, harvesting, and aggregating) are no longer occurring at a sufficient scale in most of the Bay watershed to be commercially viable. Some of the components (processing and packaging) are no longer permitted in local communities, or the regulations are cost prohibitive. Some of the components (transporting and marketing) are difficult to provide competitively with huge corporations.

Public opinion surveys have shown strong support for restoring the Chesapeake Bay, protecting farmland, and supporting local farmers and fishermen. There is logic to the notion of a foodshed that comprises the Chesapeake Bay watershed. In essence, the hope is that a foodshed system will benefit everyone and create a sustainable economy, a sustainable society, and a sustainable environment.

The Harry Hughes Center for Agro Ecology Inc. asked for a description of a process to assess existing federal, state and local laws, policies and regulations that encourage or hinder the development of a regional food plan in the Chesapeake Region.

B. Project Background

What we set out to do. This report is not intended to answer the question of whether or not a Chesapeake Food Plan could accomplish a goal of raising enough food in the watershed and infrastructure system to supply the region. Instead, as outlined by the Request for Proposals issued by Harry R. Hughes Center for Agro-Ecology, Inc., our report is intended to:

- identify the regulatory and policy barriers that hinder food production in the watershed.
- identify programs and policies that enhanced food production in the watershed.
- identify steps toward the development of a Chesapeake Bay Food Plan.

It is the study team's sincere hope that the findings here will be used as the foundation of a more in-depth analysis that will eventually support the creation of just such a plan.

C. The Study Process

The development of this study centered around two sources of information: (1) a literature review

that the team conducted for research and papers discussing local foods and local foodsheds and (2) a stakeholder survey of government and industry representatives throughout the Chesapeake Bay watershed with knowledge about regulatory/market aides and obstacles to foodshed development and function.

Chapter 2 details the results of the literature review as well as including a comprehensive list of factors either supporting or inhibiting local food systems that were mined from discovered literature. These results were then used as the foundation of the survey, and Chapter 3 lists and analyzes the results of survey responses received from 88 stakeholders in the region. Each chapter details the specific methodology used for that component of the study.

Results from this information gathering were then synthesized and formed the basis for Chapter 4. This chapter details the steps the study team recommends which stakeholders in the Bay region should take in the development of a series of foodshed assessments which would be the basis of a Chesapeake Bay foodshed plan.

CHAPTER 2. LITERATURE REVIEW AND FINDINGS

A. Introduction

The concept of local food systems/foodsheds is far from new and a significant amount of literature has been written on both this subject and local foods in general. When seeking to develop a process to assess existing federal, state and local laws, policies and regulations that encourage/hinder the development of a regional food plan in the Chesapeake Bay Region, it only makes sense to pull information from this rich body of source material. Therefore, one of the early steps in this project was to complete a literature review of academic, governmental, and non-governmental sources which discuss:

1. the status of local food systems/ foodsheds in the United States which will provide context for the proposed final analysis,
2. foodshed studies performed in other regions of the U.S. to provide insight into foodshed analysis considerations and best practices,
3. food system studies completed in the Bay region,
4. publications detailing specific federal, state, or local policies or laws which either support or limit local food systems in Delaware, the District of Columbia (D.C.), Maryland, New York, Pennsylvania, Virginia, and West Virginia.

The sources found through the literature review were then reviewed and mined for factors either supporting or inhibiting local food systems, which are summarized in the following section of the report. While other literature may exist on the subject, the authors see this as a relatively comprehensive list of factors that can then be used for a foodshed assessment in the Chesapeake Bay region should further analysis be undertaken.

In general, the U.S. local food systems, which were widespread and healthy until the early 1900s, were devastated over time through the larger market forces of consolidation, globalization, and urbanization combined with governments that failed to act to stall these forces and even enacted regulations which worsened the situation. While a groundswell to bring back local foodsheds has been seen in the past few decades, the programs therein tend to be underfunded and poorly coordinated. A more holistic approach is needed to enact real change.

B. Methodology

In order to ensure a comprehensive literature review, we used the following search tools: Maryland Public Libraries, World Book Online, Student Research Center, EBSCO Host, CQ Press Library, Google Scholar, Wikipedia, and academia.edu. General search phrases included "food plan", "foodshed", "local food", "food hub", "regional food plan", "regional foodshed", "foodshed plan", "local food obstacles", and "food plan obstacles." To gather resources regarding specific levels of government, we searched the following phrases for the federal government and each state in the Chesapeake Bay Region:

- "____ state laws/policies encourage/support local food, encourage/support agriculture",
- "____ state laws/policies block/limit/harm/prevent local food, block agriculture",
- "____ agriculture incentives", and
- "____ policies make difficult for small farms".

In addition, an emphasis was made to search for articles regarding food safety regulations and their impact upon local food. The literature discovered during this first step was examined and relevant new resources within their reference lists were added to the list for this review. This second step was completed for each resulting document and those that followed until a comprehensive list of literature was formed. The literature that we found ranged widely from more general literature which discussed the status of local foodshed analysis in the U.S., local food benefits and issues, and seeking to define what "local" is, to more specific articles like those delving into the legal complexities surrounding land use policies in a particular state.

In order to convert the list of sources into something useful for this analysis, an Excel spreadsheet was created listing all of the nearly 440 sources on the vertical axis. Then, each source was read to compile, on the horizontal axis, the factors mentioned therein which either supported local food systems or inhibited them. When language was particularly useful on a specific factor, quotes were added as comments in the cell to be used for later analysis.

Finally, once the Excel spreadsheet was completed, we took the factors inhibiting or helping local food production and processing and summarized them in the following text.

C. Factors Inhibiting Local Food Systems

1. Market Issues

Many of the factors identified in the literature review as inhibiting local food production are larger market forces, growing out of industrialized processes and technological innovations, which have led to a globalized food system where local foods have a diminished market share. These factors both promote the purchase of non-local food by consumers and negatively impact local production.

- *Market Impacts of the Green Revolution*. The past century has seen vast changes in the methods of agricultural production, commonly dubbed the "Green Revolution." Mechanized equipment, pesticides, and herbicides were developed, reducing the need for human labor on farms" (Angelo, 2011, p. 365). At the same time, the Industrial Revolution and post-WWII economic expansion drew people away from rural areas and to cities. Combined, these both led to fewer Americans in farming jobs and supported the concentration of ownership described in the next bullet.

- *Concentration of Ownership*. One of the most frequently sited themes in foodshed literature is the negative impact that the concentration of ownership has on local foods. During the twentieth century, as new technology combined with cheap energy enabled the movement of large quantities of food over long distances, businesses sought to create efficiencies through consolidation. A handful of multinational corporations came to control a huge share of the production, processing, and distribution of food products. These virtual monopolies effectively eliminate free market competition and exert an inordinate degree of influence on agricultural product pricing, putting local producers out of business. By 2001, most food traveled "an average of 1,300 to 1,600 miles, changing hands five or six times before it reaches the consumer's table" (Goreham, 2001, p. 24).

Mechanized farming has helped enable the massive consolidation of production across the world. Photography by Pexels.com.

This concentration is seen in every component of the global food system. For example, today the top three food service management companies operate food services in approximately 45 percent of all North American institutional food service outlets. Two distributors own 75 percent of the United States market for broad line distribution service (Fitch et al, 2016, p. 4).

- *Vertical Integration*. As food systems consolidated globally, companies sought to tighten influence on their own value chains through vertical integration. Such integration "refers to the combination of two or more stages in the food system" (Gorham, 2001, p. 27). For instance, ConAgra is a leading developer of crop chemicals, fertilizer, and seed, as well as producing, processing, and selling its own broilers. Complete control of the value chain allows

them to drive down prices, further forcing out local producers and processers.

- *Globalization.* The international trade and integration of cultures and products that is enabled by the ease of transportation described above is commonly known as "globalization." Beyond its detrimental impact upon local American farms, shown by the fact that in 2006 the value of food imported to the U.S. for the first time exceeded agricultural exports, it has also changed the way consumers interact with their food (American Planning Association (APA), 2007, p. 4). Households can now access food on a year-round basis when it was seasonal in the past, changing expectations and driving production to regions of the world where products can be grown at all times (Trivett, 2012, p. 115). Also, the increased distance from food production leads to "consumer ignorance about the sources of food. As people know less and less of where their food comes from, how it is produced and with what impacts on communities and the environment, preservation of land and the natural and built resources upon which local agriculture depends becomes more difficult." (APA, 2007, p. 4).

- *Genetic Modification*. One of the more recent factors revolutionizing agriculture and supporting the consolidation of the food system is genetically modified (GM) species. GM agricultural products have been altered to enhance "desirable" traits such as faster growth or insect repellent. The companies that produce GM products hold strict control over their seeds and often release those seeds in conjunction with specific types of pesticides and other chemicals to which the GM species have been made immune. This requires small farmers to buy the seeds annually rather than recycling them, harming their bottom line and strengthening larger corporations that can benefit from efficiencies of scale.

The end result of these changing market factors is that smaller local farms have difficulty competing with larger, global corporate farms. As Donaher states in *Is Local More Expensive? Challenging Perceptions of Price and Investigating Availability in Local Food Systems*,

> "The smaller and more diverse farms favored in local food systems may not benefit from the same economies of scale seen by larger operations that specialize in fewer products. On farms that limit or eliminate the use of pesticides and herbicides, labor requirements and associated costs increase. Transaction and storage costs may also be higher for smaller operations when compared to the integrated and highly efficient system favoring agribusinesses. Producers that participate in direct marketing channels need to dedicate more resources to the business development aspects of selling produce than growers who sell to retail through wholesalers." (Donaher, 2012, p. 21)

In a business where profit margins are very small, these increased costs and lower efficiencies can make the difference between a profitable business and an unsustainable one. This is a large driver behind the movement of individuals from farming as a primary occupation. As of 2002, farming was the main job for less than 60 percent of farmers in America (University of Michigan, 2009, p. 10). And thus the local farm base continues to shrink.

2. Government Policies and Laws

Components of the food system in the United States face a myriad of federal, state, and local laws, regulations, and policies that can serve to inhibit local food production, processing, and distribution. It is not surprising that the influence of the government is one of the most discussed issues in the literature. This section first highlights government policies that create a food system that prefers corporate, non-local production, and then discusses policies that directly or indirectly inhibit local food systems.

Promote Non-Local Foods

- *U.S. Farm Policy Deregulation Affecting Smaller Farms*. The consolidation of ownership in agribusinesses described above was enabled by policy deregulation during

the second half of the 20th century and the resulting weak competition policies at the federal level. A major example of this deregulation was the Federal Agriculture Improvement and Reform Act of 1996 (1996 Farm Bill), when pricing controls that had prevented discrimination against smaller firms were removed (Buck, 2007, p. 13). Beyond policies specific to agriculture, regulations on the national and international level were changed or eliminated in order to facilitate the flow of capital around the world. Combined, a system of regulations resulted that allowed the market forces previously described to push agriculture towards larger and more consolidated agribusinesses and further from smaller, local food systems.

- *U.S. Government Farm Subsidies.* Another example of federal policies that promote larger agribusiness and thus strengthen its market stance versus smaller, local farms is the system of crop-specific subsidies included in the Farm Bill. While the first Farm Bill of 1993 provided direct payments to farmers for over 100 different crops, the scope of investment has narrowed through time as policies changed. "Between 1997 and 2006, approximately 84 percent of the $172 billion dollars of Farm Bill subsidies went to five commodity crops alone: corn, rice, wheat, soybeans, and cotton" (Broad Leib, 2013, p. 28). The diverse produce needs of local consumers are therefore not supported by federal subsidies. In addition, large businesses receive a disproportionate share of the subsidies. A mere 10 percent of farms received 75 of U.S. crop subsidies between 1995 and 2011 (Shirley, 2013, p. 532). The resulting subsidy structure incentivizes overproduction of a small number of crops, driving down prices and making it difficult for small producers to compete (Trivette, 2012, p 44-45). The 2014 farm bill ended direct payments but expanded crop insurance and non-grain farmers became eligible. However, federal rising cost for the insurance may jeopardize the whole program.

- *Federal Trade Policy*. The impact of U.S. federal international trade policy, which increasingly favors open trade and reduced tariffs, on agriculture is well documented in the literature. "International trade obligations require the acceptance of cheap, imported products year-round even during times of peak production of certain local crops making it very difficult for producers to compete" (Christy, 2013, p. 15). This impact has also been felt in the fishery market, where open trade has resulted in low-cost, imported seafood flooding the market and displacing domestic production (French, 2014, p. 1).

  However, domestic/interstate trade laws can also directly limit the development of more local food policies. The Dormant Commerce Clause (DCC) in the Constitution states that only the federal government has oversight of interstate commerce. This prevents states from providing preferential treatment to local businesses since that is seen as giving them an "unfair competitive advantage against out-of-state-businesses" (The Harvard Law School Food Law and Policy Clinic, 2012, p. 65). No formal challenges to local food policies at the state/local level have been seen to-date, but the literature promotes caution and careful crafting of local procurement policies due to the DCC.

Inhibit Local Foods

- *Regulatory Issues*. Government regulations touch nearly every component of a food system, from production all the way to sale to consumers. While regulations are intended to protect citizens and general quality of life, they often inflict additional costs and introduce complexities, both which are difficult for small businesses to manage. The following are the categories of regulations most often mentioned in food system literature as limiting local food production and processing.

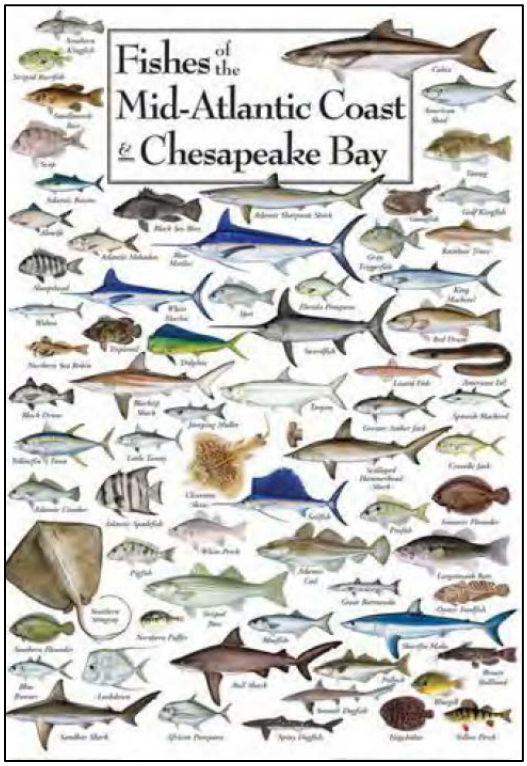
A USDA technician tests the quality of food. Source: USDA website.

- *Food Safety Laws/Regulations*. Food safety regulations exist on the federal, state, and local levels of government. These regulations are particularly imposing to the processing industry. "Farmers and slaughterhouses face an astonishing tangle of state and federal laws that govern who can slaughter what, where, when and how – and who can sell what to whom" (Janzen, 2004, p. 1). Specifically, the USDA requires that processing plants implement Hazard Analysis Critical Control Point (HACCP) plans, a tool that requires a great deal of staff time and energy to develop and process, something that is particularly difficult for smaller, local farmers and processers. In fact, according to a survey completed in 2004 by the Chesapeake Field Institute, a quarter of farmers said that regulations served as a barrier to expanding on-farm processing (Myers, 2009, p. 10).
- *Procurement Laws and Regulations*. Procurement policy is intended to equalize the playing field for contractors, with the exception of policies that allow for preferred providers (veterans, minorities, etc.). "Generally the law regulating procurement of government goods and services requires government to buy the best product at the lowest price after solicitation of bids to provide cost effective use of taxpayer dollars and prevent any favoritism in purchasing" (New York State Council on Food Policy, 2010, p. 1). This has a detrimental effect on local food providers who have difficulty competing with the economies of scale corporate farmers can achieve. For example, if a school receives funding for school lunch programs they have to follow federal guidelines which mandate placing food purchases out on national bid and choosing the lowest price regardless of the origin (Buck, 2007, p. 56).

- *Land Use Restrictions*. Zoning can be a tool that either supports or restricts agricultural production. On the detrimental side, many counties in the Washington, DC region "restrict on-farm activities and uses such as meat processing, operating a creamery, food packing, and the size and operation of farm stands and other non-traditional agricultural activities" (Regional Agricultural Workgroup, 2012, p. 18). This is part of a larger trend where counties that are becoming more suburban favor residential land uses rather than farms. This same issue is found in cities, where land use policies favor redevelopment of land rather than the use of it for community gardens and other urban agriculture.

- *Fisheries Management*. Fisheries management policies have to maintain a delicate balance of preserving fish populations while permitting sufficient fishing to support the industry and market demands. However, "in practice, most subsequent proposed rulemaking has focused on preventing overfishing, while fisheries tend to be managed for the health of the wild stock, and to a lesser degree as a source of income for harvesters, and occasionally processors—not for the wider community" (Olson, 2014, p. 105). This

emphasis on preservation has led to significant reductions in the size of fishery fleets throughout the Chesapeake Bay region.



Cover of the Maryland 2014 Fishery Management Plan. Source: Maryland DNR.

- *Regulatory Uncertainty*. Beyond the limitations and costs caused by the many regulations local food system members face, there is also a great deal of uncertainty that faces the industry when complying with regulations. For instance, a policy that may simply be a voluntary food safety requirement at the Federal level may be interpreted and implemented as mandatory on the state level (Martinez, 2010, p. 27). Federal programs are often administered at the state or local level where interpretations can vary widely.

- *Environmental Protection*. Agriculture has tended to be viewed as detrimental to the environment. For example, in the Chesapeake Bay region agriculture is a major source of nitrogen and phosphorus runoff that has led to the decline of Bay health. These environmental concerns have lead to the passage of regulatory restrictions, which can be an expensive burden to the agriculture community, and to the agricultural community feeling demoralized and under public pressure (Gardner, 2002, p 37).

- *Lack of Policy Community Investment/ Coordination.* Food system policies cut across many issue areas governed by different jurisdictional levels and different policy communities, all of whom need to be involved in order to develop a comprehensive policy approach that supports local foods. Historically, support has been lacking from many key players. For example, the literature highlights how planners have tended to pay little attention to food issues due to a sense that food only indirectly touches larger planning topics like housing, the environment, transportation, and economic development (American Planning Association, 2007, p. 1). In a 2009 survey of planners in Pennsylvania, 70 percent said that their involvement with the food system was minimal.

  Politicians also tend to be unfamiliar with agricultural and food issues, meaning that farming organizations have to lobby more heavily to make lawmakers aware of related complexities (Delaware Valley Regional Planning Commission, 2010, p. 144). And these special interest groups tend to represent corporate agriculture instead of small, local farmers.

  Also, as King states in *Can Local Food Go Mainstream?,* "while many argue food systems should be viewed holistically, they usually break food policy into separate issue-areas such as: access to healthy food, environment sustainability, regional economic development, and local/national security. While none of the issues are mutually exclusive, we often treat them very separately at all levels of politics" (King, 2014, p. 9). As an example, the FDA regulates the sale of frozen pizzas unless it contains 2 percent or more meat in which case the USDA is responsible (Trexler, 2011, p. 323). This system results in policies that are

disjointed and create much of the complexity and confusion discussed in the section above.

- *Budgetary Constraints*. As is the case with any policy initiatives, support in the budget can make or break related successes. Many policy proposals discussed in the literature would help develop the local foodshed in the Chesapeake Bay region, but absent funding they would fall short. For instance, the Maryland Department of Agriculture (MDA) has created branding to support local foods, "Maryland's Best", but they have lacked the necessary funding to promote the program thus limiting its success (The Maryland Agricultural Commission, 2006, p. 10). Even a lack of funding for regulatory programs can serve as a barrier for local foods. The USDA lacks sufficient staff to inspect meat processing facilities, creating long delays for new facilities that seek to enter the market (Food & Water Watch, 2009, p. 1).

3. Production Issues

Local producers face many barriers beyond the market and government factors discussed above. The most pressing concerns tend to be those of limited resources, whether it be lack of land, labor, or capital.

Resources Concerns

- *Insufficient Land.* The resource limitation most frequently cited in the literature is a very basic one: lack of sufficient land for local farms. The statistics are stark in the U.S., where two acres of farmland is lost every minute (Angelo, 2011, p. 388). The reasons for this loss of land are many, but the primary explanation is urbanization of the suburban and rural areas surrounding cities. Per the American Planning Association (APA), ""Urban-influenced" counties account for more than half (56 percent) the total U.S. farm production, 63 percent of dairy production, and 86 percent of fruit and vegetable production; yet these counties have annual population growth rates more than twice the national average. This rapid growth threatens our capacity to obtain fresh and local food" (APA, 2007, p. 3).

Sprawl has resulted in the rapid loss of both farmland and forests in many areas of the U.S. Photography by Dreamstime.com.

Insufficient land is not limited only to more traditional rural farm land, as urban farms also struggle to obtain land for production. In cities, community gardens and other forms urban agriculture face land tenure concerns as cities struggle with the competing desires to develop vacant and blighted properties and increase densities (Covert, 2012, p. 23). Beyond availability of land, urban farmers face additional threats to site security, with vandalism and theft being a common concern (Kaufman, 2000, p. 56).

Finally, beyond there being sufficient acreage to produce agricultural products, many farmers are unable to purchase their own land driving them to rent the land as "farm operators". USDA's national Census of Agriculture in 2012 found that 38.4 percent of farmland in the U.S. is not operator owned. This creates a number of land management problems, especially once the complicating factors of farm regulations are applied. Also, studies show that non-operator land owners are more likely to sell their land for development (Gardner, 2002, p. 35).

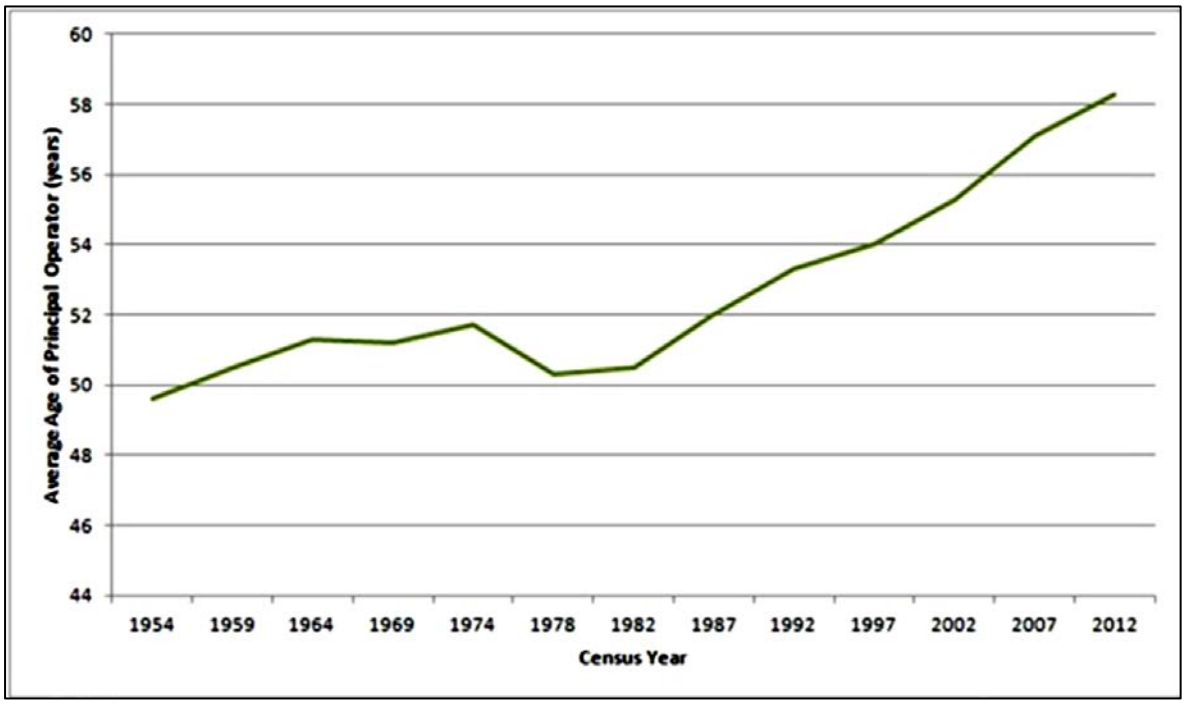
- *Human Resources Issues.* Another area commonly mentioned that limits the development of local food systems is that of human resources.
    - *Aging Farmers.* As of 2007 a quarter of U.S. farmers and half of agricultural landlords were at least 65 years old compared to only 3 percent of the U.S.

labor force in the same age bracket (APA, 2007, p. 3). **Figure 2.1** (next page) clearly displays the trend. This aging farming population paints a bleak picture of the future of farming in the U.S.

- *Lack of Education/Training.* Educational/professional development opportunities are also in low supply for farmers in the U.S. Agricultural production is very complicated and involves the management of a variety of risks, necessitating training "at the local level to meet market requirements and expand access to local customers on issues related to risk management; appropriate postharvest practices; recordkeeping; good agricultural practices (GAP) certification; and liability insurance requirements" (Martinez, 2010, p. 27). And yet, agricultural education is rare in school curriculum, leading to low farmer recruitment (Regional Agricultural Workgroup, 2012, p. 16). Once farmers start their business, they find themselves with insufficient time to learn about new agricultural innovations that might improve their production processes (Buck, 2007, p. 36).

- *Lack of Insurance.* Beyond being complicated, farming is also one of the most dangerous occupations today, with workers handling hazardous equipment, facing extensive sun exposure, and the general strenuous labor. At the same time, many farmers have difficulty obtaining affordable disability and health insurance. In fact, a 2012 North Carolina survey found that up to 60 percent of farmers in the state were uninsured (Center for Environmental Farming Systems, 2010, p. 38). While no hard data is available to date, it is likely that the Affordable Care Act helped this situation by making new, cheaper available insurance options available throughout the U.S. However, it also hurt the financial situation of small-to-medium sized farms that hire 50 or more workers since such employers are now

Figure 2.1 Average U.S. Farmer Age



Source: Kurtzleben, D. (2014). The Rapidly Aging U.S. Farmer. *U.S. News*. Retrieved from http://www.usnews.com/news/blogs/data-mine/2014/02/24/us-farmers-are-old-and-getting-much-older.

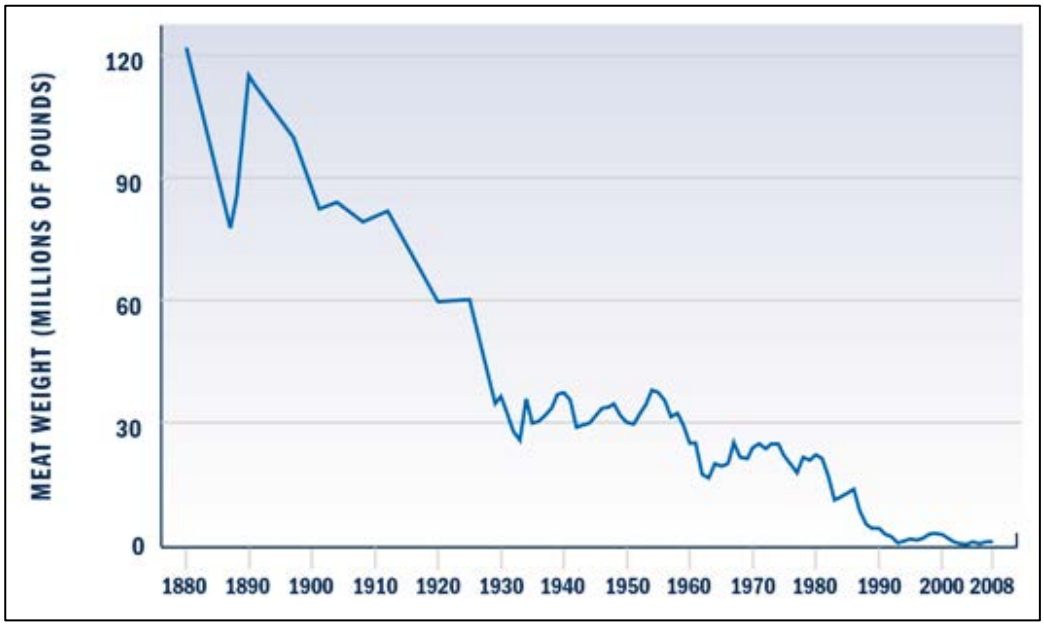
required to provide insurance coverage for their employees.

- *Shortage of Quality Labor*. Finally, the shortage of quality labor for farmers and other components of the food system was a common theme in the literature. As the number of farm jobs has declined by over 70 percent in the last decade, so too has available domestic skilled labor (Reynolds-Allie, 2013, p. 3). This has led to a reliance on foreign labor, requiring farmers to cope with burdensome federal immigration regulations. The associated costs, as well as the general costs related to hiring any staff (insurance, workers' compensation, etc.), are such that many smaller farmers cannot afford to hire labor to ramp up their operations (The Maryland Agricultural Commission, 2006).

- *Financial Concerns*. Financial woes frequently plague the smaller farms that make up local foodsheds. First, the cost of starting a local food operation can be high (land and equipment purchases, etc.), serving as a barrier to many that might be interested in agriculture as an occupation (Hagey, 2012, p. 26). This is particularly true if a farm seeks to process some of its food on-site, which is often a requirement for those interested in direct sales to consumers. Smaller producers also face difficulties when seeking capital for startup costs since they lack "collateral and required detailed financial and performance records lending institutions need to evaluate their credit risk" (Reynolds-Allie, 2013, p. 2). Finally, beyond startup concerns, smaller operations have difficulty earning enough income to make agriculture profitable. A study of Maryland farms in 2002 found that "the majority of the almost 80 percent of Maryland farms with sales of less than $100,000 have negative net cash income (expenses greater than receipts)" (Gardner, 2002, p. 37).

- *Insufficient Natural Resources*. Beyond the dearth of land discussed above, local foodsheds face other natural resource concerns. The one most frequently cited is that of water access, as drilling irrigation wells is costly and in some locations even in the Washington region competition for water is growing (Regional Agriculture Workgroup, 2012, p. 18). Water access for urban farms can be especially expensive, especially considering the fact that land ownership complications in cities make urban producers

Figure 2.2 Oyster Harvests in the Chesapeake Bay, 1880 to Present



Source: Pelton & Goldsborough, 2010, p. 5.

hesitant to invest in the infrastructure necessary to tap into water mains (Hagey, 2012, p. 27).

Beyond water, urban farms in particular face soil contamination concerns, where prior land uses can leave toxins in the soil. This necessitates expensive testing and remediation where issues are found (Kaufman, 2000, p. 55). Another example of resource issues is found in local fisheries, where consumer demands have led to the overfishing of certain fish populations, resulting in insufficient fisheries to meet demands (American Planning Association, 2007, p. 5). **Figure 2.2** shows the example of overharvesting oysters in the Bay region, resulting in severely declining populations and harvests.

Other

- *Insufficient Production to Meet Demand*. This concern was mentioned in the literature from two perspectives. First, smaller local farms have difficulty scaling up to meet the demands of larger consumers like institutions and retail (Martinez, 2010, p. 23). Second, foodshed assessments in the U.S. have often found that existing local production would be unable to support the dietary needs of the population (Oldham, 2013, p. 3).

- *Effects of Climate Change*. Since farms are dependent on weather patterns and climate change alters those patterns, the literature mentions that it can be a true challenge for farmers to deal with the impacts of climate change. "Based on many studies covering a wide range of regions and crops, negative impacts of climate change on crop yield have been more common than positive impacts" (Letts, 2014, p. 25).

- *Nuisance Concerns*. Farming activities can impact neighbors especially in the case of odors resulting from compost and manure application, particularly in the case of urban agriculture (Fletcher, 2012, p. 224). Concerns regarding these impacts can lead to the rise of restrictive regulations and negative feelings among the public regarding the farming community.

- *Legal Risk*. The legal risks that face farmers are many. For example, most agricultural producers are required to purchase $1 million in liability coverage. This is a high cost for smaller producers, a problem frequently cited in literature (Berkenkamp, 2006, p. 25). In addition, farmers must work through the legal implications of zoning regulations, labor rules, and the additional liability concerns that arise when selling their food whether it be through direct or indirect sales.

4. Processing Issues

Consumers and institutions expect raw agricultural products to be processed and packaged to certain standards, easing their use upon purchase. Processing refers to any activity that transforms a raw agricultural product into one that is closer to that which is used by consumer, thus adding to the sale value. As provided by the Harvard Law School Food Law and Policy Clinic (FLPC), examples of food processing infrastructure include "cold storage facilities; shared-use food processing centers and agricultural facilities (for grading, storing, and packaging foods); grain milling facilities; dairy processing facilities (for milk bottling and cheese making); and meat and poultry slaughter and processing facilities (including mobile processing facilities)" (FLPC, 2012, p. 24).

However, local producers in the United States face serious difficulties when seeking to have their agricultural products processed for sale. Beyond the regulatory and market factors discussed above, processing barriers mostly fall into the categories of (a) limited local processing capacity and (b) legal risks.

- *Lack of Available Slaughter Facilities*. "The number of small federally inspected cattle slaughter plants (those slaughtering under 10,000 head per year) has declined by 12 percent since 2001 to 554 in 2013" (USDA, 2015, p. 23). This is part of the trend of vertical integration discussed above, where large corporations manage all aspects of the food system and maintain centralized

processing facilities that put smaller regional ones out of business. The USDA found that 94 percent of cattle processed in 2013 were slaughtered by these larger facilities. As an example in the Chesapeake Bay Foodshed, Pennsylvania "loses 4 to 5 percent of its federally inspected meat and poultry processing plants each year" (Henning, 2007, p. 1).

Lack of sufficient slaughter facilities can be a major limitation for local farmers seeking to process and sell their meat products. Photography by Pexels.com.

- *Limited Access to Processing Facilities*. This loss of processing facilities is not limited to slaughtering plants. The number of general processing facilities for produce and other agricultural products has been shrinking largely due to vertical integration and other market factors. As a result "today's food processing and retailing units tend to be very large and centrally located, making them inconvenient to smaller, local initiatives" (Halweil, 2002, p. 41).

- *Legal Risk*. Legal risk has negative implications throughout the food system, including processing facilities. One major threat is that of food recalls, which can devastate a facility and sometime close down the plant, particularly smaller more vulnerable ones (Henning, 2007, p. 6).

5. Distribution Issues

After local food products have been produced and processed for sale, local farmers need a cost effective method to distribute food to buyers. Unfortunately, this can often be challenging in the U.S. In *Growing a Sustainable Portland Metropolitan Foodshed*, Martin found that farmers on average traveled 32.5 miles to reach farmers markets, requiring vehicles, maintenance, gas, and labor (Martin, 2012, p. 3-11). In the case of distributing to vendors, the transportation costs can be even higher. Beyond the costs of transportation, local food systems face barriers related to food safety certification, food traceability, and the costs to institutional and retail consumers when purchasing less processed food from smaller producers.

- *Limited Access to Distributors*. The primary obstacle to the distribution of local food, cited throughout local food system literature, is that of limited access to food distribution infrastructure. The "local food supply chain lacks mid-scale, aggregation and distribution systems that move local food into mainstream markets in a cost-effective manner" (Martinez, 2010, p. 25). If farmers seek to distribute their own food, they must carefully plan their routes and customers, develop the necessary infrastructure including vehicles that have temperature controls, and spend labor and time to drive deliveries. As an interviewed farmer stated in *Farm-to-Fork: Understanding Locally-Oriented Farm-to-Vendor Food Systems: Access, Boundaries, and Power-Relations*, "delivery logistics are one of our biggest challenges running the business" (Trivette, 2012, p. 121). If instead they seek to distribute using the more mainstream channels through which 97 percent of food travels, there are strict requirements regarding quality and volume of produce that can be hard for smaller- and medium-sized farmers to meet (Woods, 2013, p. 2).

- *Food Safety Certification and Related Barriers*. In order to sell their product to distributors or institutions, producers are often required to obtain food safety certifications such as the Good Agricultural Practices (GAP)/Good Handling Practices (GHP) certification developed by the USDA. In order to obtain GAP/GHP certification,

farms are required to pay an administrative fee and an hourly rate for the audit, combined with the costs of any changes necessary to meet standards following the audit (Broad Leib, 2013, p. 53). Costs can total up to thousands of dollars which is prohibitive for small producers, keeping them out of markets requiring such certification.

- *Traceability*. A distribution issue often mentioned in the literature is the matter of traceability of local agricultural products. In mainstream supply channels in particular, products are compiled from a number of suppliers for processing and distribution, making it difficult for consumers to identify the origin of the food (Martinez, 2010, p. 26). This can create issues both for consumers looking for assurances that the food they are producing is, in fact, local, as well as for the attainment of third-party certification (Berkenkamp, 2006, p. 21).

- *Food Vendor Transaction/Labor Costs*. Another barrier to the distribution of local foods is the difficulties that food vendors face in purchasing and selling the food, mainly arising due to (a) the lack of processing of local food and (b) transaction costs in dealing with a larger number of smaller producers. Regarding the first, while some local farms do processing on their food, much of local food tends to arrive at restaurants and institutions in raw form (Trivett, 2012, p. 128). This requires food vendors to hire staff to prepare the food from raw form, compared to corporate distributors who provide processed food. In *Making the Farm/School Connection*, Berkenkamp found the following when asked why schools are not purchasing local food:

  > "Handling whole, uncut produce is a barrier for many. When reflecting on their past experiences buying directly from farmers, nearly all foodservice directors said that they had purchased whole, uncut produce items and that processed produce was not available from the farmers they knew… many districts express strong concern about "buying local" on a significant scale if local equates to whole produce that requires higher labor costs, different types of staff, or altered kitchen facilities" (Berkenkamp, 2006, p. 12).

  Regarding the second, it is easier for a vendor to purchase food from one to two distributors that have reliable access to processed foods rather than working with a larger number of small farms whose production varies throughout the year, necessitating the development and management of additional contacts and contracts (Trivette, 2012, p. 45). This is particularly true of supermarkets, which require a high volume of high quality produce year-round, and through which most of the U.S. obtains its food (Buck, 2007, p. 117). In turn, in order to meet the requirements of retailers, small and medium farmers are required to sign into restrictive corporate contracts that are more beneficial to the vendors than the producers.

6. Demand Issues

Even though local food is becoming more main stream in areas of the U.S., it still faces many demand barriers before it is accepted as a primary provider of food for the population.

- *Limited Marketing Resources*. Marketing is expensive, both in terms of purchasing advertising and the human labor and time required to implement marketing strategies. Smaller farms and distributors often lack the staff to spend the necessary time on customer relations, travel, etc. (Martinez, 2010, p. 23).

- *Lack of Consumer Knowledge of Availability*. Whether it be an individual consumer, a restaurant, or an institution like a school or hospital, many consumers are simply not aware of the local food that is available to them. The literature has used surveys to show this to be a primary reason why local residents do not shop at farmers' markets (Martinez, 2010, p. 30) and why institutional food service directors have not used local food sources (Berkenkamp, 2006, p. 12).

- *Perception That Local Food is More Expensive*. The concept that local food is more expensive is debated throughout the

literature, and the perception of this cost is certainly a barrier to more local food purchases. In a 2012 survey of institutional food service providers in Vermont, 65.6% stated that cost was a barrier to purchasing local food (Becot, 2014, p. 107). Regarding individual consumers, a 2006 word association study found that "the only negative association that was related to locally produced food was price, which was considered to be high" (Donaher, 2012, p. 20).

- *Inconvenience, Particularly for Low-Income and Seniors*. The food system today is one that revolves around convenience, whether it be ease of physical access, the availability of one stop shops like supermarkets where all grocery needs can be met, or the purchase of food that has been processed and is ready for serving with little work at home. This convenience is particularly important for low-income groups and seniors, both of whom have limited means of individual transportation and low-income groups in particular due to workers often holding several jobs with little time for food purchase and preparation. A survey of food stamp clients in Portland found that over a fifth of respondents were prevented from using farmers' markets because of limited hours and locations (Grace, 2005, p. 7).

- *Consumer Dietary Preferences*. Over the past century, U.S. dietary preferences have moved from one where fresh produce was a common feature in meals to an inclination for highly processed foods and drinks (Valliantos, 2004, p. 418). Today, it is estimated that more than 87 percent of adult Americans do not eat the recommended servings of daily vegetables (Moore & Thompson, 2015). Until Americans' diets move more towards natural produce, local food sources will struggle to supply the majority of materials used in the population's meals.

- *Product Quality Concerns*. Consumers and retail have both expressed concerns with purchasing local food since there is more variance in the size, shape, and quality of local produce from smaller farms than produce from large corporations (Berkenkamp, 2006, p. 11).

- *Diversity/Seasonality Issues*. The fact that available local produce varies with the seasons creates difficulty for retailers and institutions that then have to adjust their menus based on what is available (Letts, 2014, p. 45). This is also a problem for consumers, who have grown accustomed to having produce available year round in supermarkets.

- *Issues With Labeling*. It is difficult to define what exactly the "local" means in local food, something that has caused issues with labeling such food. The actual area covered by "local" can vary, and labeling inconsistency concerns can cause some consumers to doubt local food labels similar to how "organic" labeling was coopted by conventional corporate agriculture (Trivette, 2012, p. 86). There are also concerns regarding the part of the food production chain that "local" applies to. Local food might mean that it was simply packaged or processed locally but not produced nearby (Letts, 2014, p. 45).

While standards have been developed regarding organic labeling on the national level, labeling standards regarding "local" labeling is still largely lacking. Source: USDA website.

D. Factors Supporting Local Food Systems

1. Government Programs/Policies that Promote Local Food

Just as every level of government has the potential to limit the local food system, there are opportunities at every level to promote the

production, processing, and distribution of local food. Many examples of policies and programs that support local food exist today, and the literature proposes ways in which governments can do even more.

Federal Level

- *Revise Agricultural Subsidies*. Just as the existing subsidy system largely supports a narrow group of large corporate farms that grow commodity crops, revising them could level the playing field and enhance local food systems. In *Small, Slow, and Local: Essays on Building a More Sustainable and Local Food System*, Angelo suggests limiting federal subsidies to small farms with an income of below $500,000 and that are not owned by a parent company (Angelo, 2011, p. 379). This would direct federal aid to local producers that truly need the assistance to remain in business.

- *Enforce Antitrust Laws.* As was listed under the factors inhibiting local systems, enforcement of antitrust laws is lax when it comes to agriculture. Firm application of these laws, and enabling collective bargaining by farmers, would help to reverse the tide of consolidation (Halweil, 2002, p. 57).

- *Revise Immigration Policies*. Farms have difficulty with maintaining a supply of qualified workers, and this is further complicated by U.S. immigration laws. The H-2A provisions of the Immigration and Nationality Act enable farms to hire foreign workers, but "there are a number of limiting factors – cumbersome lead time for employers, lack of certified housing, administrative pressures – that could be corrected by increased funding and Federal legislative changes" (Gardner, 2002, p. xv).

Migrant workers are the backbone of many sectors of the agricultural labor force. U.S. immigration policies can burden the hiring and housing of these workers. Photography by Dreamstime.com.

- *Revise Trade Policies*. Little detail is proffered in the literature, but just as trade policies have enabled the import of inexpensive products from other countries, where production is cheaper due to lax labor and environmental laws, revising these trade policies would benefit local food in the U.S.

- *Federal Grants Programs*. The federal government offers a number of grant programs that support agriculture in general, and some that support local food specifically. Many guides to these programs exist, so this review need not detail all of them. Instead, this section summarizes some of the major categories these programs fall into.

    - *Federal Marketing Programs*. The USDA has a number of programs that can be used to assist local food producers and distributers in marketing their products. For example, since 2002 the Farmers' Market Promotion Program (FMPP) has provided funding for the development, expansion, and outreach programs of farmers markets throughout the U.S. Within the Chesapeake Bay Foodshed, this included $75,970 in 2014 to establish a new farmers market and community supported agriculture (CSA) which now serves 100 families in Columbia Heights in Washington, DC (USDA, 2014, p. 2). In 2014, the USDA started the Local Food Marketing Promotion Program (LFPP) which provides millions of dollars annually to support the marketing activities of local food processors, food hubs, and other businesses. They also

maintain a Local Food Research & Development website, where one can access a diversity of resources to support local food systems and supply chains.

- *Federal Production Grant Programs*. Grant programs administered by the USDA that support food production range from loan programs like the Business and Industry Loan Guarantees program which assists new rural businesses with startup, to the Beginning Farmer and Rancher Development Program (BFRDP) which helps train and educate new interested farmers, to Organic Certification Cost Share Programs through which organic farms can receive up to 75 percent coverage of certification costs.

- *Federal Processing Programs*. Among other programs, the USDA oversees the Value-Added Producer Grant program which provides funding to assist farmers who seek to process their products on-site. In the most recent 2014 Farm Bill, the program funding was quadrupled from $15 million to $63 million and the funding was redirected towards smaller, family-run farms (USDA Economic Research Service, 2015, p. 52).

- *Low-Income and Senior Programs*. The federal government supports a number of programs that enhance the abilities of low-income and senior individuals to access local food options. For instance, the 2014 Farm Bill expanded the Food Insecurity Nutrition Incentive Grant program which supports direct-to-consumer programs that increase fruit and vegetable consumption by Supplemental Nutrition Assistance Program (SNAP) participants. $20 million is mandated annually through FY 2018 for the program (USDA Economic Research Service, 2015, p.53). Also, the Bill expanded already existing programs which enable SNAP participants to use their benefits at farmers markets, CSAs, etc.

  Another new program, the Healthy Food Financing Initiative, was authorized to fund regional food systems and other local food projects that support underserved populations. Regarding senior citizens, the Senior Farmers' Market Nutrition Program provides low-income seniors with coupons to farmers' markets, CSAs, etc. The program receives $20.6 million in mandatory funding annually (USDA Economic Research Service, 2015, p.55)

General Government

- *Tailoring Regulations to Fit Local*. Numerous examples exist around the U.S. where governments have altered their regulations to ease the strain on smaller, local farms and processors. The USDA established the Group GAP Pilot Project in 2010 where groups of farms are audited for GAP certification as a unit, sharing the related burdens and costs (USDA Economic Research Service, 2015, p. 20). Some states, such as Vermont, permit the exchange of raw milk in limited quantities despite Food and Drug Administration rules which generally ban the sale of raw milk (Coit, 2009, p. 19). New York recently passed a new beverage law eased restrictions on small craft breweries so that they can conduct expanded tasting and sell at more retail outlets (Barclay, 2015, p. 1).

  The most common type of effort to ease regulations for local food is cottage food laws. These laws allow small farms to process and sell certain products where general food safety laws would require that such processing occur in licensed kitchens. Cottage food laws tend to be limited to producers who sell directly to consumers, to food that is not "potentially hazardous," and to a certain sale size (Miller, 2014, p. 10).

  A newer tool that some local food advocates are promoting is food policy audits. Such audits address "food production, distribution, and access, as well as community activities that might help improve the food system," reviewing regulations and programs in a holistic manner (Sanders, 2011, p. 3).

Another example of a tool is the local food ordinance. Sedgwick, Maine was the first town in the nation to pass such an ordinance in 2011 (Shirley, 2013, p. 526). The ordinance exempts local farmers from certain food safety and other regulations if they are below a specified size and sell directly to consumers.

- *Right-to-Farm Laws*. As was mentioned under the barriers to local food production, nuisance complaints from neighbors have become a growing issue as rural lands are increasingly developed and interspersed with suburbia. This has led to the passage of right to farm laws in all 50 states, protecting farmers from various lawsuits and complaints they might face (The Harvard Law School Food Law and Policy Clinic, 2012, p. 36). The extent of protections vary widely, from simple nuisance complaint protection to bans against the passage of restrictive laws by local jurisdictions. An example of the latter is New York State, where Article XIV, Section 4, of the New York State Constitution authorized the creation of agricultural districts which prohibit "local governments from enacting and administering comprehensive plans, laws, ordinances, rules, or regulations that unreasonably restrict or regulate farm operations within an agricultural district, unless it can be shown that the public health or safety is threatened" (Guardino, 2015, p. 1).

- *Streamlining Permits*. Some governments have eased the process of applying for agriculture-related permits to encourage local food production. For example, in Baltimore City, Maryland, the Power in Dirt initiative simplifies the process of converting vacant city-managed lots into community gardens and reduces costs for water access (Baltimore City Planning Commission , 2013, p. 29).

Planning Activities (Land Use and Zoning)

Planners have many tools at their disposal to encourage the development of local foodsheds, and those tools are frequently discussed in local food literature.

- *Buy-in of the Planning Community*. First and foremost, as was stated under the list of limitations on local food, the planning community is less invested than it could be in food policy. In *Community Food Assessment: A First Step in Planning for Community Food Security*, Pothukuchi articulates a detailed argument as to why planners should be involved in food assessments and food policies in general. Her seven main rationales for this involvement are (1) "Urban planners are trained about communities; their social, political, economic, and environmental functions; and their processes and policies," (2) "Planners are able to analyze the spatial dimensions of community needs, concerns, resources, and goals and translate these into spatial and land-use policies," (3) "Planners are trained to conceptualize, collect, organize, and disseminate information about communities and related indicators to both inform policies and evaluate their outcomes," (4) "Planners are linked to decision makers and decision arenas in public, private, and nonprofit sectors," (5) "Planners are trained to lead, facilitate, and manage community-based group processes involving stakeholders, organizational partners, and community residents," (6) "Planners bring interdisciplinary perspectives and have the capacity to identify and analyze new community concerns at the intersection of multiple disciplines and to incorporate them into planning," and (7) "Planners are concerned with such overarching and normative goals as healthy communities, sustainable communities, or community quality of life" (Pothukuchi, 2004, p. 360-362).

- *Specific Land Use/Zoning Policies to Promote Local Food*. Land use and zoning policies, both the jurisdiction of local planners, can be used to directly support local food systems. Multiple examples of such policies exist in local food literature. For instance, smart growth land use policies can be implemented to "encourage development and utility extension where public

infrastructure already exists and discourage development in less populated areas or where productive land exists" (Center for Environmental Farming Systems, 2010, p. 59). Since housing and maintaining a sufficient workforce can be a problem for farms, zoning ordinances can be revised to permit more than one household on a farm, enabling onsite housing for interns and temporary workers.

In urban areas, cities like Berkeley, California have designated areas for community gardens in their official plans (Hagey, 2012, p. 37). Similarly, Seattle's land use codes require one garden per 2,500 residents.

Beyond bolstering production, access to food can also be supported through land use policies. Seattle's Office of Housing and Community Development is working to ensure access to gardens near public housing (Biehler, 1999, p. 8). In general, housing authorities should coordinate with planners to site public housing near to farmers' markets or other sources of food. In the area of broader healthy food policy, which in turn supports local produce as a healthier option, some of the literature advocates for using zoning regulations to limit the development of fast food restaurants (Maryland Department of Planning, 2012, p. 91).

Zoning can also be a tool for supporting the processing of local food. For instance, in Maryland some counties have revised their zoning codes to allow value-added infrastructure in areas zoned for agriculture. As a specific example, Calvert County, Maryland conditionally permits "agritourism enterprises, commercial kitchen (farm), farm brewery, farm distillery, farm stand, and farm winery; ecotourism enterprises and hunting services" in agricultural zones (Maryland Department of Planning, 2012, p. 61). With Planning Board approval, Carroll County allows "food processing and packing plants, wineries, slaughterhouses, and plants for the processing of animal by-products" if they are a certain distance from homes and schools zones (Maryland Department of Planning, 2012, p. 61).

- *Inclusion in Comprehensive Plans*. Given that comprehensive plans serve as a vision for the future of a local community, it is crucial that local food policy be incorporated into the plans. Many jurisdictions around the U.S. have begun to do just that, whether by including food policies throughout the relevant sections of the document (i.e. land use, natural resources, health, economic development, etc.) or through the creation of an entire food policy section (Maryland Department of Planning, 2012, p. 25). The plans should then detail specific actions that will be taken to improve the local food system, such as the type of strategies highlighted in the previous bullet.

Government Efforts to Improve Coordination of Local Food Policy

Since food policies touch so many areas of policy and regulation throughout multiple levels of government and the economy, one of the most important tasks that governments and local food policy advocates can undertake is to increase the coordination among all involved actors. Existing efforts to improve coordination include the formation of food policy councils, food system assessments, food system plans, strengthening the urban-rural linkage within the food system, and larger regional coordination frameworks.

- *Food Policy Councils*. Over the last decade, food policy councils have become an increasingly common tool to bring together the diverse stakeholders involved in food system policy. They exist on both the state and local level, and generally involve "farmers, city and state officials, nonprofit organizations, chefs, food distributors, food justice advocates, educators, health professionals, and concerned citizens" (The Harvard Law School Food Law and Policy Clinic, 2012, p. 1). As of 2012, the Community Food Security Coalition (CFSC) found that there were 193 food policy councils in the U.S. In the Chesapeake Bay region, the literature lists statewide councils in New York, Washington, DC, and Virginia.

- *Food System/Foodshed Assessments and Plans*. The last fifteen years have seen the

proliferation of foodshed analyses and food plans throughout the U.S. One of the first assessments was completed in 1993 in Los Angeles, with a study titled *Seeds of Change: Strategies for Food Security for the Inner City* (Pothukuchi, 2002, p. 1). It led to interest in quantitative analysis of the food systems that exist around the nation, determining how much food is provided locally, identifying populations that are underserved, categorizing barriers to improvement, and proposing policy tools that could improve the system.

Some areas have taken these assessments a step further by developing comprehensive food system plans detailing the steps needed for foodshed development going forward. Examples of such plans can be found for Buffalo, New York, Central Ohio, Clackamus County, Oregon, Headwaters Region, Oregon, the Hudson Valley, Northeast Ohio, North Kootenay Lake, Santa Fe, New Mexico, and Vermont.

- *Strengthen Urban - Rural Linkages*. It is unlikely that urban areas would be able to produce ample food to become self-sufficient at the local level. Therefore, food system planning requires the development of strong urban-rural linkages to provide enough customers to rural areas and the necessary food for urban consumers. Strategies found in the literature include face-to-face contact between stakeholder groups, hire of urban-rural food coordinators at the state level, and improved consumer education as to available local options (discussed further in the education and marketing sections) (Christ, 2013, Page 29). Direct marketing such as farm-to-school programs and community supported agriculture (CSA) can also serve to link the areas, particularly if urban and rural farmers collaborate (Masi, 2010, p. 92).

October 3-7, 2016 was the most recent of Virginia's annual Farm-to-School Week, part of the National Farm-to-School Month. Source: Virginia Department of Education.

- *Regional Coordination*. The Northeast Ag Works! Project's 2006 paper *Regionalist Approaches to Farm and Food System Policy; A Focus on the Northeast* argues that food system policies need to be addressed on a regional basis, given that regional food still meets most definitions of "local food." Also, "there are consumer preferences—related to product freshness, the demand for traceability, to cultural or ethnic heritage, to some a desire to support the local economy—that are best or even uniquely met by a regional agricultural system" (Northeast Ag Works! Project, 2006, p. 5).

  Regional food coordination can take many forms. On the more structured side, 200 examples exist of regional interstate compacts that address various policy issues. Such compacts are binding legal contracts, often requiring approval by Congress. The compact most relevant to food policy is the expired Northeast Dairy Compact, approved by Congress in 1996, which fixed minimum milk prices higher than the federal minimum price to support the local dairy industry (American Farmland Trust, 2014, p. 124). Another form of regional state government coordination is interstate commissions, many

of which also include federal representatives. Examples that involve the Bay Region states include the Chesapeake Bay Commission, the Appalachian Regional Commission, and the Delaware River Basin Commission. These commissions range from formal agencies that have oversight and decision-making authority to appointed groups that research and report on a topic (American Farmland Trust, 2014, p. 125).

Informal agreements like memoranda of understanding (MOU) can be signed by states as more nonbinding, voluntary agreements to implement certain policies or pool resources to address an issue. For instance, the Regional Greenhouse Gas Initiative (RGGI) is an MOU between Northeastern states to partake in a regional carbon dioxide cap-and-trade program.

The least formal version of regional coordination comes in the form of "regulatory harmonization and reciprocity," where a state adopts a law which serves as an example for surrounding states who adopt similar policies (American Farmland Trust, 2014, p. 126). For example, New England states have adopted renewable portfolio standards (RPS) that require the purchase of a certain percentage of renewable energy by utilities. They vary from state to state, but the similarity of laws in the region has helped to drive down greenhouse gas emissions in the area, benefiting residents of each state.

2. Production of Local Food

Programs and policies that support the production of local food take many forms, addressing many of the land, labor, and capital resource limitations highlighted above.

- *Government Grant/Loan Programs*. State and local governments use a wide variety of grant and loan programs to support the production of local food. They are generally used to either inspire new farmers to take up the business or to incentivize farmers to produce specific agricultural products. For example, New York recently established the Beginning Farmer's NY Fund which includes $1 million in grant farms for "new or expanding small farms that reside on less than 150 acres" (Barclay, 2015, p. 2). Also, their Young Farmers Loan Forgiveness Program provides up to $10,000 in education loan forgiveness for new farmers. Numerous cities including Madison, Cleveland, and Boston provide grants to residents and nonprofits for developing urban agriculture projects (Hagey, 2012, p. 35).

  Some programs even seek to leverage private market sources, such as the Maryland Agricultural & Resource-Based Industry Development Corporation (Marbidco) Urban Agriculture Lending Incentive Grant which offers small grants to supplement commercial loans (Baltimore City Planning Commission, 2013, p. 26). Loan programs do tend to be a particularly popular tool since they are less costly and have to be paid back at some point, yet they still provide farmers a lower interest than they would find on the private market.

- *Government Crop Insurance*. Federal crop insurance, which protects agricultural producers against loss of crops or revenue, has traditionally been structured to support commodity crops rather than the diverse produce needed for viable local food systems. As a result, local food literature has recommended revising the insurance to base it on whole-farm revenue rather than specific crops and making it more user friendly for small farms (Reynolds-Allie, 2013, p. 2). Fortunately, the 2014 Farm Bill did introduce a new Whole Farm Crop Insurance program.

  Some states have created programs to assist producers with closing gaps in insurance coverage. The North Carolina Division of Soil and Water Conservation (DSWC) district runs an Agriculture Drought Recovery Program, which covers "75 percent of the cost of restoring drought-damaged pastureland and providing additional water for livestock and crops produced by farmers below a set income threshold" (Center for Environmental Farming Systems, 2010, p. 41). After a particularly devastating freeze in California, the City of Fresno offered no-interest loans to

small producers to help them get through the season.

- *Tax Incentives*. Another method that governments use to support the finances of farmers is tax incentives or exemptions. For instance, some local jurisdictions in Maryland offer property tax credits for farmers who preserve their land, ensuring that the land remains available for production (The Maryland Agricultural Commission, 2006, p. 20). Also in Maryland, the state has a preferential property tax assessment for agriculture where the land is valued based on the worth of the agricultural income rather than the standard "best use" value (Gardner, 2002, p. 70). In Missouri, farmers who sell their products on-farm are exempt from local licensing and taxes (Hamilton, 2011).

  Tax incentives have proven successful at reducing the loss of productive farmland. The Maryland preferential property tax has reduced the annual conversion of farmland by more than half, from 7.58 percent to 3.58 percent annually.

- *Availability of Land*. Since finding land for agricultural production can be a major barrier to new farmers, many programs have been developed to address the issue.

  - *Identifying Land*. Discovering what land can be used for agricultural production can be difficult for interested farmers, especially in urban settings. An example of a government program to help overcome this barrier is The Diggable City Project of Portland, OR, launched in 2002, were the local Food Policy Council coordinated with urban planning students to locate and map suitable urban agriculture land (The Harvard Law School Food Law and Policy Clinic, 2012, p. 55). In the Chesapeake Bay region, Washington, DC also maintains an inventory of land suitable for gardens.

  - *Using Public Land*. The City of Cleveland has coordinated with the nonprofit Neighborhood Progress for a land grant program, enabling private citizens to use vacant public land for community gardens or urban farms (Hagey, 2012, p. 35). In 2010, Baltimore made twenty public land parcels sized at an acre or more available for urban food production, allowing farmers to lease the land for a nominal fee (Leib, 2013, p. 339).

  - *Facilitating Land Transfer*. Governments can also facilitate the transfer of land from farmer to farmer in the private sector, and Farm Link programs exist in Maryland, New Jersey, Virginia, and Pennsylvania to "match interested farmers with interested landowners or retiring farmers" (Delaware Valley Regional Planning Commission, 2011, p. 33). Some of the literature also advocates for reducing taxes related to the transfer of agricultural land to new farmers.

  - *Agricultural Land Preservation Programs*. As was stated above, development pressures have led to a drastic decline in the amount of agricultural land over the past few decades. In response, all 50 states have created some form of agricultural land preservation program or programs (Hardesty, 2010, p. 3). For example, the New York State Department of Agriculture and Markets oversees two preservation grant programs, the first which helps fund local development of preservation plans and the second which helps local governments purchase conservation easements (Stirpe, 2013, p. 2). These easements restrict development on the land in perpetuity, ensuring that it is preserved for farmland and open space. In 1977, Maryland and Massachusetts were the first states to adopt easement programs (Bowers, 2016). The Maryland Agricultural Land Preservation Foundation (MALPF) has preserved nearly 300,000 acres in the State since then (MALPF, 2016, p. 1). Initiated in 1988, Pennsylvania now has the largest land preservation program in the country (500,000 + acres).

The American Chestnut Land Trust (ACLT) in Calvert County, MD is offering some farmland on properties it has conserved to farmers. Photography by Gregory Bowen.

  - *Coordination with Land Trusts for Land Access*. Nonprofit organizations like land trusts often coordinate with farmers to provide land. For instance, the Northern Virginia Conservation Trust leases land to urban agricultural farmers (Urban Agriculture Task Force, 2013, p. 32).

- *Human Resources*. Farmers in the United States struggle both with hiring sufficient/qualified labor and with a lack of insurance and other employee benefits, and the literature contains recommendations to resolve these shortfalls.

  - *Labor Support Programs*. Several examples of such programs are mentioned in the literature. In New York State, the Housing Development Fund provides loans which, among other things, can be used to develop joint farm housing for workers (Stirpe, 2013, p. 2). The Clackamus County Agriculture and Foodshed Strategic Plan advocates for shared labor programming, where the government would assist farmers with sharing seasonal workers to maximize labor use (Cogan Owens Cogan, LLC, 2012, p. 40).

  - *Farmer Employee Benefits*. Both health and retirement benefits are often too expensive for farmers to purchase, and the literature advocates for nonprofits or the government to step in and assist them with doing so in order to make the profession a less risky enterprise. The *Greater Philadelphia's Food System Plan* calls for the establishment of a state-supported 401(k) for farmers (Delaware Valley Regional Planning Commission, 2011, p. 35). The Maryland Farm Bureau once had a group insurance program to make health insurance more affordable, but it has since been discontinued (Maryland Agricultural Commission, 2006, p. 14). In North Carolina, the AgriSafe Network has helped coordinate with farmers to reduce out-of-pocket health care costs with funding from charitable nonprofits (Center for Environmental Farming Systems, 2010, p. 41). As was mentioned before in this report, the Affordable Care Act has also expanded health insurance options for farmers in the past few years.

- *Training for Farmers and Other Local Food Business Operators*. As was stated above, one of the factors that limit the development of local food production is that educational/professional development opportunities are also in low supply for farmers in the U.S. There are numerous examples of the types of programs that have been initiated to fill this need:

  - *Training for New Farmers*. One type of training program focuses on assisting individuals interested in farming to learn their new trade. Future Harvest-CASA in Maryland trains new farmers in their rapidly expanding Beginner Farmer Training Program, where they host workshops on urban farming including "market essentials, small farm business planning, soil fertility and conservation, season extension, management of pests, disease and weeds, GAP and post handling, and organic certification, and integrating livestock onto a small farm" (Baltimore City Planning Commission, 2013, p. 58). Federal funding exists for these types of programs in the form of the Beginning Farmer and Rancher Development Program. In Virginia, Virginia Tech and Virginia State University have organized the Virginia

Beginning Farmer and Rancher Coalition which provides training, apprenticeships, and labor opportunities to interested new farmers (Virginia Cooperative Extension, 2012, p. 2).

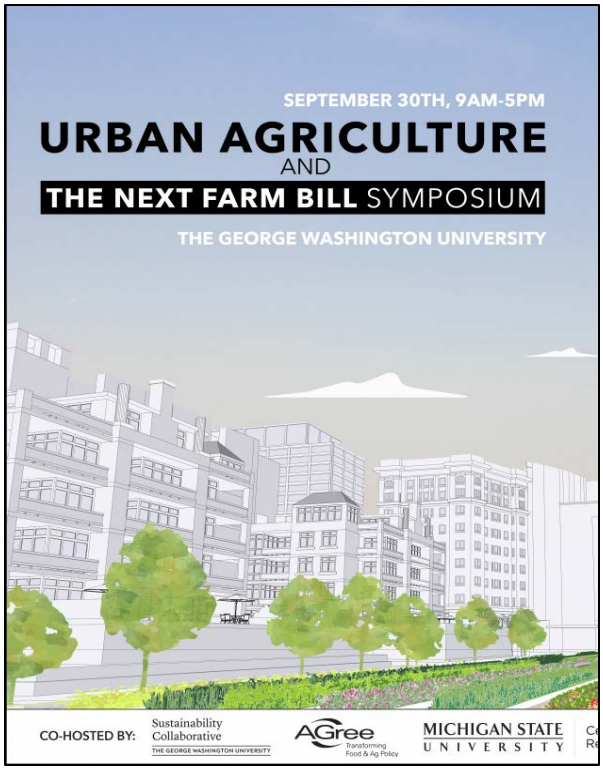
- *Farmer Mentoring Programs*. A more specific type of training program for new farmers that has been implemented is farmer-to-farmer peer mentorship programs, where experienced farmers are partnered with beginning farmers. This provides an opportunity to "exchange ideas, ask questions, and seek advice" (Letts, 2014, p. 63).

- *Food Safety Training*. Food safety laws are complex, and training programs have been developed in every state to assist producers and processers with navigating them, ranging from informational brochures and websites to more hands-on programs (Colorado Department of Public Health and Environment, 2012, p. 4).

- *Cooperative Extension Programs*. State agricultural cooperative extension programs provide a variety of educational programming opportunities for farmers around the nation. For example, the Ohio State University Extension in Cuyahoga County provides grants and classes to interested urban farmers (Hagey, 2012, p. 39). Others provide business training, since farms are businesses and farmers need to know how to balance books, advertise, and study market demands.

- *Urban Agriculture and Community Garden Support*. While it is unlikely that urban agriculture projects in a metropolitan area would ever be able to fully support the produce needs of that city, they can play a crucial role in increasing the productivity of the local foodshed. Beyond food production, urban farms and community gardens provide educational opportunities for residents, inspire future generations of farmers, and bring agricultural enterprise to low-income city areas that otherwise would not have any affordable way to grow their own food (Virginia Cooperative Extension, 2014, p. 19). According to National Gardening Association's Impact of Home and Community Gardening in America Survey, in 2009 23 percent of all households grew vegetables, 12 percent grew herbs, and 10 percent grew fruit trees (Martinez, 2010, p. 9).

  Due to these benefits, state and local governments around the U.S. have initiated programs and passed laws to support the development and sustainability of urban agriculture and community gardens. For example, Buffalo, New York "leases more than 30 publicly owned vacant lots for community gardens to Grassroots Gardens, a nonprofit group that acts as a liaison between the city and community gardeners and provides insurance to gardens. Many of these gardens also receive subsidized or free access to public infrastructure such as water supply and electricity" (Raja, 2008, p. 10). In 2014, Washington DC passed the DC Urban Farming and Food Security Act, which creates a new initiative to lease vacant lots for urban agriculture and community gardens, provides 90% tax abatement to landowners who use their land for agriculture, and gives tax credits to individuals and businesses that donate local food to food banks.



September 30, 2016, George Washington University hosted a Urban Agriculture Symposium, bringing together policymakers, academics, and practitioners to discuss today's science, future research, and ways to promote the role of urban areas in the food system. Source: George Washintgon University Food Institute.

Some municipalities even oversee the administration of a network of community gardens. Seattle, Washington started the P-Patch program in the 1970s, which manages more than 60 gardens on 23 acres of city land (Raja, 2008, p. 10). Tasks it undertakes in this management include services to: "evaluate potential of proposed garden site, help residents secure access to the land (through lease or purchase of public or privately owned land, including through the city's Neighbor- hood Matching Fund), help with soil testing and recommend potential remediation techniques, lead a community group through a garden design process, manage plot assignment within the garden, attend to emergencies, provide materials and educational resources, facilitate dispute resolution in case of conflicts", etc. ((Raja, 2008, p. 10-11). Over 6,000 residents participate in the program, and in addition to feeding their own families they also donate tons of produce to food banks every year.

- *Season Extending and Crop Diversity Strategies*. Consumers are used to having produce available year round in supermarkets, so the limited season in which many agricultural products can be grown in regions of the U.S. is a major factor limiting consumer purchases of local foods. However, farmers can use a variety of tools such as greenhouses, hoophouses, and cold frames, to extend their growing season. The literature advocates for states to help farmers to cover the costs of constructing such tools as they can be crucial to the profitability of a farm (Starr, 2003, p. 317).

  Another strategy that can boost farm viability is the diversification of the produce grown by the farm. Farms need to grow more than one or two forms of produce in order to adequately satisfy the needs of local consumers (Halweil, 2002, p. 29). Beyond just growing additional food, many farms diversify to growing non-food plants such as trees and flowers for sale (Hagey, 2012, p. 33).

- *Programs to Support Certification*. The capital and labor required to obtain food safety certifications can be prohibitive for small local producers. This led Massachusetts to establish an alternative state-run Commonwealth Quality Seal program, where the state provides training at the end of which vendors receive a seal certifying that the state has found their practices to be safe (The Harvard Law School Food Law and Policy Clinic, 2012, p. 92). The literature also suggests that farms can use group certification to defray the costs among a number of producers (ZumBrunnen, 2015).

- *Private Sector Strategies to Capitalize the Local Foodshed*. Beyond government grant programs, the private sector has also stepped up to support the development of local food production and processing capacity. This financial support can take various forms, ranging from grants to loan underwriting.

  Numerous examples exist in the literature. For instance, the Rural Advancement Foundation International–USA's (RAFI-

USA's) Tobacco Communities Reinvestment Project invests in local food enterprises with a mind towards social return rather than just financial return (Center for Environmental Farming Systems, 2010, p. 53). The Golden LEAF Foundation provided funds to the North Carolina Rural Economic Development Center which helps underwrite loans to assist communities impacted by the decline in tobacco. In New Mexico, Finance for Food and Farming coordinates a number of groups that provide micro-financing for small food businesses in the state.

In New England, the Carrot Project "creates, tests, and operates financing programs that support profitable, sustainable farm businesses that are unable to find traditional financing by partnering and leveraging the assets of community-based lenders, socially responsible investors, farm support organizations, and farmers" (Matson, 2013, p. 433). The Mid-Atlantic Farm Credit's Farm Fresh Financing Program provides loans for new small, local farms in that region (Baltimore City Planning Commission, 2013, p. 26). Finally, in Vermont the Intervale Center runs a Farm Venture Program which leases land, equipment, and storage space at reduced rates to new small farming operations (Barham, 2012, p. 27).

3. Processing of Local Food

The availability of processing infrastructure is crucial to enabling local farmers to scale up their operations. Policies and programs to support local food processing capacity range from more general grant initiatives to specific ones addressing particular processing needs.

- *Programs helping processers to find space*. One barrier to the development of processing infrastructure is inability to find affordable space, especially for startups in urban areas. In response, some jurisdictions have begun to assist new processors with locating space. For instance, in their plan to improve the New York City (NYC) Food System, the NYC Council has utilized a Small Manufacturing Investment Fund to assist in the development of new manufacturing space (including food processing) and they have partnered with NYC Economic Development Corporation to locate vacant buildings that could be renovated and leased to small manufacturers (NYC Council, 2010, p. 36).

- *Make storage facilities available*. Storage facilities, a specific subset of processing infrastructure, are mentioned in the literature as particularly lacking in areas of the United States. Insufficient storage can severely limit farming and processing operations when seeking to scale up their production. Fortunately, some programs have been developed to assist in the construction of storage. For example, the USDA's Farm Storage Facility Loan Program (FSFL) provides low interest financing to build or upgrade farm storage and handling facilities.

- *Incubator Kitchens*. Incubator kitchens are an innovative tool that some communities use to provide processing capacity to local agricultural producers. In such incubators, members share commercial kitchen space and the equipment needed to process their product. Examples in the Chesapeake Bay foodshed from the literature review include the Food Business Incubator Center at Delaware State University, Union Kitchen in Washington, DC, and B-More Kitchen in Baltimore.

- *Increase the number/capacity of available slaughter facilities*. As was stated in the barriers to local food production, there is a dearth of meat slaughtering facilities in the United States. The literature identifies several strategies to increase the availability of slaughter facilities, ranging from mobile slaughtering and processing facilities such as the Island Grown Farmers Cooperative in northwest Washington (University of Michigan, 2009, p. 62) to more wholescale policy changes like shifting the existing national inspection system to a regionally controlled system which might be better supported and responsive to local concerns (Angelo, 2011, p. 383).

4. Distribution of Local Food

Direct Marketing

Direct marketing, or selling products straight to customers rather than through wholesalers, enables farmers to keep a larger percentage of the revenue of their product and sell at a price that actually reflects the cost of production (O'Hara, 2011, p. 7). One study found that moving to direct marketing could increase a farm's production "from over 50 to 600 percent higher, depending on the products sold and individual farm practices" (Local Economies Project of the New World Foundation, 2013, p. 8). Therefore, many of the programs that seek to support local food do so through bolstering direct marketing opportunities, including farmers' markets, community supported programs, etc. Direct marketing represents a small but growing share of the U.S. agricultural market, representing 0.8 percent in 2007 which is a 120 percent increase from 1997 (Martinez, 2010, p. 5).

- *Farmers' Markets*. Farmers' markets, where a number of farmers come together in a centralized location to sell their wares directly to consumers, are probably what most consumers think of when they are seeking to purchase local food. The consolidation of the food industry in the early 1900s drastically reduced the number of farmers' markets in the U.S., which dropped to only 340 in 1970 (O'Hara, 2011, p. 3). However, this trend has dramatically reversed and today there are over 8,000 around the nation (USDA Economic Research Service, 2015, p. 2).

  Farmers' markets require a large infusion of capital to start up, due to infrastructure and other related costs, and government and nonprofit programs have sprung up to help cover these costs and provide other support. "In 2012, Florida, Georgia, Mississippi, New York, North Carolina, and South Carolina each appropriated funds ranging from $50,000 to $7 million for construction, repair, and maintenance of capital infrastructure for farmers' markets" (USDA Economic Research Service, 2015, p. 2). Another area targeted for support is assistance with marketing to draw additional customers to the markets. For instance, Delaware promotes farmers' markets on their state websites and maps (University of Delaware Center for Energy and Environmental Policy, 2011, p. 23). Finally, the other major form of farmers' market support programs is those seeking to expand access to the markets for low-income individuals and seniors.

Chesapeake's Bounty in North Beach Maryland only sells food from the Chesapeake Bay watershed. Photography by Greg Bowen.

- *Community Supported Agriculture (CSAs) & Other Subscriptions*. A CSA is an organization where customers buy a "share" of the produce from a farm and then they receive deliveries of produce on a weekly basis. Because CSA members typically pay in full ahead of the growing season, some of the inherent production risks are lessened for the farmer (Martinez, 2010, p. 7). The number of CSAs in the U.S. has blossomed from only 2 in the mid-1980s to several thousand today, with over 70 in the Washington region alone (Regional Agricultural Workgroup, 2012, p. 20). The community-supported food production model is not limited to agriculture. Community supported fisheries are also currently growing in popularity in the U.S. (Olson, 2014, p. 107).

- *Mobile Vendors*. Mobile local food can include "everything from mobile farmers markets and mobile grocery stores to food trucks and produce carts" (The Harvard Law School

Food Law and Policy Clinic, 2012, p. 25). Food trucks in particular have become popular in cities around the U.S. Governments can support mobile vendors in a number of ways, including zoning regulations that permit mobile vending, streamlining mobile vending permits, providing funding, and helping potential vendors to connect with nonprofits that might provide assistance. For example, New York City has a Green Cart Initiative that provides loans, marketing support, and technical assistance for approximately 1,000 mobile food cards that sell fresh produce in the City (Neuner, 2011, p. 28). Kansas City, Missouri reduces permitting fees and expands available vending locations for carts that sell healthy food.

- *On-Farm Sales*. On-farm sales are those where farmers either set up a produce stand on their property next to the road or establish a pick-your-own operation (PYO) (Coit, 2009, p. 11).

- *Farm to Institution*. As the benefits of local food have become more widely known, institutions around the U.S. have begun to procure more of their food locally. Institutions include hospitals, schools, higher education institutions, and correctional facilities. This is a market with significant potential for local foods, as it is estimated that nearly half of the food in America is consumed in institutions (Peterson, 2010, p. 234).

    - *Farm to University Programs*. Just as universities often stand on the vanguard of social change, they have been some of the first institutions to adopt local food programs. In the Chesapeake foodshed, the University of Maryland has adopted a goal of 20 percent local and sustainable food by 2020 (Lilly, 2012, p. 4). Also, Virginia Tech has undertaken similar goals plus the creation of a three-acre university garden at a local farm.

    - *Farm to School Programs*. Schools are the institutions most often discussed in the literature and, according to USDA, as of 2015 there were 4,322 school districts with farm to school programs (USDA Economic Research Service, 2015, p. 2). This is more than 40 percent of schools in America, and a 430 percent increase in less than a decade. The programs include school gardens, field trips to farms, local food taste tests, and actually incorporating the local food into meals served at schools. It is notable that only 44 percent of schools with programs purchase food directly from farms, while almost two-thirds procure local food from distributors.

      There is governmental support for farm to school programs at both the federal and state level. In 2010, the federal Healthy-Hunger Free Kids Act created a USDA farm to school program with funding to assist districts with planning and implementation of their own programs (USDA Economic Research Service, 2015, p. 56). Also, the 2014 Farm Bill authorized a pilot program permitting some states to use USDA free and reduced priced meals (FARM) funding (School Breakfast and Lunch programs) on local, unprocessed food, something that had not been allowed before.

      One example at the State level is New Jersey's "Jersey Fresh Farm to School Week" which promotes the use of local food in schools. Another is Oregon's grant program which "provides funding of up to 15 cents per lunch to schools to use Oregon-grown, processed or manufactured food in school meals and to provide education related to local agriculture" (USDA Economic Research Service, 2015, p. 58).

      On the nonprofit side, multiple organizations promote farm to school programs. For instance, the National Farm to School Network provides support to state and national policymakers as they develop regulations and legislation (University of Delaware Center for Energy and Environmental Policy, 2011, p. 23). The Network is

currently involved in more than 2,000 programs in 40 states.

- *Direct to Retail/Foodservice Marketing*. Beyond government and nonprofit institutions, private market retailers ranging from individual restaurants to large supermarkets have also begun to implement local food programs. According to Walmart, 20 percent of their summer fresh produce is produced in-state (King, 2010, p. 20). Wegmans, a regional supermarket chain in the Mid-Atlantic, counts well over 1,000 local produce suppliers. When produce is in-season, local food accounts for about 30 percent of fruits and vegetables sold at Wegmans. Whole Foods goes further to directly support local production, providing $10 million in low-interest loans for local producers (Coit, 2009, p. 12). Some of the literature advocates for governments to require retail to procure part of their produce locally, but no examples of such laws exist in the literature today.

- *Laws Supporting Direct Marketing*. Multiple states have passed laws that generally support the development of direct marketing. For example, in 1981 New York enacted a law declaring that it is their intent "to encourage expanded production of farm and food products through providing increased opportunities for farm and food product producers within the state to wholesale and retail their products directly to consumers on a state, regional and local basis" (Hamilton, 2011). The law authorized a number of activities to support this goal, including assistance with marketing, development of institutional programs, technical assistance, etc.

Other Distribution

- *Food Hubs and Other Aggregators*. Local, small producers often have difficulty finding the time and sufficient labor to manage the myriad of details needed to market and distribute their products. This has led to the development of intermediary organizations to assist with this coordination, and to help link them with customers. Food hubs are the type of organization most often discussed in the literature, and their defining characteristics include:

  1. "Carries out or coordinates the aggregation, distribution, and marketing of primarily locally/regionally produced foods from multiple producers to multiple markets.
  2. Considers producers as valued business partners instead of interchangeable suppliers and is committed to buying from small to mid-sized local producers whenever possible.
  3. Works closely with producers, particularly small-scale operations, to ensure they can meet buyer requirements by either providing technical assistance or findings partners that can provide this technical assistance.
  4. Uses product differentiation strategies to ensure that producers get a good price for their products.
  5. Aims to be financially viable while also having positive economic, social, and environmental impacts within their communities, as demonstrated by carrying out certain production, community, or environmental services and activities" (Barham, 2011, p. 4).

  An example in the Chesapeake Bay foodshed is the Local Food Hub of Charlottesville, VA, which consolidates and processes food from 50 local farmers and sells it to more than 100 Virginia institutions and businesses. USDA reports that there are currently 302 food hubs in the U.S. (USDA Economic Research Service, 2015, p. 2). The literature notes that, while grant funding or other capital infusions seem to be necessary to initiate most food hubs, most of them are able to become profitable once fully implemented (Fischer, 2013, p. 5).

5. Demand for Local Food

Market Factors

Consumer preferences and perceptions have been a major factor driving growth of the local food industry over the past few decades. In the 2011 the 2011 U.S. Grocery Shopper Trends

Survey of consumers in the U.S., 86 percent stated that when they choose a food store the availability of local food options was important (Barham, 2012, p. 10). In addition, more than 80 percent of shoppers said they purchased local foods occasionally and 9 percent bought local whenever possible (United State Department of Agriculture Economic Research Service, 2015, p. 30).

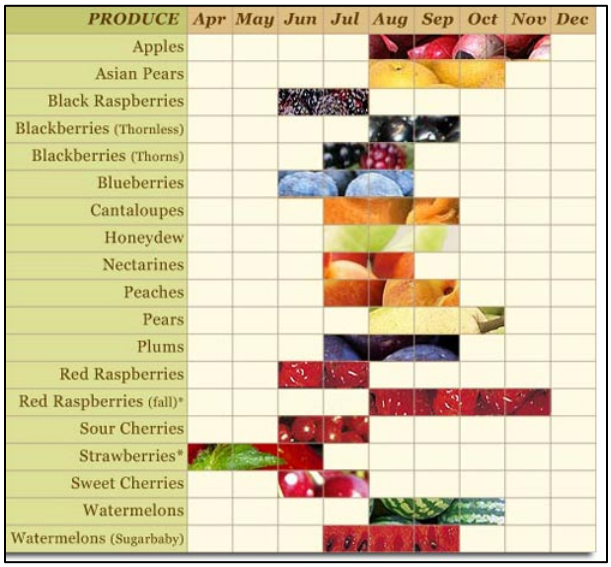
As to the reasons why consumers prefer local food, the survey a found that "freshness was the most frequent reason (83 percent) cited, and taste was the number three reason (with 56 percent) for buying local food." Other key reasons for consumer preference found in literature reviews include that buyers "believe local food is of better quality, want to support local businesses and producers, want to know the source of the food, want food with greater nutritional value, prefer food grown through environmentally sustainable practices (e.g., organic), enjoy the shopping experience, can obtain a greater variety of food, and can pay lower prices" (O'Hara, 2011, p. 7).

There is some regional variance in the level of interest in local foods, with consumers in the Northeast shopping local more frequently than in other areas of the country (United State Department of Agriculture Economic Research Service, 2015, p. 30). The literature is less clear as to whether educational and income levels factor into preference for local food. Some studies have found that people with higher levels of income and education more frequently purchase local, while others found that these factors have no impact (Martinez, 2010, p. 29).

Government Programs

- *Public Education to Increase Market Demand*. While few examples exist in the literature of education programs for the broader public, it is generally recommended that consumers be taught about the seasons where food is available, what food is available, why local food is recommended, how to prepare local (i.e. likely less processed) food, etc. (Christy, 2014, p. 18). For example, parks and recreation departments can host educational sessions, social services departments can distribute information to low-income individuals about what local options are available, and health departments can provide nutrition courses. While nutrition programs do not tend to be specifically in support of local food consumption, if they successfully move more consumers to diets that include healthy produce on a regular basis the ripple effects will likely help local food.

  One area where there is a lot of programming is public schools, who have begun to incorporate healthy eating in general and local food in particular more and more into their curriculum. In Baltimore, MD, the school system has partnered with a 33-acre farm to serve as an "educational resource campus for Baltimore City school children. The farm provides opportunities for students to participate in every aspect of food preparation and prepares them to lead 21st century sustainability efforts. In the 2012-2013 school year, students and staff at more than 162 City Schools took advantage of the farm's programs; including more than 3,300 students from 107 schools who visited the farm" (Baltimore City Planning Commission, 2013, p. 33).



The Maryland Department of Agriculture (MDA) posts calendars on its website as to when various produce is in season, suggesting to consumers when they can seek such food from local farmers. Source: MDA website.

- *Local food Procurement Policies*. State and local governments have immense purchasing power which can be used to support the local food economy. The literature estimates that every dollar spent on a local farm "has a multiplier effect of two to three times more in the local economy compared to that same dollar spent on an equivalent non-local business" (Sanders, 2011, p. 15). Today, a majority of state governments have procurement policies that favor local over non-local food, whether it be for correctional facilities, hospitals, universities, schools, etc. (Scully, 2011, p. 1). These policies range from tie-breaker preferences when comparing two offers to price percentage preferences to definite quotas for local purchases.

  For example, Colorado gives a 5 percent preference to local foods and Louisiana has a 10 percent preference (Center for Environmental Farming Systems, 2010, p. 48). Montana's preference policy simply requires that the quality be equal and the local price be "reasonable". Illinois has a policy that encourages that at least 10 percent of food procurement dollars go to local foods.

  In addition to preferences, state and local governments can make procurement procedures easier for small, local businesses to navigate. For instance, governments can increase the length of their bidding process to allow local farms, which require more lead-up time to increase production, to have sufficient time to prepare (Brislen, 2015, p. 19).

- *Incentives for Retailers*. Some governments have begun to work to increase both the availability of and demand for healthy, local produce by providing financial incentives for retailers who offer produce. These programs tend to target low-income areas where most food is purchased from small corner stores which generally lack stocked produce. While the programs do not tend to be specifically for local food, similar to health programs discussed above, increasing produce availability will likely help the entire agricultural production system including local farms.

  An example in the Chesapeake Bay region is the Richmond, Virginia Healthy Corner Store – Get Fresh Program. This program assists corner stores in food deserts with purchasing refrigerators for produce storage and with buying reduced-price local produce (Virginia Cooperative Extension, 2014, p. 6). In Washington, DC the FEED DC Act of 2010 created a Healthy Food Retail Program that provides financial and technical assistance to small retailers who sell healthy produce.

- *Marketing Programs*. Governments have undertaken various marketing programs to increase demand for local products from their jurisdiction.

  - *Local Food Target*. Some jurisdictions have launched campaigns challenging local residents to spend a certain percentage of their food purchasing on local produce. For example, North Carolina initiated their 10% Campaign in 2010, setting the goal for their state at 10 percent and polling residents to collect data as to whether the challenge was successful (Virginia Cooperative Extension, 2012, p. 30). In the first year, the 4,000 residents that responded to surveys spent more than $5.7 million on local foods.

  - *Local Food Guides*. Another example of government-supported marketing is web portals that detail the local food options available to retailers and consumers (i.e. local farms, farmers markets, CSAs, etc.). The Delaware Department of Agriculture coordinated with universities in the state to create a virtual "Delaware Farm Market" (University of Delaware Center for Energy and Environmental Policy, 2011, p. 39).

  - *Labeling Programs*. At least 48 states have implemented local food labeling programs to promote local agriculture to date (Onken, 2010, p. 1). These programs have the potential to be particularly impactful, since research shows that consumers are more likely to purchase

local food if it is labeled as such (Seeds of Change Appalachia Coalition, 2012, p. 26).

However, the literature also shows that regulation of this labeling is crucial. Deceptive advertising has the potential to sell non-local products as local, leading some states to restrict labeling to specific geographic areas. For instance, Vermont law limits food labeled as local to "food and other goods that originate in Vermont or within 30 miles of where they are being sold" (University of Delaware Center for Energy and Environmental Policy, 2011, p. 24). Quality control is also important since "the perceived quality of a local product has the strongest impact on purchasing likelihood" (Onken, 2010, p. 5). If locally produced food is perceived as subpar, all local food sales suffer. Therefore, states like New Jersey and California have put in place strict certification and program regulations that farms must meet before their products can receive state local labels.

- *Local Food Vendor Showcases*. Trade showcases are common in many fields of industry, since in-person meetings inspire trust and build stronger supplier-vendor relationships, and some jurisdictions have begun to include local agriculture in these showcases. New York State (NYS) has begun to do so, and within their International Restaurant & Food Service Show the NYS Department of Agriculture hosts a "Taste NY/Pride of New York" section (Endy, 2014, p. 11).

- *Agritourism Programs*. Agritourism is when farmers add experiential programming on-site (i.e. corn mazes, pumpkin patches, apple picking, pony rides) to draw tourists to their farm and supplant other farm income. This can be quite profitable, and in 2007 agrotourism bolstered farm profits by over $6.7 million in the Washington, DC region. (Regional Agricultural Workgroup, 2012, p. 19). Governments can support agritourism in multiple ways, such as road signs, adding farms to tourism materials, and the creation of Agricultural Enterprise Zones to permit agritourism activities (Maryland Department of Planning, 2012, p. 66).

6. Other Miscellaneous Factors Supporting Local Food Systems

- *Anti-Price Discrimination Laws*. Corporate processing facilities often provide larger producers with pricing preferences, a practice that some states have begun to regulate including South Dakota, Minnesota, Nebraska, and Missouri (Agribusiness Accountability Initiative, p. 5).

- *Measuring Success*. The saying goes, "What gets measured, gets done." It is crucial that any programs promoting local food are measured for success, so that resources can be targeted towards more effective programs and to demonstrate successes to other governments for implementation.

- *Access for Low-income and Seniors*. As was noted under factors limiting local food, both low-income individuals and senior citizens face challenges in accessing local, healthy food. Government programs to overcome this barrier are many. For example, the Food Bank of Delaware partners with farmers and community gardens to provide a supply of local food to customers (University of Delaware Center for Energy and Environmental Policy, 2011, p. 39). Most states have funded programs which allow the use of electronic benefit transfer (EBT) cards at farmers' markets so that Supplemental Nutrition Assistance Program (SNAP) can use their benefits to buy food there. New York City even provides coupons to low-income individuals for purchases at farmers' markets through the Health Bucks Incentive Program (Martinez, 2010, p. 39). Santa Fe's Food Policy Council has advocated for the city to purchase local food for senior center community meals (Santa Fe Food Policy Council, 2013, p. 8). Finally, the literature also advocates for mixed development which includes small grocery stores, farmers' markets, and community gardens, and establishing transit connections to local food

sources for individuals without personal vehicles.

- *Policies/Programs to eliminate food deserts*. Food deserts represent a serious threat to local food systems, as they indicate limited access of residents to all food, including local food. Strategies to address food deserts are frequently discussed in food system literature, ranging from limiting the construction of fast food chains to improving public transit routes to corner store conversion projects, etc.

- *Strategies to address climate change*. The agriculture industry is highly susceptible to the effects of climate change. As is stated in the Greater Philadelphia Food System Study, "agriculture is also detrimentally impacted by climate change through increased flood events, droughts, hurricanes, forest fires, and an overall loss of biodiversity" (DVRPC, 2010, p. 19). Therefore, policies and programs that reduce climate change and its impacts will benefit agriculture and local food systems, including sustainable agriculture production practices that reduce and/or sequester carbon such as "low till, generating alternative energy on a farm, seed saving, and planting cover crops" (DVRPC, 2010, p. 20).

- *Research*. Research is needed to better target policies and funding to support local food systems. Both the government and non-government actors can play a significant role in researching and planning regarding food system issues. The University of Delaware Center for Energy and Environmental Policy details a number of such research and technical assistance organizations in their 2011 report *Local Food System Policy and Planning for Sustainability*, ranging from academic programs to nonprofit think tanks studying everything from practices to improve farm production to sustainable practices to food marketing, etc. The 2014 Farm Bill requires the USDA to collect data regarding local food production and marketing, which serves as a starting point, but an annual appropriation and support from policymakers is needed to build the growing local food system movement.

- *Programs to support sustainable/ conservation practices*. "Farmers value their soil and water resources; therefore, environmental stewardship of their land and … working landscapes is critical to long-term profitability and sustainability" (Virginia Cooperative Extension, 2012, p. 7). Laws and programs have been established at every level of government and through nonprofit organizations around the United States to promote such sustainable practices, requiring and assisting farmers to be good stewards of the land. For an example in the Bay region, Maryland has implemented a number of programs such as (The Maryland Agricultural Commission, 2006):

  1. The Maryland Agricultural Water Quality Cost-Share (MACS) Program, which provides farmers with grants to cover up to 87.5 percent installation costs for best management practices (BMPs).
  2. Maryland's Cover Crop Program, which reimburses farmers who plant cover crops which both nourish the soil and limit erosion.
  3. The Conservation Reserve Enhancement Program, a partnership between the state and federal governments, through which the government pays landowners rent to take sensitive cropland out of production and install conservation practices.
  4. Assist for animal producers to transport excess manure (and thus nutrients) off their land.
  5. A Maryland Income Tax Subtraction Modification for certain conservation equipment.
  6. Grants to help the development of new animal waste technologies.

- *Eliminating Food Waste*. Estimates show that about 40 percent of food is thrown away in America each year (Sustainable Economies Law Center, 2013, p. 5). Beyond simply producing more food, building a strong food system also requires the reduction of waste to ensure efficient use of available food. Desire to reduce food waste has led to the creation of gleaning and composting programs around the nation.

Gleaning programs collect excess fresh produce and redistribute it to "food banks, pantries, soup kitchens and charities that are able to redistribute food to those in need" (Letts, 2014, p. 65). Composting of excess food not only reduces waste but also enhances soil, lowers the requirement for pesticides and fertilizers, and generally supports future production.

The Society of St. Andrew Virginia Gleaning Network serves as an excellent example of an extensive gleaning program. The Society works with hundreds of farms to pick up and distribute 20-30 million pounds of fresh produce to hungry Virginians every year (Virginia Cooperative Extension, 2012, p. 22). In another example, the Iowa City public school district used funding from USDA to purchase storage and carriers for gleaning and organized students in a new local gleaning initiative (Sustainable Economies Law Center, 2013, p. 5).

Governments have also supported composting programs in their jurisdictions. Since 2011, Connecticut has required composting of food by specific food establishments (The Harvard Law School Food Law and Policy Clinic, 2012, p. 27). Illinois runs a Food Scrap Composting Revitalization & Advancement (F-SCRAP) Program which provides grants to new composting projects.

CHAPTER 3. SURVEY

A. Introduction

One element of the project was to survey stakeholders involved in local foods in some capacity within the region. The purpose was to learn something about their experience of government programs and policies as either supportive of or obstacles to local farm to table commerce. This in turn would inform the formulation of an assessment process (Chapter 4) in conjunction with the information derived from other studies (Chapter 2). Targets for the survey were individuals involved as part of a local food system supply chain (producers, processors, etc.), as regulators of some part of the supply chain, or as advocates or educators for activities relevant to individuals and organizations involved in the supply chain.

1. Initial Contact List

To compile a list of stakeholders to survey, we identified federal agencies and county, large city, and state governments and agencies in the Chesapeake Bay Region.

We reviewed websites of each government and agency to identify possible positions and individuals of interest on food, agriculture, environment, and land use planning/ management, attempting to determine the relevant expert in each department and program. When this was not possible, we included the head of a department or program in our list of potential stakeholders. We conducted a search for nonprofit advocacy and assistance groups, research centers (university-based or otherwise), and any food hubs or other aggregators in the region, and incorporated contact information accordingly into our list.

We shared our initial listing with members of the Chesapeake Foodshed Network recommended by the project sponsors, who suggested additional individuals and organizations to include in the survey. This led to a database of over 600 potential contacts, approximately 100 of which were subsequently deleted for various reasons: some aspect of the contact information was obsolete, email addresses obtained from the websites were not correct, the individual was no longer in the position of interest, etc.

2. Survey Process

On July 1, 2016, we distributed the survey via email to approximately 500 potential stakeholders derived from these sources of information. The initial response to this distribution was limited to approximately 20 respondents. After a few weeks we decided that a more personalized approach would be needed to obtain more responses, particularly from individuals engaged in the supply chain as all or part of their income, who we surmised may have been too busy during the growing season to notice an email invitation from a stranger.

To that end, we began to contact selected individuals by phone throughout the watershed, specifically those who, by virtue of affiliation with organizations in the region, might have personal contact with other stakeholders engaged in the supply chain. We asked those individuals to make personal appeals to stakeholders who might have an interest.

Primarily as a result of these personalized contacts, we received completed surveys from 88 individuals.

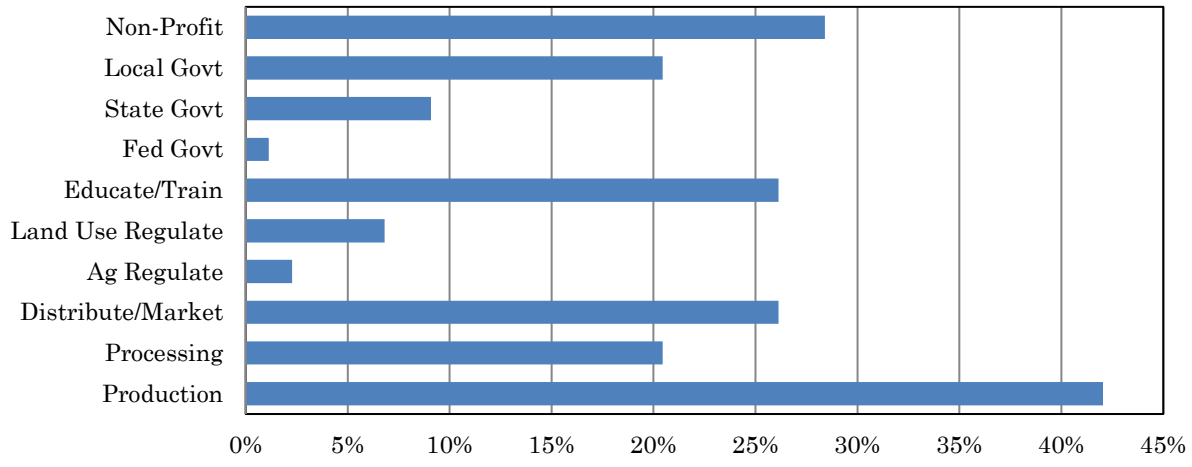
B. Survey Results

The online survey consisted of 14 questions, shown in detail in the Appendices. The results are summarized here.

1. Who Responded

The first two questions focused on the backgrounds of the respondents. **Figure 3.1** (next page) shows the answers to the first question, which asked what role respondents play in local food systems. Of the 88 respondents, the largest percentages of responses came from producers, followed by non-profits, those involved in distribution/marketing local foods, and those involved in education/ training. The most common roles of non-profit respondents were distribution/marketing and education/training.

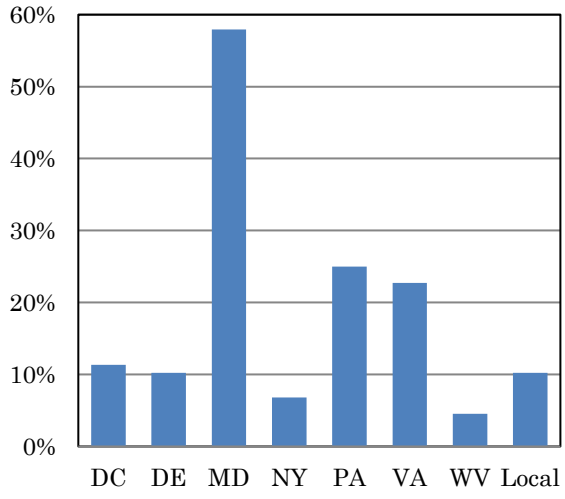
Figure 3.1 Percent of respondents who play each role



Notably, half of the respondents have roles in more than one field. "Other" responses included two self-defined researchers, a food lawyer, a K-12 end user of local food, a CSA member, and a member of a Food Policy Council.

Figure 3.2 shows which geographic area respondents knew best when it comes to programs and other factors that support or hinder farm-to-table agriculture. Fifty one of the eighty eight respondents were familiar with Maryland (58%), but significant numbers were familiar with Pennsylvania (22%) and Virginia (20%). Nine respondents were familiar with local areas but not necessarily entire states.

Figure 3.2 Geographic Expertise



2. Obstacles to Farm-to-Table

Six of the questions centered on programs, policies, laws, regulations, or other practices that the respondents think create significant obstacles to the development and continuation of local food systems.

The first specifically asked which types of government regulatory policies and programs create unnecessary obstacles to supply chain elements of local food systems. **Figure 3.3** summarizes responses. The following are some key takeaways from the data:

- The largest percentages of respondents named state/D.C. regulatory programs (over 60%) and federal regulatory programs (also over 60%) as sources of obstacles for one or more aspects of local food systems. In fact, both of these categories were also ranked as impacting multiple areas of the local food system more than other categories.

- Government certification programs and state and/or D.C. licensing programs also had particularly high response rates as obstacles, and in every category over a quarter of respondents identified it as an obstacle for some part of the local food system.

Figure 3.3 Number of Respondents Naming Programs Types as Obstacles to Supply Chain Elements

Government Program Types	Produce Food	Process Food	Access Markets	More than One
Federal Regulatory	8	16	8	31
State/DC Regulatory	2	12	10	37
Education/Training	2	12	4	13
Government Certification	11	9	8	28
State/DC Licensing	6	14	6	29
Local Land Use Rules	16	7	1	21
Local Licensing	4	13	9	21
Environmental Requirements	19	2	0	21
Labor Laws/ Practices	13	5	1	22
Marketing	0	4	13	13
Grant and Loan	8	5	5	25
Procurement Laws and Policies	4	3	13	25
Tax Law	3	1	2	25
Low Income/ Senior	0	1	14	9

- It is particularly telling that in almost every instance, the most common response was that the government policy/program was an obstacle for multiple components of the local food chain.

- Respondents most often stated that government environmental requirements, land use rules, labor laws, and certification programs impacted the production of food.

- Regarding food processing, the government programs/policies that respondents most often said were obstacles included federal regulations in general, state licensing, local licensing, state/D.C. regulation in general, and education/training programs.

- According to respondents, local food market access is negatively impacted most by low income/senior programs, procurement laws and policies, and government marketing programs.

It is important to note that **Figure 3.3** excludes "N/A" responses, which might mean anything from "the programs creates no obstacles," to simply "I don't know anything about these programs," among other things. As they can't be interpreted they are not presented here.

Questions four through seven ask respondents to name specific programs they believe present major obstacles to local food systems. **Figures 3.4** and **3.5** (next page) summarize results.

Of 100 specific programs enumerated as sources of major obstacles by respondents, food health and safety programs were named more than half the time; 16% are related to land use and related rules; 11% were other state and federal programs; 10% were federal food assistance and nutrition programs; 8% were market practices of some kind; and 1% were not classifiable.

Figure 3.5 (next page) shows the specific programs named to comprise these categories, and the frequency of instances each program was named as a percentage of all instances named in that category.

Figure 3.4 Programs That Create Major Obstacles for Local Food Systems (100 Programs Named)

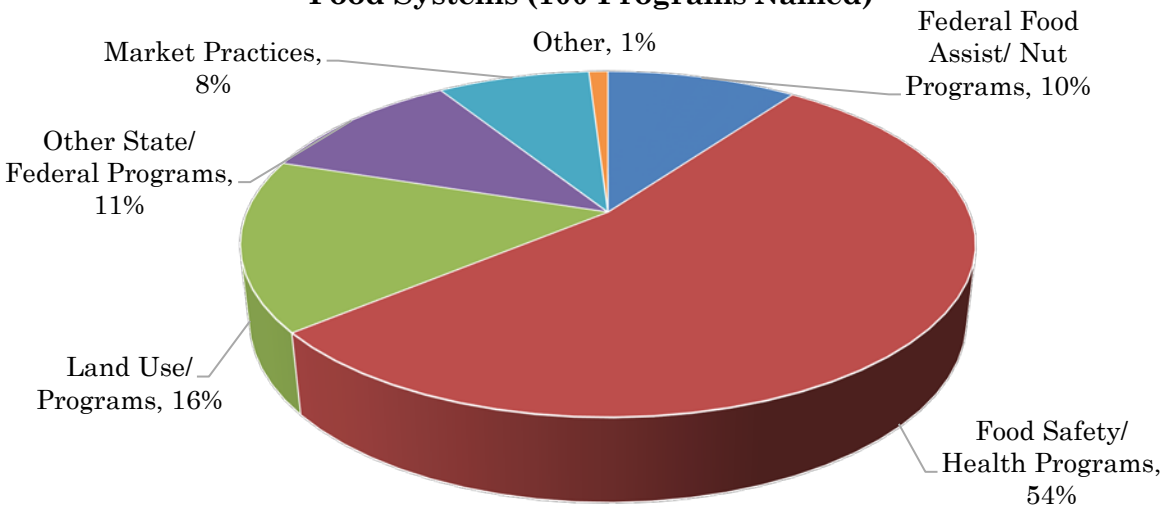


Figure 3.5 Program Types & Specific Program Frequently Named as Major Obstacles

% of Times All Named Major Obstacles Fell in This Category	% of Times Program Was Named as Source of Major Obstacles within This Category
Federal Food Assist/ Nut Programs (10%)	DoD Fresh (20%) Gov't Food Procurement Programs (30%) National School Lunch Program (10%) SNAP (40%)
Food Safety/ Health Programs (54%)	Food Safety General (11%) USDA FSIS – Food Safety & Inspection Service (15%) FDA FSMA – Food Safety Modernization Act (30%) Good Agricultural Practices – GAP – Certification (9%) Local Health Programs (13%) State Food Safety/ Health Regulations (17%) FDA Canning Regulations (2%) Farmers Market Licensing (4%)
Land Use/ Programs (16%)	Development Impacts on Processing, Production (6%) Local Land Use Rules (94%)
Other State/ Federal Programs (11%)	State Manure Transport Program (9%) USDA Farm Subsidy Programs (18%) Cost Share for Organic Production (9%) Environmental Regulations (27%) Federal Labor Law (9%) Organic Certification (18%) RFID Tagging (9%)
Privet Market Practices (8%)	Misc. Private Market Practices (100%)
Other (1%)	Other (100%)

Question eight asked respondents "Is there anything else you would like to share relating to obstacles to local food systems in your community?"

Comments in response to this question were quite varied and useful when considered in conjunction with responses to preceding questions. Most respondent comments follow; some were edited for brevity or attempted clarification, but the vast majority are reproduced verbatim; a few are omitted because we judged that they were not relevant to project objectives.

- It is VERY difficult for certain populations - low-income, immigrant, low-literacy, etc. to start and run food businesses, despite great enthusiasm and often significant experience in their home countries. To achieve equity in our food system, the processes and systems need to be easier and cheaper to navigate.
- Building regional capacity for regulatory (FSMA) and market-based (GAP) food safety audit compliance is critical for the continued expansion of regional food systems.
- We have many challenges with our local county government making regulations without really understanding the impact those rules might have on the vendors. We often find ourselves having to go back to our local government with negative financial impact data to fight to have rules and regulations revised to negate the financial loss they cause.
- Lack of organized networking for farm-to-consumer for specialty food products
- We need a more uniform way of licensure and make it more accessible (monetarily) for vendors to participate in more than one market per county
- We help producers access wholesale markets; we know that we make a big impact on producers' ability to sell their products, but [as a non-profit] we struggle to fund this work.
- Transportation, marketing, sales
- Lack of involvement/concern/belief in local food as a possible economic driver for WVs small communities (same in neighboring states also)
- Regulations and services designed to restrict farmers from selling retail which is profitable rather than keeping in the commodities
- I believe a major obstacle may be the lack of harmonization between federal, state, and local licensing requirements, as well as a lack of consistency in terms of what is permitted or incentivized across state lines. An additional obstacle is the deployment of resources to support food security and to strengthen local and regional food systems. They are uneven, sometimes with the communities of greatest need having the least amount of support, and we generally need more of them.
- Cheap food sourced from large farms in CA, FL and Mexico
- As a cheese producer in MD, I know well the burden of regulation at both the state and Federal level. However, I have come to believe that on the whole these regulations are necessary to ensure food safety and mitigate production risks in the long run. The problem – and much of the resistance to such regulations – relates more to the economic burden placed upon new or start-up businesses to achieve and maintain compliance. Margins are very thin, restrain profitability, and create resistance to compliance. Re-education of the American public on the "true cost of food" is imperative.
- Communities are interested in supporting local food systems but need some state support on how to do it. There needs to be MACO leadership on this.
- Chemical/GMO/commodity farmers are subsidized and institutionally supported, whereas smaller organic produce and protein farmers must struggle against the outsized political influence of "conventional" agriculture.
- All the fees and obstacles-even driving distances, make it hard to sell home grown products for a reasonable price, so many folks are not able to enjoy healthy local foods.
- Biggest obstacle is infrastructure needed to aggregate, store and distribute local foods

- There is little financial support to help direct market farmers and few financially stable market opportunities. Farmer Markets in Blair County have low cash flow. Finding other markets, such as restaurants require high insurance coverage (expensive) and GAP cert (expensive). It requires high cost input from the farmer but little opportunity to recuperate via income/profit
- Inconsistency of regulations between local governmental agencies
- We have a small boutique coffee roasting and spice blend business along with a small scale agricultural operation. The best showcase for our products is to demo their use but the local farmers market and local (Caroline County) extension of the Maryland Department of Hygiene are difficult to contact and, from others reports, difficult to work with. We would like to be able to offer food and beverage demonstrations at the local farmers' market, but it [has not been] feasible. It … limits how effective we can be marketing our products.
- University agricultural extension service needs to provide more education and technical assistance for people who want to produce food for communities
- Uneducated code and policy enforcement who deal primarily with the few loud complainers who are typically neighbors to working farms. Education of these agency and department government employees is of utmost importance to promote understanding … the challenges farmers face, and ways to assist the farmers in producing great products with supportive code policies and enforcement so as not to create undue hardship.
- We have MANY families in need in our rural area and because of obstacles they have in their lives, access to good food is prohibited. We donate a lot of produce to the Maryland Food Bank, but they need help finding the folks who need the food in rural areas.
- Federal regulations fail to take into consideration the compliance challenges of small farm processing businesses. FSMA groups all covered facilities under 500 employees together for compliance deadlines. Our dairy processing plant has about 12 employees- this one rule is placing significant regulatory burden on our business and our already limited staff.
- Our Health Department is extremely strict on farmers and anyone selling food at our farmers markets. This has caused people to stop selling at the market this year. Surrounding counties seem to be more relaxed about the laws so our farmers to go other counties to sell their goods.
- I sell and do business in two different states, and fees, licensing and regulations vary greatly for the same products only a few miles away.
- Lack of proper venues for farmers' markets.
- Requiring everything to be clam-shelled or in plastics bags is expensive, limiting and makes produce go bad faster. Bags and boxes of paper should be acceptable, and is more sustainable for the environment. Requiring all prepared food sold at markets to be done in a special kitchen is limiting. …who can join the farmers market should be about who can put up a table... Selling and growing produce in front lawns and back should be allowed, and selling it with a stand should be allowed… There should be no food insecurity. See Todmorden, the town in England. http://www.incredible-edible-todmorden.co.uk/
- PASA in PA is too expensive for small farmers to participate
- Farmers selling direct to consumer must navigate myriad state health department fees and regulations. On the federal front, FSMA is exacerbating the problem.
- Schoharie County is frustrated that across commodities, farmers are not making livable margins for their produce (milk, meat, vegetables, grain, forages), they can't afford to sell it to their neighbors, and in many instances if they can direct market, it needs to be in a more metropolitan market in order for them to make any profit at all.

3. Support for Farm-to-Table

The next six questions centered on programs, policies, laws, regulations, or other practices that the respondents think provide significant support for local food systems.

The first asked which types of government regulatory policies and programs support various aspects of the local food systems. **Figure 3.6** summarizes the responses to the question.

Figure 3.6 Number of Respondents Identifying Program Types as Supporting Supply Chain Elements

Government Program Types	Produce Food	Process Food	Access Markets	More than One
Federal Regulatory Programs	5	11	8	18
State/DC Regulatory Programs	5	4	9	21
Education/Training Programs	12	3	8	42
Gov't Certification Programs	7	6	11	24
State/DC Licensing Programs	2	10	5	20
Local Land Use Rules	17	1	3	12
Local Licensing Programs	3	6	4	8
Environmental Requirements	10	2	0	11
Labor Laws/ Practices	6	3	2	14
Marketing Programs	7	1	17	33
Grant and Loan Programs	15	3	5	38
Procurement Laws and Policies	2	3	7	15
Tax Law	6	2	0	7
Low Income/ Senior Programs	4	1	17	18

The following are some key takeaways from the data:

- The largest percentages of respondents named Education and Training Programs, Marketing Programs, and Grant and Loan Programs as significant sources of support for one or more aspects of local food systems.

- In nearly every case, respondents believe that these program types support "more than one" element of the supply chain more often than any single element.

- Respondents most often stated that government land use rules, grant and loan programs, education/training, and environmental requirements support the production of local food.

- Regarding food processing, the government programs/policies that respondents most often said were supportive included federal regulations in general and state licensing.

- Local food market access was most often stated as being supported by marketing programs, low income/senior programs, and government certification programs.

In several cases, significant numbers of respondents name the same programs as obstacles and supports. For instance, local land use rules were the second most frequently named source of obstacles for production yet here they are the most often listed source of governmental support for production. This seeming dichotomy of response suggests that experience by stakeholders of programs varies. Possible reasons for the dichotomy are discussed in Section C of this Chapter.

Questions 10 through 13 asked respondents to name specific programs they believe provide major support for aspects of local food systems. **Figures 3.7** and **3.8** (next page) summarize responses.

Figure 3.7 Programs That Provide Major Support for Local Food Systems

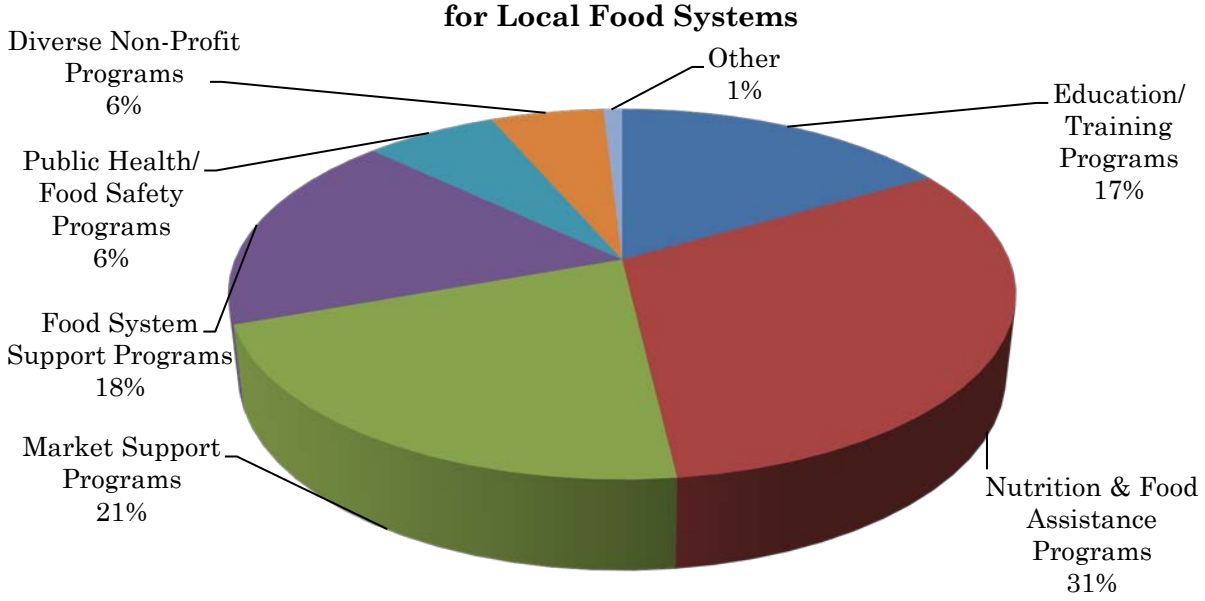


Figure 3.8 Program Types and Specific Programs Frequently Named as Major Supports

% of Times All Named Major Support Programs Fell in This Category	% of Times Each Program Was Named as a Major Source of Support within This Category
Education/ Training Programs (17%)	Misc. Education/ Training Programs (56%) Extension Service (44%)
Nutrition & Food Assistance Programs (31%)	Farmers Market Nutrition Programs (12%) Farm to School Programs (6%) Federal Food Assist/ Nut Programs (6%) USDA Farm to School Grant Program (3%) USDA Farmers Market Nutrition Programs (18%) USDA KYF Programs (6%) USDA Local Food Promotion Programs (12%) USDA Farmers Market Promotion Program (6%) USDA Nutrition & Assistance Programs (3%) SNAP (12%) State/DC Farmers Market Nutrition Programs (6%) State Market & Nutrition Programs (9%) Market & Nutrition Grant Programs (3%)
Market Support Programs (21%)	Local Gov't Marketing Programs (9%) Private Sector Markets (26%) State Marketing Programs (65%)

% of Times All Named Major Support Programs Fell in This Category	% of Times Each Program Was Named as a Major Source of Support within This Category
Food System Support Programs (17%)	Cost Share Programs (16%) Farmland Preservation Programs (16%) Local Land Use Rules (11%) Organic Certification (5%) Rural Economic Development Programs (11%) State Loan Programs (11%) USDA FSA Loan Programs (5%) USDA VAPG Grants (26%)
Public Health/Food Safety Programs (6%)	FSMA (14%) CDC PPHF (14%) GAP Certification (43%) State Food Safety/ Health Regulations (14%) State Health Ombudsman (14%)
Diverse Non-Profit Programs (6%)	Non-Profit Programs (100%)
Other (2%)	Other (100%)

Of 108 specific programs enumerated as supportive by respondents, the two named most frequently were nutrition and food assistance programs (31%) and market support programs (21%). Both food system support programs and education/ training programs were named 17% of the time, while both public health/food safety programs and diverse non-profit programs were named 6% of the time.

Question fourteen asked respondents "Is there anything else you would like to share with us about programs that support local food systems in your community?" Most respondent answers to this question follow. Some were edited for brevity or attempted clarification, but the vast majority are reproduced verbatim. A few are omitted because we judged that they were not relevant to project objectives.

- There are some really great grant programs that can support nonprofits and farmers. There are lots of educational programs designed to support producers, processors, etc., but the quality really varies.
- We have been able to partner with several local organizations such as our food pantry, master gardeners, and school groups to bring value added programs educational opportunities out to the market place.
- Were NGO's or Food aggregation points adequately addressed by these questions?
- Local and regional networks of food system practitioners are uniquely powerful in support of this work. Connections, conversations, and a group of like-minded people to fall back on can provide more support than all the programs listed. Formalize those networks.
- Our Health Department and University of Maryland Extension promote healthy eating in the community and try to strengthen healthier food access. We promote SNAP vendors/ farmers markets that carry fresh fruits/vegetables and educate customers about nutrition and preparing produce.
- Local healthcare system /hospital (WellSpan) Foundation funds local farmers market outreach programs for low income families
- GAP certification helps distinguish farmers' products as meeting certain food safety and environmental standards, increasing their marketability.
- VA Department of Agriculture's APHID grant program. We also have some great examples of philanthropic efforts to support local and regional systems. We need more of these.

- Farmers market operators have for decades provided economic access for farmers and value added food producers. They have been effective incubators in our region, but now face a new set of challenges associated with targeting farming and food businesses with the capacity to grow and develop more extensive wholesale channels. Economics and consumer education again become significant obstacles (both in the form of regulatory compliance and true cost of food). Finding ways to mitigate these obstacles and promote sustainable scale in the foodshed is imperative.
- The State and the County Governments do a good job of promoting and protecting farmers that sell at farmers' markets. The State of Maryland may need to step in and prevent local fire marshals from requiring unrealistic conditions and permits for farmers that prepare or process food at the farmers' markets.
- We are trying to establish a food hub in Frederick County, MD to help small and mid-sized farmers gain access to institutional markets. We are not getting supported by local or state Governmental agencies in any meaningful way.
- MDA is very positive and supportive of food safety training and program steps that can help with certification for MD farms. Feds are much less helpful and seem only involved with USDA grants which are overly bureaucratic in the implementation of SBIR and other grant programs.
- Lots of freebies for lower income, but they rarely buy any other products leaving other vendors with less business. Great to help needy out, but many folks are looking for handouts and not temp assistance. Snap should not be a lifestyle, use some of that $ to advertise and fully promote the bounty of farmers markets. You'll put more cash back into the community instead of giving it away.
- Local government and private nonprofit loans that support ag diversification
- The MD DHMH process reviewers and inspectors have been tremendous to work with. As a small scale packaging and processing facility, we had some unique challenges and they were extremely flexible with working with us to fine tune our process and procedures. Their work allowed us to establish a manufacturing facility in downtown Denton and their flexibility allowed us to meet our tight deadlines for getting up and running.
- Counties that provide a streamlined process for use of nutrition benefits at farmers' markets are doing great work (e.g. Prince George's County)
- It seems to me that most support comes from within the industry and the citizens who want access to better food and farm products. The Federal Govt. does have information available but local and state governments tend to brush that aside and say, "well, that's not how our county does it"
- The PA Milk Marketing Board supports minimum state pricing for milk based on a calculation of factors that include cost of production. By establishing this minimum price, PMMB provides market access for smaller dairies- the big companies can't bid business below the minimum price (because it would result in farmers being paid less for their milk).
- I redeem many senior and WIC vouchers for fresh produce, I think this is a wonderful way to get fresh veggies grown domestically in the hands of those who need it most.
- Spaces to grow food in Columbia are used but in short supply, people should be able to grow in front yards not just back. And allow meadows so that birds and pollinators can proliferate. Hedge rows and supporting bird methods as natural insecticide should be explored and encouraged. Also none row plantings.

4. Other Matters

Respondents were asked "Is there anything else you would like to share with us about local food system issues in your community or experience?" Most answers to this question follow. Some were edited for brevity or attempted clarification, but the vast majority are reproduced verbatim. A few are omitted because we judged that they were not relevant to project objectives.

- Thanks for putting this together! We look forward to supporting food system development.
- Our level of frustration with our county government process is high. Rules and regulations are made by a committee of 7 individuals, 5 of whom have never visited our Farmers market or discussed ideas with the customers who do. We have made multiple attempts to partner with them … to change what does not work and … hinders sales … without success. If only there was a way to have them first examine potential impact before implementing regulation that our private business is required to comply with to retain our zoning permit it would save a lot of time and money … instead of the way it is currently handled.
- Lack of area farmers is impacting the ability to have a robust program
- My book, Biting the Hands that Feed Us: How Fewer, Smarter Laws Would Make Our Food System More Sustainable, will be published by leading environmental publisher Island Press on September 15, 2016. https://www.amazon.com/Biting-Hands-that-Feed-Sustainable/dp/1610916751
- Transportation and land use issues are the biggest obstacles here in our urban community.
- Opening up channels for collaboration is critical. Too often a sense of competition among farms, businesses, institutions and organizations acts to negatively impact opportunities. Funding is tight, so people naturally act in silos that tend to serve narrow groups of stakeholders.
- Need for a market for Seconds or Ugly Produce
- I believe there is an interest in, and hunger for, some specific information on local land use policies in the Chesapeake Region that are supportive of local and regional food systems, as well as those that may be hindering
- Like any system, there are good things and bad things. I would say that the political environment is the hardest factor. If the politics are not in place, nothing else can really happen.
- Repeat: there needs to be 1- leadership to move our large institutions to procure local food, 2- leadership to encourage local governments to prioritize support for local farm economy by buying local (i.e. Chamber of Commerce programs) and 3 - support for grassroots institutions to build aggregation, distribution and marketing facilities to foster the connection between farm to institution.
- There needs to be a LARGE institutional support effort to transition farmland away from chemically grown commodity crops (which kills healthy soil and releases soil carbon into the atmosphere as CO2) and move our farmland into more profitable sustainable/regenerative/NO CHEMICAL food growing to build soil health and diverse soil biology (which will sequester soil carbon out of the atmosphere and reduce run-off into waterways.)
- We should have more exemptions for small kitchens in MD like they do in VA so that baked goods can be served and restrictions do not prevent people from trying new products. Local Markets are excellent test places for new locally produced products.
- Yes! Tons! Better for a call or meeting. Feel free to contact me.
- Obstacle - Labor Laws with respect to food processing
- It is hard for small, direct market farmers to compete with large industry. We cannot price our products as low as industry farms.
- I am working on finding resources to conduct a food system assessment in my foodshed…
- I should have been more specific in the question about obstacles. I was specifically referring to the USDA policies on butchering and the Talbot County Council's land-use determinations.
- …our governors, senators, and representatives need to be clearly in support of agriculture and the economic success of our farms … in the form of willing agency and code enforcement … creating farm environments that allow for the economic

success and … overall intent of producing excellent products on which our own citizens can thrive and live well. Why is there a stigma out there that farmers are not financially successful?

- The State can play a far greater role fighting for its share of federal resources to support vegetable production, pastured animal production, and organic production and the Feds can certainly transition significantly more resources to sustainable real food production
- Local food system is not seen as a community development or economic development vehicle, but it is. The multiplier effects that can result should be touted, and economic development professionals be educated about the potential impacts.
- Websites … to … promote local farms and enable buyers to connect with farmers … would enable growers to focus on other tasks. As a small certified organic grower I spend far too much time trying to keep up with paperwork and market my produce. Anything that would relieve some of that burden would be greatly appreciated. Between the organic requirements, GAP certification requirements, Nutrient Management requirements, and my own bookkeeping, record keeping, and marketing requirements I find myself stretched to my limits.
- Education of young farmers about the possibility and market potential of growing something other than soybeans and corn...
- I resent people who buy produce from auction and sell as if they grew it. They do not know anything about where it came from or who grew it under what conditions and they pretend and lie. How can I compete against this practice? It makes me so upset.

Seventy seven of 88 respondents (83%) said that they were willing to consult further about the issues addressed in this survey.

C. Discussion

The survey was completed by a variety of stakeholders distributed throughout the Chesapeake Bay Region. However, it should not be considered a representative sampling of stakeholders in various aspects of local food system supply chains in parts of or the region as a whole. Rather, it provides supplemental information to that derived from the literature and research we reviewed (Chapter 2).

Questions three through seven gave respondents opportunities to identify program types and specific programs they think create obstacles to local food systems, and to specify which aspects of the supply chain they think are affected: Production, Processing, Market Access, and More Than One. Question eight gave respondents the opportunity to convey more broadly/ in a less structured fashion their thoughts about obstacles.

Considered collectively, responses to questions three through eight reflect observations from the literature and the other reports we reviewed (Chapter 2) fairly well with regards to regulatory, licensing, and certification programs, in several ways.

- The four program types identified most frequently (more than 50% of the time) as sources of obstacles to one or more elements of the supply chain were:
  - State/DC Regulatory Programs
  - State/DC Licensing Programs
  - Government Certification Programs
  - Federal Regulatory Programs
- Environmental Requirements and Local Land Use Rules were most frequently named as sources of obstacles to Production.
- Federal Regulatory Programs, State/ DC Licensing Programs, Local Licensing Programs, State/ DC Regulatory Programs, and Education/ Training Programs stood out as most frequently named sources of obstacles to Processing.
- Most frequently named sources of obstacles to Market Access were Low Income/ Senior Programs, Procurement Laws and Policies, and Marketing Programs.
- Food Safety/ Health Programs were most frequently identified as major sources of obstacles to local food systems. Of those programs, the Food Safety and Modernization Act, State Food Safety/

Health Regulations, USDA's Food Safety & Inspection Service, and Local Health Programs accounted for about 75% of the responses. Land Use Programs were also identified 16% of the time, which is the second highest frequency of any other category of programs. Within this category, Local Land Use Programs accounted for 94% of those instances.

With a few possible exceptions, these stakeholder sentiments expressed in the survey mirror predominant themes we found in our research.

However, as noted in the previous section (B, Survey and Results), some programs designed to support or work in tandem with local food systems were identified by stakeholders in the survey as sources of obstacles. The most notable instances were:

- Education/ Training Programs, identified with some frequency as a source of obstacles for Processing;
- Low Income/Senior Programs and Marketing Programs, both among the programs most frequently named as obstacles to Market Access (Figure 3-9);
- Supplemental Nutrition Assistance Program (SNAP)

We suspect that in most instances, identification of support programs as obstacles were the result of limited availability or accessibility of the programs relative to perceived need by the stakeholder. For example, we know that education/training programs are a valued source of information helpful to many starting and operating businesses in parts of the local foods supply chain. Stakeholders in various contexts have observed greater needs in the local food community than support programs can fulfill, for example, that low income/ senior programs in general and the SNAP program in particular do not have enough funding to reach or meet the needs of the eligible community; more education/ training programs are needed to support expansion of value added businesses in some areas; although a state or local government sponsored program does a great deal to advance local food systems, it has nowhere near enough funding or human resources to do justice to the potential of these systems; etc. Some of these and many other similar assertions are probably true in numerous locations throughout the region.

In light of these considerations, it is important to distinguish stakeholders' identification of these support programs as obstacles from their identification of other programs as obstacles in the survey. By "other" we mean programs designed to regulate supply chain businesses for primary public purposes other than support of those businesses. Support may be an implicit or even an explicit secondary purpose of some regulatory programs, but it is not their primary purpose. Accordingly, we suggest that survey responses identifying support programs as obstacles probably mean, for most respondents, that the programs do not have enough resources to adequately serve their intended support purposes.

This conclusion is corroborated by stakeholder responses to questions nine through fourteen about supportive programs (see the following bullets). But these latter responses also make a different but related point: that regulatory programs for which support is at most a secondary objective can, in the experience of some stakeholders, be supportive:

- The three program types identified most frequently (more than 65% of the time) as supporting one or more elements of the supply chain were:
  - Education/ Training Programs
  - Marketing Programs
  - Grant and Loan Programs
- Local Land Use Rules, Grant and Loan Programs, and Education/ Training Programs were most frequently named as supporting Production.
- Federal Regulatory Programs, State/ DC Licensing Programs, Government Certification Programs, and Local Licensing Programs are the four most frequently named sources of support for Processing.
- The most frequently named sources of support for Market Access were Marketing Programs, Low Income/ Senior Programs, Government Certification Programs, and State/ DC Regulatory Programs.

Local Land Use Rules were the most frequently named obstacle to production; they were also the most frequently named support for production. Federal regulatory programs, state/ D.C. licensing programs, and local licensing programs were the most frequently named sources of obstacles to Processing; they were also among the top four most frequently named support programs for Processing.

Clearly, whether these programs are seen as sources of obstacles or support depends on the experience of individual stakeholders. And the fact that significant numbers of stakeholders experience regulatory or licensing programs as sources of support suggests that they can in fact be supportive for some stakeholders. The question is, what explains the differences among stakeholders' experiences? There are several possibilities, and the answers matter when it comes to potentially productive avenues of inquiry for the assessment process described in Chapter 4. We focus here on two possible explanations.

- It is possible that some stakeholders have more difficulty complying with regulatory requirements and are more prone to perceiving them as obstacles than others, who have less trouble and perceive them in a positive light. No doubt this dichotomy exists to some degree. But, one must also consider variability within the regulator community, which brings us to the second explanation.

- It is possible that differences in experience are related to differences among regulations and regulators. Stakeholders commented on the variability they encounter among different local and state government regulatory programs. It is quite possible that the ways in which regulations differ and/or are implemented from place to place make things more or less difficult for stakeholders subject to them. The same may be true about different federal regulators covering different geographic areas for the same program.

An important objective would be to account for these sources of variability in the course of an assessment of obstacles and supports.

Nutrition and food assistance programs (31% of the time) and market support programs (21% of the time) were most frequently identified as major supports for local food systems, followed by education/training Programs (17%) and food system support programs (also 17%). Of nutrition and food assistance programs, those cited most frequently (highlighted in Table 3-2) are USDA Farmers Market Nutrition Programs, USDA Local Food Promotion Programs, other Farmers' Market Nutrition Programs, and SNAP. Of market support programs, those most cited were state marketing programs and private sector markets.

As in the case of reports and research reviewed in Chapter 2, responses of survey participants suggest something of the diversity and magnitude of challenges to address in creating a stronger Chesapeake Regional Food System. There are six states, the District of Columbia, and hundreds of counties, each with their own regulations intended to promote health, safety, and welfare. Each survey participant, and by extension each stakeholder, has a window into issues, but may not really fathom the whole regulatory and business landscape.

Even if they are aware of the regulations and market obstacles pertaining to their particular product(s) in their area, most are probably not cognizant of the full array of forces at work throughout the Region that make it much easier for national and multinational food corporations to reach consumers to which they do not realistically have access. This suggests that an assessment method to substantially strengthen the local system will have to "harvest" stakeholder insights from the local level, and assemble/ make sense of them in an aggregate sense: for example, by county, by state, and at the regional scale.

Perhaps the most important conclusions from the survey itself are the following:

1. Based on overlaps between them, much of the research and many local food system efforts outside the Chesapeake Region are relevant to experiences within the Region; and
2. The ways in which regulatory programs are interpreted and implemented by regulators may be as or more important in determining if they are present obstacles or provide

supports to supply chain elements than the regulations themselves.

The implications of this second conclusion would seem to be positive, particularly for federal and state regulatory processes: it suggests that these programs might better support local systems without necessarily changing fundamental regulatory requirements in at least some cases.

CHAPTER 4. RECOMMENDED ASSESSMENT PROCESS

A. Context

The objectives of the study were to:

- *Identify major factors that must be addressed to support a Chesapeake Region Food Plan that will accommodate the flow of food from farm and fishery to table in ways that strengthen farming and the regional food economy; protect our land, water, and air; and provide healthy, nutritious food that sustains the region's communities and cities. These factors will include but not be limited to existing federal, state and local laws, policies and regulations.*
- *Research these factors as far as is feasible within the limits of time and resources for the Grant.*
- *Describe the steps that should be taken – the process to be followed – in order to complete an assessment of existing federal, state and local laws, policies and regulations that encourage/hinder the development of a regional food plan in the Chesapeake Region.*

The results of our efforts toward the first two objectives were summarized in preceding Chapters 2 (Literature Review) and 3 (Survey). This chapter describes the recommended assessment process called for by objective 3.

Research detailed in Chapter 2 shows that a corporate national/international food system currently dominates food markets throughout the United States, and it is this overarching food system that is the main impediment to the development of a regional food system. Today, over 90%[1] of all food sales are controlled by major corporations and are supported, intentionally or not, by federal policies and trade agreements. Creating an effective regional food plan contradicts the widely accepted free market theory upon which the current system is based, wherein cost is the prevailing determinant of where food comes from. In the existing economic environment, international trade policies and a vertically integrated national and international food system favor the import of over 90% of the food consumed in the region, transported by the same corporations that control production and processing.

The crux of the problem is that the reasons to grow a local/regional food system, espoused in the report's objectives and outlined in the Introduction to this report, are not yet widely embraced by federal policy makers, state and regional economic development strategists, or land development business practitioners. The corporation-dominated market place assigns no special points to a tomato raised locally and sustainably over one raised further away at great environmental cost. Also, local food systems have few inherent institutional advocates compared to the existing national and global system. Rather, support for local food systems comes from a small but rapidly growing number of consumers, small and mid-scale producers who share the value these consumers place on local foods, an emerging but still developing group of related advocacy organizations, and some federal, state, and local government programs in the region.

As described in Chapter 2, the U.S. Department of Agriculture has begun to address some of the obstacles to a regional food system. In addition, some state governments in the region have enacted programs to facilitate, enable and encourage production, marketing and consumption of local foods. Some local governments have begun to address regulatory processes for value-added food production. However, the challenges and impediments dwarf these efforts and associated funding assistance available thus far.

B. Recommendation – A Two-Tiered Approach

The study team sees the development of a Chesapeake Bay regional foodshed as requiring two levels of action: (1) from the top down there must be major revamping of federal policies and

[1] According to the USDA ERS, there was $12 billion in local food sales in 2014 out of over $1.5 trillion in total food sales. Based on local food sales reported the 2012 U.S. Census of Agriculture, the states that comprise the Chesapeake watershed were not exemplary in sales of local foods.

laws and (2) the more incremental bottom up building of support, continuing and expanding local food movement efforts that have already won small increases in regional market shares over the last 20+ years.

Until the existing system of trade agreements and federal food policies are changed, the local food movement will always struggle to gain a foot hold in the larger U.S. food market. True change will come from the top.

However, federal policy changes tend to occur at a glacial pace and large policy shifts tend to first be experimented at the local and state level before being implemented on a larger scale. Therefore, action on the local and state level remains vital to the development of a Chesapeake Bay regional food system. This study recommends a combination of these approaches as necessary to assess, plan, and implement a regional system as outlined in the following steps.

Step 1, Food Policy Councils: Creation of food policy councils at all policy levels, but especially regionally, to facilitate and coordinate local food system research and advocacy, including the steps that follow.

Step 2, Chesapeake Foodshed Assessments: Estimate the ability of the region to feed its population, and the growth potential for local production and marketing. This type of foodshed assessment can be done at various levels and in aggregate for all foods, or by crop and food type.

Step 3, Inventory of Food System Infrastructure: Inventory and examine assets in each step within the local/ regional supply chain – production, processing and added value, aggregation, distribution, and marketing and sales to wholesale, institutional, commercial, retail and individual consumers – to determine where there are gaps, shortcomings, obstacles, and therefore needs for improvement or changes in the system. Policy assessment is included in this step, and the analysis should be driven by the obstacles identified in Chapters 2 and 3 of this report.

Step 4, Identify Opportunities: Evaluate the potential to provide scale appropriate opportunities to change aspects of the system, address gaps and shortcomings, and increase market shares of local foods in the system.

C. Food Policy Councils

1. Overview

Organized bodies of advocates, planning and making the case to policymakers, will be crucial to any needed changes to policies at the local, state, or federal level. Food policy councils are ideal for playing this role. As was described in Chapter 2, food policy councils exist today throughout the U.S. as groups of stakeholders with an objective of promoting policies that support local and regional food systems. The literature stresses the importance of such councils.

> "In response to the increasing interest in the production of food in this country, citizens and communities have come together to forge responses aiming to strengthen local and regional food systems. A key element of this new organizing around the topic of food has been the formation of state and local food policy councils. A food policy council provides a unique forum for diverse stakeholders to come together and address common concerns about food policy, including topics such as food security, farm policy, food regulations, environmental impacts, health, and nutrition. Stakeholders generally include a range of people such as farmers, city and state officials, non-profit organizations, chefs, food distributors, food justice advocates, educators, health professionals, and concerned citizens. With the lack of government agencies (at any level of government) devoted to the sole task of regulating and improving food policy, food policy councils have emerged as innovative and much-needed mechanisms to identify and advocate for food system change" (The Harvard Law School Food Law and Policy Clinic, 2012, p.1).

The food policy council model for organizing stakeholders described in this publication is suggested for all three levels (local, state, federal), particularly for state and regional

assessments. Higher levels are likely to involve greater diversities of stakeholders looking to address more issues, and the policy council approach is designed to help do those things. By way of contrast, some local assessments may be driven by relatively few stakeholders in a locale, whose interest may be more narrowly defined as discussed previously. Therefore, it may not be necessary or desirable to form a local food policy council for some local groups of stakeholders, although it could probably be used to advantage in most local efforts.

Food policy councils are also an excellent way to inventory the network of human, organizational, and physical assets that produce food locally and move it through the components of the supply chain. Such an inventory, discussed in greater detail later in this Chapter, is essential when planning for the development of a food system.

In light of these considerations, we recommend:

- Formation of a Chesapeake Regional Food Council to conduct a regional assessment, bring together information from the states, and provide support and information to smaller scale assessment teams.
- Formation of state councils in each state of the Region to conduct state assessments, bring together information from counties, townships and municipalities, and provide support and information to assessment teams for those entities.
- Formation of local councils or assessment teams wherever possible to work in cooperation with state and the regional councils.

A Chesapeake Bay regional food council in particular would play the crucial role of researching food issues and making the case for a regional food system to local, state, and federal policymakers. The case must be made by answering questions like the following:

- What is the economic cost to the region of importing over 90% of food?
- Is the region capable of producing a majority of the food that it needs? What would be the economic benefit?
- What are the health consequences of the region's reliance on highly processed foods?
- Would the region be healthier if we could make more fresh, local food available to our region's population?
- How food-secure is the region in this time of global political unrest, climate change, and declining world freshwater sources, and in a nation and a world that has not begun to formulate a plan to address these risks of food insecurity?
- Would the region be more food secure if a food plan was implemented to provide substantially more of the population with local foods?
- Would the nation and world be more food secure if all regions would develop and implement plans for enhanced local food systems?
- At the regional scale and in each state, where are key gaps in local food system infrastructure that, if filled, could make strategically important connections in the supply chain?

Many of the publications and reports referenced in Chapter 2 provide valuable information about identifying and connecting with stakeholders that will be useful at all three geographic scales. Pothukuchi et al. (2002) provides a good overview in particular. They explain the importance of and benefits to be derived from including stakeholders from universities, public agencies, private sector firms, the nonprofit sector, and community-based organizations. They also recommend criteria that could be used to ensure that membership of the food policy council/assessment team provides all of the capabilities needed, and that the individual members are capable of fulfilling their roles. These include community representation, diversity, expertise and experience, availability, and capacity for decision-making.

2. Ensuring Stakeholder Involvement

Stakeholders at different scales within the region will have very different concerns and priorities. For example, a group of producers of specialty, high quality vegetables, fruits and herbs in a defined local area may be interested in better accessing nearby restaurants as customers. Factors with which they must contend may include GAP (Good Agricultural Practices) or GHP (Good Handling Practices) certification; the

way in which requirements of the Food Safety and Modernization Act are being implemented by their state and local government; and coordination between them and their potential restaurant clients about sale, purchase and delivery of available and desired products.

Perhaps their primary interests are most directly served by forming a cooperatively managed marketplace for them (the sellers) and their clients, and a consolidating facility to aggregate, minimally process, temporarily store, and distribute products, while also helping them address market certification and regulatory requirements. Beyond that, these local stakeholders may have little time and energy to engage in a higher level assessment of how, why, and to what degree the corporate food system, federal regulations, or local implementation of FSMA requirements should be addressed in their county, state, or the Chesapeake region.

On the other hand, there may be a group of food system supply chain associations, land use and conservation planners, food system advocates and assistance interests, and state departments of agriculture and commerce in the region. They may be quite interested in assessing assets, gaps and shortcomings in system infrastructure broadly in their area, their state or the region as a whole, and determining how gaps and shortcomings should be systematically addressed to greatest advantage. Call these high level stakeholders.

For an assessment process to be useful to the diversity of stakeholders in the region, it has to engage the interest and participation of both local and higher level stakeholders.

To this end, this study recommends an assessment process that creates opportunities to support the interests and address the objectives and priorities of both local and high level stakeholders by operating at three levels: local, state, and regional. Such assessments are described in the next section of this chapter.

D. Foodshed Assessments

1. Overview

As described previously in this report, a foodshed assessment estimates the ability of an area to feed its population, and the growth potential for local production and marketing. The study team recommends that food policy councils at various levels engage in such assessments.

Local assessment efforts –

- are already happening at different scales within the region;
- are being conducted by a diversity of stakeholders, in many cases simply in the course of problem solving as they conduct business;
- are confronting problems and priorities that are similarly diverse;
- are confronting their own versions of more universal problems specific to their state, county, or other local economy and their own place in the supply chain;
- are achieving varying degrees of success and failure in solving their priority problems; and
- are and will continue to become an increasingly rich source of lessons and insights for aspiring local and regional food systems, and not coincidentally for higher level assessments as well.

These diverse problems, stakeholders, lessons and insights are a significant part of what is needed to guide efforts and support solutions at the state and Chesapeake regional foodshed scales, and even at the federal scale. Such local efforts are already cross-fertilizing through the Chesapeake Regional Foodshed Network.

The "higher level" assessments that are recommended would –

- require organization of a regional and/or several coordinated state bodies consisting of high level stakeholders;
- support and benefit from lessons and insights derived from local efforts;
- be in a position to use those lessons and insights to assess and address obstacles at the larger state, regional and federal scales;
- be in a position to execute a region-wide assessment, informed by local efforts, to confront obstacles less likely to be addressed

effectively at local scales (e.g., obstacles in state or federal policy);
- synergize with local assessments to support development and realization of a Regional Plan for the Chesapeake Foodshed; and ultimately
- seek to effect change in federal policies and trade agreements that inhibit a regional food system.

It is important to note that most smaller scale, local foodshed assessments completed around the country have found that, for their geography of interest, local food's share of the market is very small with percentages in the single digits. Many observe that sales of local products are increasing but the magnitude of increase has not made great inroads to change local food's market share when measured against that of the corporate food and delivery system that dominates supermarket, restaurant, and institutional food service chains.

Therefore, it is recommended some thought about the specific purpose of foodshed assessments precede their initiation at any scale. Particularly important is consideration of how the team hopes to use results. If the intent is to use them to encourage private or public investment in a specific part of food system infrastructure – for example, a shared or community kitchen incubator facility for processing of locally produced foods, mobile facilities for slaughter and meat processing, or food hubs – sufficient attention should be paid to determining up front the criteria according to which the results will be judged by the ultimate target audience. These deliberations by team stakeholders should guide the nature and details of foodshed assessments performed at any of the three scales we're recommending.

If a Chesapeake Bay regional foodshed assessment can be completed in the near future, it will serve state and local teams' purposes to a degree, and will somewhat relieve lower level assessment teams of that workload burden until they are equipped with members or funding to complete their own.

2. Assessments in the Literature

A few examples of published reports with information on how to conduct foodshed or food system assessments are:

- Designing a Foodshed Assessment Model: Guidance for Local and Regional Planners in Understanding Local Farm Capacity in Comparison to Local Food Needs.
- Community Food Assessment: A First Step in Planning for Community Food Security.
- What's Cooking in Your Food System: A Guide to Community Food Assessment

A few examples of reports on food system assessments or elements thereof include the following. The first two references are for studies completed within the Chesapeake Bay region:

- Local Food System Assessment for Northern Virginia
- Maryland Food Hubs: Scaling Food System Impact
- Central Puget Sound Food System Assessment
- Western Washington Foodshed Study: Evaluating the potential for Western Washington to meet its food needs based on locally produced foods
- Assessing the San Diego County Food System: Indicators for a More Food Secure Future
- Growing the Food System within the Headwaters Region
- A Food Systems Assessment for Oakland, CA: Toward a Sustainable Food Plan

Specifically, Johns Hopkins Center for a Livable Future has conducted foodshed assessments for Maryland that could be expanded to the watershed or duplicated at the state level to determine the food needs for the region's residents. From that data, one could begin to assess the economic value of producing that food regionally, along with spinoff values such as greater food security and a greater appreciation for an ecosystem (land and water) that is producing that food. If the studies lead to the conclusion that the region would be better off with a strong regional food system, it would provide evidence to support logical next steps such as a review of federal policies and trade agreements.

3. Important Questions for an Assessment to Answer

Foodshed assessments completed in the U.S. to date have taken many forms and included multiple data sources and tools. The appropriate method will depend largely on the scale of the assessment, and the literature listed above provides ample examples of how best to complete studies in the Chesapeake Bay region. How the various factors are defined may also vary from study to study. For instance, a population's diet can be defined different ways including current caloric intake (using data on food purchases) or recommended nutritional needs based on federal guidelines.

Regardless of the chosen methodology and definitions, the basic questions that an assessment must answer include:

- How much local food is currently consumed in the Bay region? What percentage of the population's diet does this present? This starting point is important to help measure the progress of various implemented policy tools.
- What is the current crop and animal yield of farms and waterways in the Chesapeake Bay region? What percentage of the population's diet could be supported based on current production?
- How much farmland and how many healthy waterways are available for the production of food? What is the potential nutritional yield from these natural resources and would it be sufficient to feed the region's population?

E. Inventory of Food System Infrastructure

1. Overview

As used here, an inventory of food system infrastructure means getting a systematic handle on the network of human, organizational and physical assets, and the relationships between them, that produce food locally and move it through the components of the supply chain – production, processing or added value, aggregation, distribution, marketing and sales – to wholesale, institutional, commercial, retail, and individual consumers.

To a significant degree, inventorying assets and identifying gaps also means inventorying stakeholders comprising the components of the supply chain. This includes a much broader group than those who would be involved in a food policy council. Here, stakeholders include those who regulate or assist in one or more stages of supply chain, those who invest in the supply chain, and those who support, train, educate, or advocate within or for the system. These stakeholders are in a position to know from experience what the assets, gaps, shortcomings, and obstacles are in their parts of the system. For these reasons, a first step in this part of the overall process is networking with stakeholders and agreeing upon objectives.

Inventorying system assets, stakeholders, and institutional infrastructure require background and contextual information about who these parties are and how to find them. We mention several sources of such information here.

Among the most useful for these purposes are two publications by the Harvard Food Law and Policy Clinic, entitled *Good Laws, Good Food: Putting State Food Policy to Work for Our Communities* (November 2012), and *Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities* (July 2012).

These two toolkits are designed for food policy councils. Essential information in these toolkits include the following:

- Sections on General Federal, State, and Local Legal Settings;
- Sections on Food System Infrastructure;
- Sections on Land Use Planning and Regulation;
- Section (in Local toolkit) on Urban Agriculture;
- Section (in State toolkit) on Food Assistance Programs;
- Sections on Consumer Access and Demand.

Although there is some overlap between similarly named sections in the two guides in some cases, there is enough valuable information unique to each of them to make the entirety of both highly desirable reading.

The state toolkit will be particularly useful for purposes of regional and state assessments/inventories, the local kit obviously for local assessments/inventories. Both provide references to many other helpful resources that can be used throughout an assessment process. They should be standard reading for stakeholders serious about conducting assessments at any scale.

2. Conducting the Inventory

The scope and detail of an inventory of assets in food system infrastructure in a particular locality, state or (Chesapeake) region will depend on the stakeholders comprising the assessment team and the objectives they formulate. Based on existing research, a few common obstacles are likely to often wind up in the queue for analysis.

For example, one of the principal gaps in food system infrastructure identified in the literature is the difficulty smaller local farms have competing with food moving through the consolidated, vertically integrated, industrialized agribusiness corporate food system that brings most food to the Chesapeake Region. If stakeholders in an assessment team want to tackle this problem, they will have to determine how enough local production, processing, aggregation, and distribution capacity can be created to make it worthwhile for local supermarket chains and managers to give them the opportunity to supply larger portions of their fresh and value added foods inventories. This presents a very different set of challenges at a larger scale than the situation in which a team is concerned primarily with creation of a cooperatively managed marketplace and shared aggregation and processing facility to supply local restaurants. Therefore, figuring out how to best compete with the national/ international food system might be a challenge more appropriately taken up by a regional team.

Depending on the level of the analysis, every factor identified as an obstacle in Chapters 2 and 3 should be reviewed and studied for relevance. Other examples of common challenges found therein include the following:

- Access to startup capital faced by producers seeking to process food on-site to better take advantage of increasing opportunities for direct marketing, specifically if they lack the credentials or collateral required by lenders.
- Difficulties smaller local farms have scaling up to meet the demands of larger consumers like institutions and retail.
- Lack of available local slaughter facilities.
- Lack of access to small to mid-scale processing facilities for produce and other non-meat agricultural products, including kitchen incubators in which producers or aggregators can add value themselves.
- Lack of mid-scale aggregation and distribution systems to cost-effectively move local food into mainstream markets.
- Insufficient funds to aggressively market locally produced foods.
- Lack of awareness of consumers, institutions and wholesalers that locally produced foods are available.
- Relative inconvenience of acquiring locally produced foods for many consumers.
- Consumer perceptions of local foods and concerns about their appearance and quality.
- Access to land for beginning farmers, in particular, and fruit and vegetable farmers, in general.

This part of the assessment process requires that the team:

- Interview and work with the stakeholders that produce food locally and move it through the components of the supply chain – production, processing or added value, aggregation, distribution, marketing and sales – to wholesale, institutional, commercial, retail and individual consumers;
- Assess the relationships between them; and
- Determine which gaps in local, state and Regional system infrastructure (including policies) are the biggest problems and the ones an assessment team wants to address.

Government policies are a crucial part of the food system infrastructure, and relevant policies exist at all three levels: federal, state, and local. States have their own authorities and responsibilities that govern and otherwise affect food systems. Regulations at each level will need to be cataloged in the hope that regulations that are out-of-date, over-burdensome and don't improve the health, safety and welfare of its citizens will

be removed. In their place, the assessors could recommend model regulations.

The membership of the Chesapeake Foodshed Network and the communication links established by the Network are fertile grounds from which to recruit and organize potential candidates for assessment teams. In addition, the study's survey, reported in the preceding chapter, found over 80% of respondents willing to participate further in activities to address obstacles to local food systems. Contacts from these and many other state and local organizations can be recruited for Regional, state and local assessment teams.

3. Policy Assessment

While the study's defined region follows watershed boundaries, government policy does not. Public policy assessment at the state and local level is critical for enhancing the capacity of the regional food system.

Production

Policies most directly impacting production fall into areas of local land use regulation, which affects production in rural, suburban and urban areas, state and federal financial incentives for production, quality certification programs for agricultural producers, and federal insurance programs for production.

Local Policies Affecting Production: Examples of Questions to Answer

The overarching question that must be answered here is "are local policies governing land use compromising production of local, healthy foods?" The following more detailed questions can help provide an answer.

About the local comprehensive plan:
Comprehensive plans set the stage for land use regulation, meaning regulation of what you can or cannot do with your land. Particularly impactful are zoning districts, including agricultural, residential, and mixed use districts whereon some production of food may support local food systems. Implemented programs, like zoning and development rules, must in many places be consistent with the goals and policies articulated in comprehensive plans.

- Does the local government have a comprehensive plan or a sustainability plan?
- Does the comprehensive plan contain food related goals and policies that support food production and population access to healthy, locally produced foods?
- Do the goals and policies provide substantive direction for implementing programs (e.g., zoning ordinances) to sufficiently support local production?
- If there is no comprehensive plan, is one required by state law or does the local government have the power to enact one?

About local zoning ordinances and other land use and conservation tools:

Zoning and other land use and land conservation tools carry out relevant goals and policies articulated in the comprehensive plan.

- Does your local government have a zoning ordinance and a zoning map?
- Does zoning permit the following by right or special use permit in some residential zoning districts: community gardens, urban farms, food sales, greenhouses/ hoophouses/ high or low tunnels, hens for eggs, goats, pigs, rabbits, turkeys, and ducks?
- Are these types of farming activities classified as acceptable uses in a variety of zoning districts?
- Does zoning provide for these uses in close proximity to residential and mixed use zoning districts in some other way? For example, do local rules require developers to dedicate or deed land for open space that can be used for community gardens or farmers' markets?
- Are there explicit zoning districts or agricultural overlay zones used by your local government to permit agricultural uses within the built environment in forms like community gardens or urban farms?
- Do your local government and land trusts prevent excessive development and preserve land in agricultural zoning districts, through restrictive residential zoning and purchase and/or transfer of development rights

programs that produce permanent easements?
- Section IV (Urban Agriculture) in *Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities*, describes numerous other local land use policies that can comprise important production assets in municipalities and other more intensely developed areas.

About other Local Rules and Procedures:
- Are there local rules that restrict processing and sales by defining them as commercial activities? Are uses and definitions included in local zoning codes to explicitly accommodate them in many zoning districts?
- Is there a local government "ombudsman" whose job is to know programs that must be navigated by practitioners of local agricultural production, processing, value added and marketing and assist them in doing so? Do local government leaders and staff implementing these programs have an explicit priority to enable local food systems as much as possible without sacrificing safeguards on public health, safety, land use, or other public objectives?
- Are there other health, fire or other regulations that place unreasonable constraints on processing, value added activities, aggregation, and sales of local food products?

State Policies Affecting Production: Examples of Questions to Answer

Relevant state policies and practices include those related to disposition of grants from USDA, use of financial incentives for production, provision of training programs, protection of land from development, right to farm laws, and partnering with other organizations to support local production and new or young farmers.

- What state policies and procedures are used to apply for and award Specialty Crop Block grants from USDA under the Farm Bill? Does the state Department of Agriculture work with specialty crop growers to formulate projects relevant to their needs?
- Does your state provide its own grants to support specialty crop production and healthy foods for local consumption in general?
- Does your state effectively use tax incentives to support farming in general and food for local consumption in particular? This includes use of reduced tax rates for certain incomes or tax transactions; a lower property tax rate for farms, including small ones in close proximity to population; tax credits for things like production of crops for local consumptions, organic farming, and young or new farmers.
- Does your state have tax incentives to encourage procurement of local foods by wholesalers, retailers and institutions, which in turn stimulates local food production?
- Does your state have income tax deductions based on input costs for producers of healthy food for local markets to incentivize growers?
- Does your state have loan programs to incentivize new or young farmers and production of local food products?
- Does your state provide training programs to help new and established farmers meet financial, environmental, production, and other challenges?
- Has your state enacted programs and policies to protect agricultural land from residential development statewide, or provided local governments with financial incentives to do so? Does your state have a comprehensive farmland protection plan to serve as an umbrella for these programs and policies, at state and local levels?
- Has your state established a dedicated revenue source for purchase of development rights, and an effectively targeted program to spend it? Does it include provisions to cost-effectively preserve land for community gardens and urban farms in urban areas?
- Has your state adopted a program to purchase farmland in fee and resell it with agricultural conservation deed restrictions?
- Does your state have right to farm laws that provide strong protection to farmers? Do they cover a broad range of farming activities conducted at any time of day? Do they apply explicitly to production of food for local consumption, particularly in areas within or close to urban areas? Do they prevent enactment of other laws and regulations that would impose unreasonable restrictions on

agriculture in general and production for local consumption in particular?
- Does your state work with other organizations to mentor new farmers by matching them up with experienced farmers? Does it contribute funds to these efforts?
- Does your state work with other organizations to help farmers interested in local foods to choose, evaluate and manage their operations more effectively and profitably?

Quality Certification Programs for Agricultural Producers: Examples of Questions to Answer

Although fresh fruit and vegetable producers are subject to much less intense food safety regulations than processing facilities, purchasers increasingly require certification of "good agricultural practices" (GAP) and "good handling practices" (GHP) through 3rd party audits conducted according to USDA's Good Agricultural Practices & Good Handling Practices. Audits can be costly for small producers, especially those who grow a variety of crops.

- Does your state provide grants or other forms of financial support to farmers to meet GAP/ GHP requirements?
- Has your state implemented a less expensive, more manageable state certification program to serve as an alternative to the federal audit process?
- Does your state conduct training and distribute educational materials to farmers to help them meet certification requirements?

Other Policy Questions Affecting Production to Answer: Examples of Questions to Answer

- Are federal crop insurance programs for specialty crop growers available in your state? These include the AGR (adjusted gross revenue) and AGR-Lite programs (from the USDA Risk Management Agency). and the NAP (non-insured crop disaster assistance program) from the USDA Farm Service Agency.
- Are specialty crop growers in your state aware of these programs? Do they know how to take advantage of them to manage risks?

Processing, Aggregation and Distribution

Federal regulations loom large in the scheme of processing and handling, through aggregation and distribution, particularly for foods that may travel across state lines. But state governments have significant authority and ability to influence these important step in the supply chain, particularly as they pertain to smaller scale participants that sell more locally. Local governments have authority specified in each state's constitution and laws, they often enforce state regulations, and some have their own rules where authorized.

For this topic, Chapter VIII, Food Safety and Processing in *Good Laws, Good Food: Putting State Food Policy to Work for Our Communities* is a valuable orientation guide and reference. As noted there, "…federal regulations apply to all foods that are sold in interstate commerce (meaning across state borders) or foreign commerce, and states have the power to regulate most foods that are only sold intrastate" (within one state's boundaries). "The U.S. Food & Drug Administration (FDA) has jurisdiction over processed foods, seafood, and food additives, while the U.S. Department of Agriculture (USDA) regulates fresh produce, livestock, poultry, and eggs…states enjoy complete jurisdiction over farmers' markets and other types of direct farm sales, retail sales, restaurants, and many types of small-scale agricultural production and processing entities."

Important parts of the regulatory scheme for processing and handling include:
- The Food Safety and Modernization Act (FSMA), enacted in 2011. FDA develops safety standards for production of fruits and vegetables, and requirements for Hazard Analysis and Critical Control Point (HACCP) plans for processing facilities that gross more than $500,000 annually or sell a majority of products outside the state or beyond a 275 mile radius.
- The Federal Food, Drug and Cosmetic Act (FDCA) allows FDA to establish regulatory standards for processed foods and imposes labeling requirements for packaged foods.
- FDA also issues the federal model "Food Code" for producers, processors and retailers.

States may adopt this code for foods and sales under their authority or alter it as they see fit. This may include state "cottage food" laws or regulations.

- USDA's Food Safety and Inspection Service (FSIS) regulates processing for meat, poultry and eggs sold interstate. State governments are authorized to establish their own procedures that are "at least equal to" federal programs for intrastate products.
- USDA's Good Agricultural Practices & Good Handling Practices (GAP & GHP) provide guidelines for federal and 3rd party audit programs intended to certify the safety of fruits and vegetables. These certification audits are required by many large scale distributors and buyers of fruits and vegetables, whether they are distributed interstate or strictly within a state.

Policy Questions Affecting Processing, Aggregation and Distribution

Federal/ State Regulation & Assistance, Fruits and Vegetables: Example Questions to Answer

- Does your state provide frequent, accessible education, outreach and training workshops, and distribute related materials on the FSMA, covering the way it is implemented within the jurisdiction, how requirements apply to different types and sizes of producers and processors, and how each might efficiently comply with the requirements?
- Do these materials and workshops distinguish between large facilities producing food products for interstate commerce, and smaller ones whose products are distributed strictly within the state?
- Does your state distribute guidelines to help farmers, processors and handlers to make sense of food safety requirements of federal and state programs, as implemented in the state, and to meet compliance requirements of all levels of health and food safety regulations and requirements?
- Does your state have a cooperative agreement with the federal government under which it administers federal food safety programs?
- Has your state adopted and does it administer state-level food safety regulations for products within its exclusive (from the federal government) jurisdiction?
- Has your state evaluated its regulations and requirements to determine if they interfere with local, small scale operations in ways that are not necessary to safeguard public health and food safety? Has it taken actions to change requirements indicated by such assessments?
- Has your state worked with private distributors and buyers to establish a GAP/ GHP certification program alternative to the federal audit process, to address issues of cost, accessibility, and imposition of requirements that are not necessary to safeguard public health and food safety?
- Does your state offer financial assistance to farmers and processors to develop procedures that meet GAP/ GHP audit certification requirements?
- Does your state allow and facilitate the use of group GAP for small and mid-size producers?
- Are there private, non-profit and educational programs and efforts to support new and existing produce operations, and help them to navigate regulatory, business and certification issues? Do they work with state and federal partners, and vice versa, to maximize their contact with stakeholders?

Federal/ State Regulation & Assistance, Meat, Poultry and Eggs: Example Questions to Answer

- Has your state published guidelines for small scale meat, poultry and egg producers and processors to help them comply with federal and state regulations?
- Has your state developed and does it implement programs designed to support those starting new meat and poultry production operations, designed to help them minimize costs and achieve regulatory compliance?
- Does your state have a state meat and poultry inspection program for slaughter and processing facilities?
- Has your state evaluated its meat and poultry slaughtering and processing regulations and requirements for construction, permitting and operations, to determine if they create barriers to local, small scale operations that are not necessary to safeguard public health and food safety?

Has it taken actions to change requirements indicated by such assessments?
- Does your state provide grants, loans or other forms of financial assistance to support creation of local or regional slaughterhouses and processing facilities?
- Do state regulations allow mobile slaughtering operations?
- Does your state have programs to support, encourage, and assist individuals or companies to create mobile slaughter and processing facilities?
- Are there private, non-profit and educational programs and efforts to support new and existing meat and poultry production, slaughter, and processing operations, and help them navigate regulatory and business issues? Do they work with state and federal partners, and vice versa?
- Is there a statewide, interagency organization in place to monitor progress in expanding local food systems?

Roles of Local Government: Example Questions to Answer

- What roles and responsibilities have been delegated to local government in your state as they relate to processing facilities?
- Is there a great deal of variation in the ways in which local governments interpret and implement delegated authority for food safety and health regulations in your state? Do these differences complicate efforts of producers and processors to sell in different local jurisdictions? Has the state attempted to identify and resolve barriers created by variations in interpretation and implementation by local governments?

Cottage Food Law and Regulation & Assistance: Example Questions to Answer

- Does your state specifically allow for production and sale of cottage foods?
- Has your state published simple guidelines to help cottage industries comply with requirements unique to that sector?
- Does your state provide educational workshops and informational materials to help those starting new or operating existing cottage food operations manage costs, develop markets, and meet regulatory requirements as simply and expeditiously as possible?

Marketing, Market Access and Sales

Questions about Market and Consumer Access:

- Are farmers' markets allowed to operate without local permits, or with appropriately simple and inexpensive permits appropriate for farmers' markets compared to supermarkets or large businesses?
- Does the zoning or the comprehensive plan provide for these uses in close proximity to residential and mixed use zoning districts? For example, do local rules require developers to dedicate or deed land for open space that could be used for farmers' markets?
- Does local zoning include mixed use districts to maximize accessibility of residents and employees to sources of healthy, local foods?
- Does local zoning permit healthy, local food sources such as farmers' markets, local food trucks, and grocery stores that sell local products to locate in residential zoning districts, in food deserts or other areas with limited access to healthy foods?
- Does local zoning permit construction of healthy food outlets but prohibit construction of new fast food restaurants near schools and other areas targeted to populations with limited access to healthy foods?
- Does your local government use financial incentive programs (e.g., real estate or sales tax incentives), zoning incentives (e.g., additional floor area, reduced parking requirements, etc.), or incentive zoning (e.g., reciprocal zoning or permitting concessions in exchange for development commitments to the community) to encourage development of space for healthy, local food outlets and for vendors of healthy, local foods to locate in communities, including food deserts?
- Does your local government require food stores in communities to stock some minimum level of healthy, local foods?
- Does the comprehensive plan include goals and policies supporting walkability and community access to commercial establishments like grocery stores and other potential sources of healthy, local foods, by means other than automobile?

- Does your state operate a Fresh Food or Healthy Food Financing Initiative, such as those in place in Pennsylvania and California, to fund projects designed to improve access of low income communities to healthy foods?
- Has your state issued simple guidance documents describing rules and regulations governing famers' markets?

Questions about Consumer Demand and Food Waste

- Has your state implemented its own food labeling rules for foods sold intrastate? Are these rules flexible for start-up cottage food industries? Do they allow information to be presented that informs consumers about the sources of the food and the ways in which it was produced and handled?
- Has the state implemented its own menu labeling rules for restaurants not subject to the federal menu labeling law under the Patient Protection and Affordable Care Act of 2010, to allow desirable attribute information about local foods to be presented?
- Do local government agencies and private institutions such as hospitals implement local food preferences in their procurement procedures?
- Do local policies for food waste enable gleaning, donation, and re-sale of unused food products and composting as ways to minimize food waste and produce new food products?
- Do your state and local governments educate individuals and organizations to take advantage of Federal tax credits for those who make charitable donations of food? Have they created additional tax credits to these ends?

Other Important Areas for Questions

Additional areas having substantial influence on local food system access to markets include the ways in which states and local governments implement federal and their own food assistance programs, farm to institution policies, and school food programs. Assessment teams at all three levels may want to investigate the degrees to which opportunities in these arenas are being acted upon by state and local governments. *Putting State Food Policy to Work for Our Communities* includes two sections helpful for these purposes: Section IV, Food Assistance Programs, and Section VI, Farm to Institutions. *Putting Local Food Policy to Work for Our Communities* includes a similarly valuable Section VI, School Food and Nutrition Education.

F. Opportunities for Change

The final, vital step in the process of developing a Chesapeake Bay regional food system will be a food policy council's recommendations to scale appropriate opportunities identified in the above to change aspects of the existing food system(s). These opportunities will vary to a significant degree with the scale of the assessment, and will increase if there is some synergy among teams at different levels.

A few examples of issues local assessment teams may be in a good position to address themselves:

- Local land use planning, regulatory, and other practices affecting production, processing, aggregation and distribution.
- Production, processing, aggregation and distribution issues to fill gaps associated with specific, defined local markets. An example is the one used in section C.2 of this Chapter to illustrate local producers wishing to form a cooperatively managed marketplace for them (the sellers) and their buyers (select local restaurants), and a consolidating facility to aggregate, minimally process, and distribute products to the buyers.
- Market access issues under control of their local government or governed by policies and practices at the discretion of individual grocery stores.
- Procurement practices of local institutions that unintentionally and unnecessarily discriminate against the local supply chain and fail to take advantage of its benefits.

A few examples of issues on which local assessment teams may be an invaluable source of information for state and the regional assessment teams:

- State policies and practices that represent gaps in or obstacles to supply chain infrastructure.

- Local variations in the ways in which state food safety policies are implemented, which will help state assessment teams evaluate state policies and guidelines.
- Local accessibility to incubator kitchens, other processing facilities, and stationary and mobile slaughtering and meat processing facilities, which in turn will help state assessment teams evaluate these issues at the state level.
- Access to written guidelines, training, other educational materials, and grants that help local stakeholders participate in the supply chain. These might include access to Specialty Crop Block grants from USDA administered by the state; training programs to help new and established farmers meet financial, environmental, production, processing, and other challenges; etc.

A few examples of issues state assessment teams may be in a good position to address themselves:

- Market access of state producers, processors, aggregators and distributors to supermarket chains with substantial presence in the state.
- Feasibility of regional processing, aggregation, slaughtering and distribution facilities within the state that might enhance access of state stakeholders to supermarkets as wholesale customers.
- Inconsistencies in the ways in which state food safety and healthy food policies are implemented by local governments.
- Shortcomings in state guidelines for fruit and vegetable processing facilities that do not distinguish between large facilities producing for interstate commerce and small ones whose products are distributed strictly within the state.
- Food safety requirements for production and sale of cottage foods that do not make it simpler, easier and less expensive to produce, process and sell cottage food products and which contradict the purpose of state cottage food laws.
- Food safety requirements for local fruit, vegetable, meat, and dairy producers, processors, and distributors at any level within the state that do not make food safer but impose substantial burdens on stakeholders that constrain the relevant links in the local supply chain.

A few examples of issues the regional assessment team may be in the best position to address:

- Federal food safety requirements for local fruit, vegetable, meat, and dairy producers, processors, and distributors for which there is insufficient flexibility for states to optimize food safety while minimizing procedural and financial burdens on stakeholders in the Regional supply chain.
- Federal allocation of dollars to programs that support local and regional food systems.
- A regional foodshed assessment, examining market realities and market potential for local foods in the Region; the magnitude of local/ regional production, processing and other steps in the supply chain that would be required to achieve some of that potential; and an assessment of means to increase local food system capacity in coordination with engaged state and local assessment teams.
- Development of a comprehensive food plan for the region, including steps to prioritize issues to be addressed to create alternative, local and regional food system infrastructure and provide substantially greater access to institutional, wholesale, retail and individual consumers.

When researching opportunities, study teams should review the opportunities outlined in Chapters 2 and 3 as they provide a solid framework of areas where action is being taken in the U.S. today.

CONCLUSION

A. Overview

The notion of a Chesapeake Food System has been proposed. Consumers continue to indicate that they would like to buy locally sourced food, and many will even pay more for it.

Chapter 1 highlights the reasons why it might be in the region's interest to have its own food system. It makes the point that the watershed's lands and waters once did feed the region's residents. Now increasing numbers of farmers and those who support them are trying to build such a food system again.

However, conditions are much different today. Every aspect of the production and provision of food is now regulated at the federal, state, and local levels, and is economically governed and physically distributed and sold by a national and international corporate system.

Justification for regulations is usually based on the health, safety, and welfare of the citizens. As the old fashioned, minimally processed food system evolved into a global, industrial food system, there were many reasons to regulate the provision of food. Over the 20th century, the national, now global, corporate food system has adapted to the regulatory system and manages virtually every aspect of the provision of food.

Based on growing popularity for local food, there has been some governmental effort to expand local food opportunities in the last few decades. However, corporations still control over 90% of all food sales and regulations stymie local food system progress.

Chapter 2 describes dozens of government programs that directly hinder the development of a regional food system, and a similar number of programs that encourage it. However, the odds are stacked against a regional/ local food system because of a combination of federal policies and laws and the prevalence of the corporate food system.

Chapter 3 characterizes responses and perspectives of regional stakeholders to the array of challenges and opportunities presented by government policies. Their responses reflect the research findings described in Chapter 2. They also suggest that in some cases, the ways in which federal, state, and local policies are interpreted and implemented at the level of the farm or facility may be a bigger problem than the policies themselves. Responses also reinforce the complexity and difficulty of issues that will need to be addressed to realize a successful regional food system. Some programs are making progress in certain areas, but progress appears to be geographically sporadic, highly variable from place to place, and quite limited relative to the full range of challenges.

B. It is Time to Build the Case

In Chapter 4, the study team notes that the crux of the problem is that the reasons to grow a local/regional food system, espoused in the report's objectives and outlined in the Introduction to this report, are not yet widely embraced by federal policy makers, state and regional economic development strategists, or land development business practitioners. The corporation-dominated market place assigns no special value to food security or environmental protection. Also, local food systems have few inherent institutional advocates compared to the existing national and global system.

The case needs to be made that it is in the region's interests, from the standpoint of health, safety, and welfare, to develop a regional food system.

Assuming that the case is made, change will require two levels of action: (1) from the top down there must be major revamping of federal policies and laws and (2) the more incremental bottom up building of support, continuing and expanding local food movement efforts that have already won small increases in regional market shares over the last 20+ years.

Until the existing system of trade agreements and federal food policies evolve, the local food movement will always struggle to gain a foothold for market share in the corporate system. True change will come from the top.

However, federal policy changes tend to occur at a glacial pace. Therefore, action on the local and state level remains vital to the development of a Chesapeake Bay regional food system. Accordingly, this study recommends building local and a regional food system through a combination of these approaches to assess, plan, and implement solutions and the necessary infrastructure. The study team lays out a more detailed strategy to that end in **Chapter 4**.

If food is an essential ecosystem service, it is time to focus explicitly on creation of local and a regional system to deliver that service in the Chesapeake Region. In summary, that means:

- Focusing on a common objective, for which we suggest: Create local food system infrastructure *and relationships analogous to the prevailing multinational corporate system, but designed to move locally grown foods efficiently and profitably through local and regional supply chains to all who need them, while minimizing waste and maximizing recovery*;
- Recognizing all of the obstacles interfering with and the assets already supporting such a system;
- Convening stakeholders from the three relevant levels of government, and from the base (producers) to the top (wholesale, institutional and retail consumers) of the supply chain;
- Taking advantage of on-the-ground, innovative efforts already undertaken by stakeholders throughout the supply chain within the region; and
- Strategically integrating those efforts to first draw a blueprint for and then to build the infrastructure for a strong local/ regional system that can provide food security for the region through a foundation comprised of healthy, regionally produced, and processed foods.

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Appendix 1.

FOOD SYSTEM ANALYSIS IN THE UNITED STATES AND THE CHESAPEAKE BAY REGION IN PARTICULAR; A PRELIMINARY LITERATURE REVIEW

By

Land Stewardship Solutions, LLC

Prepared for the Chesapeake Foodshed Network

December 2015

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A. Introduction

The Harry R. Hughes Center for Agro-Ecology, Inc. and the Chesapeake Foodshed Network have requested that a process be developed as to how one should go about assessing existing federal, state and local laws, policies and regulations that encourage/hinder the development of a regional foodplan in the Chesapeake Bay Region. This paper provides a preliminary review of academic, governmental, and non-governmental sources of literature which discuss:

(1) The status of local food systems/foodsheds in the United States which will provide context for the proposed final analysis,

(2) foodshed studies performed in other regions of the U.S. to provide insight into foodshed analysis considerations and best practices,

(3) food system studies completed in the Bay region,

(4) publications detailing specific federal, state, or local policies or laws which either support or limit local food systems in Delaware, the District of Columbia (D.C.), Maryland, New York, Pennsylvania, Virginia, and West Virginia.

The review discovered a wide breadth of information about local food systems, including analyses and discussion of issues and policies at all levels of government in the U.S. and in areas around the nation. While few studies have been completed specifically in the Chesapeake Bay Region, this review did discover some evaluations of regional local food issues, and it documents a great number of policies and laws that either support or limit local food production in the Region.

The intent of this review is to categorize an all-inclusive list of the literature applicable to the subject of the study. However, we recommend as a next step that the contained literature be analyzed in a comprehensive fashion in order to support a full assessment of considerations facing the development of a regional foodplan in the Chesapeake Bay Region.

B. Methodology

In order to ensure a comprehensive literature review, we used the following search tools: Maryland Public Libraries, World Book Online, Student Research Center, EBSCO Host, CQ Press Library, Google Scholar, Wikipedia, and academia.edu. General search phrases included "foodplan", "foodshed", "local food", "food hub", "regional foodplan", "regional foodshed", "foodshed plan", "local food obstacles", and "foodplan obstacles". To gather resources regarding specific levels of government, we searched the following phrases for the federal government and each state in the Chesapeake Bay Region:

- "____ state laws/policies encourage/support local food, encourage/support agriculture",
- "____ state laws/policies block/limit/harm/prevent local food, block agriculture",
- "____ agriculture incentives", and
- "____ policies make difficult for small farms".

In addition, an emphasis was made to search for articles regarding food safety regulations and their impact upon local food.

The literature discovered during this first step was examined and relevant new resources within their reference lists were added to the list for this review. This second step was completed for each resulting document and those that followed until a comprehensive list of literature was formed.

C. Foodshed Literature – General

This literature review discovered a wealth of resources on foodshed analysis in general, and on its current status in the U.S. While the literature discussed later in this report runs the full gamut from recommendations in specific policy areas to examples of foodshed studies in other areas to local policy examples, the literature in this category is predominantly related to more general discussions covering such topics as:

- How to complete a foodshed assessment
- Best practice foodshed policies
- Analyzing the benefits of foodsheds
- How far away is local?

- Legal issues facing the development of foodsheds
- Guides on foodshed plan development
- How do you decide the size and geography of a regional foodshed?
- Foodshed case studies
- Other existing literature reviews covering the state of knowledge regarding food systems

D. Local Food Topics

1. Food Hubs

Food hubs have been defined by the United States Department of Agriculture (USDA) as "a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand" (USDA, 2012). These hubs have largely risen in response to the key challenge local food producers face regarding a lack of distribution infrastructure for smaller farms in the U.S. Our list includes numerous resources on food hubs, including surveys and case studies of existing hubs in the country and guides on how to develop a food hub.

2. Consumer Perceptions and Marketing

A common theme in foodshed literature is the major barrier of how local producers can best market their products and change consumer perceptions of local food for the better. Articles in this category discuss consumer willingness to pay, the use of e-marketing to promote local food, the use of food hubs to promote marketing, etc.

3. Low-Income Consumer Considerations

Local produce is often touted as a way to improve the health of low-income communities, and ensuring access of local food to these communities should be an integral part of any foodplan. Available literature has highlighted this fact, with analyses of food stamp client perceptions of local food and farmers' markets, case studies of programs to bring farmers' markets to low-income communities, etc.

4. Local Food in Institutions

Significant barriers prevent many farmers from taking the step from direct sales to institutional markets, including "infrastructure challenges such as inadequate kitchen equipment, untrained kitchen staff, and limited storage space for unprocessed food, food safety concerns, distributors not carrying or identifying local foods, inconsistent quality, and seasonality" (Becot et al, 2014). Most literature on this subject falls into analysis of three types of institutions:

A. Hospitals, where case studies have analyzed the factors which help encourage these institutions to partake in farm-to-hospital programs;
B. Universities, where many colleges have adopted programs to promote the purchase of local food by both the institution and by students within that institution;
C. K-12 schools, where multiple federal and state laws and programs have promoted farm-to-school sales.

5. Local Fisheries

The inclusion of local seafood in foodshed planning is not an oft-analyzed subject in foodshed literature, but there are several resources on the topic. Our review contains a study by Brinson, Lee, and Rountree in 2011 discussing community-supported fisheries, a study completed in 2014 analyzing consumer and retailer demand for locally-caught seafood in New Hampshire, *American Catch; The Fight for Our Local Seafood*, a book which tells the history of the decline of local seafood consumption and argues for its revival, and two research reports in 2013 and 2014 promoting the inclusion of seafood in future foodshed analysis.

6. Local Meat

USDA research has determined that "access to Federal or State-inspected slaughter and processing facilities is limited in some parts of the country" (Johns, Marti, & Gwin, 2012), which represents a significant barrier to locally sourced meats as part of a foodshed.

Thirteen articles covering the subject are included in this review.

7. Food Safety Policies and Regulations

One of the major barriers to local food production is the regulatory burden placed upon small farmers by federal, state, and local food safety policies. This issue has become particularly prevalent in literature recently due to the adoption of the U.S. Food Safety Modernization Act (FSMA) which will have a large impact on U.S. food production for years to come.

8. Local Food Policies/Issues

This subsection of resources covers a large track of literature discussing the various issues that impact agriculture and local food production and sale at the state/local level of government. Topics covered include:

- Food sovereignty laws
- Agricultural tax credits
- Farmland protection statutes
- Cottage food laws
- Local food procurement
- Food truck laws
- Right-to-farm laws
- Policies and laws supporting agritourism
- Food ordinances
- Land use policies/planning
- Urban policies to support agriculture in cities.

E. Foodshed Studies in Other Regions

The last fifteen years have seen an outburst of foodshed analyses and food plans throughout the U.S. These documents can be reviewed to discover relevant themes, best practices in foodshed assessment, obstacles, opportunities, and policy implementations which could then be applied to the Chesapeake Bay Region.

Literature on other regions in the U.S. can be categories into the main following areas: (1) food system evaluations/assessments which are primarily quantitative analyses of the existing systems in an area usually with some recommendations for moving toward a plan, (2) food system recommendations which are lists of policies to promote the local food system, (3) agricultural plan which is not specific to local food but generally supports agricultural development, and (4) food system plans which are comprehensive in scope, including a foodshed assessment, analysis of related results, and a plan to improve the foodshed going forward.

<u>Food System Evaluation/Assessments</u>
Central Puget Soundy
Clay County, North Carolina
Cook County, Illinois
Cumberland County, Maine
Detroit, Michigan
Douglas County, Jefferson County, & Leavenworth County in Kansas
Knoxville, Tennessee
Manhattan, Kansas
North Central Washington
Oakland, California
Orono, Maine
Rochester, New York
San Diego, California
San Francisco, California
Sonoma County, California
Southern Appalacha
Southeast Alaska
Southeastern Massachusetts
Southeastern Michigan
Western Lake Superior Region
Western Washington State
Willammette Valley

<u>Food System Recommendations</u>
Dane County, Wisconsin
Illinois
Johnson County, Iowa
Multnomah County, Oregon
New York City, New York
Northeastern Kansas
Portland, Oregon
Puget Sound
San Diego, California
New Hampshire
Washington State

<u>Local Agriculture Plan</u>
Fairview County, Ohio
Iowa

<u>Food System Plan</u>
Buffalo, New York
Central Ohio
Clackamus County, Oregon
Headwaters Region, Oregon
Hudson Valley
Northeast Ohio
North Kootenay Lake

Santa Fe, New Mexico
Vermont

Other (Specific Local Food Topics)
Beaufort County, North Carolina
Chattanooga, Tennessee
Colorado
Lane County, Oregon
Massachusetts
Michigan
Montgomery County, Pennsylvania
Ohio
San Luis Opisbo County, California
North Carolina
Saratoga, California

F. Studies in the Chesapeake Bay Region

To date, most analyses of local foods and food systems in the Bay region have been either state- or locality-specific and therefore are covered later in those state sections of this document. However, in the past five years interest in a more regional perspective has grown and four projects of interest have been completed.

(1) In 2010, the Delaware Valley Regional Planning Commission (DVRPC) completed a study of the current situation and challenges of the 100-mile foodshed surrounding Philadelphia, PA.

(2) A report assessing the existing system of local food in Appalachia, which includes portions of Maryland, New York, Pennsylvania, Virginia, and West Virginia in our study, found "a vigorous and growing regional food economy" and identified best practices and resources to further the food system's growth (Haskell, 2011).

(3) An analysis of farm-direct food sales in Northeast (covering all Bay states except Virginia) was completed in 2011, highlighting at the county level which factors impact local food sales (Cheng et al, 2011).

(4) In 2014, the Northeast Sustainable Agriculture Working Group, which includes the same area, released *New England Food Policy: Building a Sustainable Food System*. The document is intended to guide citizens, organizations, coalitions, agencies and policymakers in identifying barriers to a strong regional agricultural economy and expanded food production in New England.

(5) In 2016, Arabella Advisors released a report assessing the current landscape of food system initiatives in the Chesapeake Bay watershed and identifying the most crucial gaps and challenges.

G. Federal Policies

The United States Federal Government has an extensive array of laws and policies that impact and/or promote agriculture in general and local food systems in particular. This analysis discovered numerous resources describing this array, covering the following subjects:

- U.S. Department of Agriculture programs, including grants and loans
- Federal Farm Bill and recent revisions
- Food Stamp and Food Distribution Program
- Child Nutrition Programs
- Federal tax laws, such as the estate tax
- Food safety laws
- The commerce clause

H. Specific Chesapeake Bay Region States

1. Delaware

Literature on local food and its support system in Delaware covers the following topics:

- Agricultural reservation programs
- Food processing regulations for on-farm kitchens
- Direct marketing consumer analysis
- Food trucks regulations (literature has shown food trucks to be an integral part of foodshed integration in urban areas)
- Agricultural support programs
- Oyster farming support

Notably, in 2011 the University of Delaware Center for Energy and Environmental Policy completed a report providing a review of local food systems in the United States and how lessons learned can be applied to the State of Delaware. The report includes recommendations such as ways to increase public awareness, the development of a

State Food Policy Council, the development of food distribution systems, etc.

2. District of Columbia (D.C.)

Given that it is an urban center and therefore unable to sustain its population's dietary needs without the support of the surround region, it is not surprising that the D.C.-specific literature list is relatively short. However, there are articles on the following topics:

- Local food policy/laws in the City
- Urban farming
- Food in schools
- Food safety regulations

3. Maryland

Literature related to the local food system in Maryland covers the following topics:

- Right-to-farm laws in the state
- Food recovery
- Local food in schools
- Institution food purchasing in Baltimore & the University System of Maryland
- Farmer's markets and related regulations
- Food trucks
- Tax incentives, such as property tax agricultural use assessments and urban agriculture tax credits
- On-farm processing
- Agricultural labor laws
- Agricultural support programs
- Oyster aquaculture

The City of Baltimore has been an area of focus in Maryland. In 2010, the Johns Hopkins School of Public Health Center for a Liveable Future released a report assessing the City's food environment and making a number of recommended interventions (Haering & Franco, 2010). Then in 2013, the Baltimore City Planning Commission published its *Urban Agriculture Plan* analyzing challenges and proposed solutions to expand urban agriculture in the City.

Also of significance, the Maryland Department of Planning (MDP) released a report in 2012 which "provides information to local governments and interested citizens about the food system—production, processing, marketing, distribution, consumption, and waste management—and how public policies, including planning, can improve the system to benefit Maryland's environment, economy, and citizens" (MDP, 2012).

4. New York

In New York State, a great deal of the literature regarding food system planning centers around New York City, which is not in the Chesapeake Bay Region and therefore is not included in this report. However, a variety of resources were discovered covering the state as a whole including literature discussing:

- Agricultural preservation and support statues and policies
- Sanitary regulations impacting direct marketing of local food
- Tax incentives, such as property tax agricultural use assessments
- Guidance on starting home-based food businesses
- Cottage food laws
- Local zoning and planning

In addition, an intriguing analysis of the capacity of local agriculture in the state to feed its citizens was completed in 2008 and found that "overall, NYS could provide 34% of its total food needs within an average distance of just 49 km" (Peters et al, 2008).

5. Pennsylvania

Major topic areas of literature discussing issues impacting Pennsylvania's food system include:

- Agricultural support programs
- Laws impacting seed libraries
- Agricultural law and regulations handbooks
- Land use policy tools to support agriculture
- Farm to school programs
- Right-to-farm laws in the state
- Farmer's Market inspection regulations
- Direct farm regulations
- Analysis of the state's meat processing industry

Several studies are specific to the Philadelphia area, including the DVRPC plan highlighted earlier in this paper, a report analyzing the ability of Philadelphia's foodshed to support the diet of the

City's population (Kremer & Schreuder, 2011), a study mapping the City's existing foodshed, and an analysis of its current community-based food initiatives.

6. *Virginia*

Literature on local food and its support system in Virginia covers the following topics:

- Agricultural support programs
- Local food system initiatives and studies around Charlottesville, Richmond, Roanoke, Arlington County, and Falls Church
- Guides on regulations for new farmers
- A study on food deserts in the state
- Programs to support beekeeping
- Laws protecting agricultural operations
- Virtual marketing of local food in the state
- Recent legislation supporting local beer production and aquaculture

Notably, in 2010 FamilyFarmed.org completed its *Local Food System Assessment for Northern Virginia*, exploring the system's current infrastructure, and in 2012 the Virginia Cooperative Extension completed a Virginia Farm to Table Plan.

7. *West Virginia*

Major topic areas of literature discussing issues impacting West Virginia's food system include:

- Agricultural support programs
- Analysis of the state's existing farmers' market structure
- Analysis of the factors effecting the prevalence of direct marketing
- Market participation analysis of local food farmers
- Discussion of groups working to expand local food in the state

One of the main groups working to enhance the state's local food system is the West Virginia Food & Farm Coalition, which released a *Road Map for the Food Economy* in 2013. The *Road Map* provides guidance for local government, citizens groups, policy makers, farmer groups, foundations, agencies, etc. on steps to take to support local food in West Virginia.

I. References List

**Note: summaries are largely extracted from literature abstracts.*

1. *Food System Planning/Foodshed Analysis – General*

Ackerman-Leist, P. (2013). *Rebuilding the Foodshed: How to Create Local, Sustainable, and Secure Food Systems*. White River Junction, Vermont: Chelsea Green Publishing.

Summary: Changing our foodscapes raises a host of questions. How far away is local? How do you decide the size and geography of a regional foodshed? How do you tackle tough issues that plague food systems large and small—issues like inefficient transportation, high energy demands, and rampant food waste? How do you grow what you need with minimum environmental impact? And how do you create a foodshed that's resilient enough if fuel grows scarce, weather gets more severe, and traditional supply chains are hampered? Showcasing some of the most promising, replicable models for growing, processing, and distributing sustainably grown food, this book points the reader toward the next stages of the food revolution. It also covers the full landscape of the burgeoning local-food movement, from rural to suburban to urban, and from backyard gardens to large-scale food enterprises.

American Planning Association. (2007). *Policy Guide on Community and Regional Food Planning*. Retrieved from https://www.planning.org/policy/guides/adopted/food.htm.

Summary: This Policy Guide on community and regional food planning presents seven general policies, each divided into several specific policies. For each specific policy, a number of roles planners can play are suggested. The seven general policies are:

1. Support comprehensive food planning process at the community and regional levels;
2. Support strengthening the local and regional economy by promoting local and regional food systems;
3. Support food systems that improve the health of the region's residents;

4. Support food systems that are ecologically sustainable;
5. Support food systems that are equitable and just;
6. Support food systems that preserve and sustain diverse traditional food cultures of Native American and other ethnic minority communities;
7. Support the development of state and federal legislation to facilitate community and regional food planning discussed in general policies #1 through #6.

American Public Health Association. (2007). *Toward a Sustainable Food System*. Retrieved from https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/29/12/34/toward-a-healthy-sustainable-food-system.

Summary: This position paper reviews the scientific basis for understanding the US food system and sustainability, identifies specific issues of concern, discusses key related policies and action opportunities, and outlines APHA goals. By uniting multiple food system themes in a single statement, it aims to provide clarity, new emphases, and solid direction, encouraging the APHA to increase its activities and leadership to promote a more sustainable, healthier, and more equitable food system.

Angelo, M. (2011). Small, Slow, and Local: Essays on Building a More Sustainable and Local Food System. *Vermont Journal of Environmental Law*. 12, 353-425. Retrieved from http://scholarship.law.ufl.edu/cgi/viewcontent.cgi?article=1281&context=facultypub.

Summary: To achieve a shift toward local food systems, it will be necessary to overcome existing legal, economic, and social barriers and to institute new innovative ideas to incentivize and promote local agriculture. It will also require overcoming social, economic, and educational barriers to facilitate the emergence of a new generation of small-scale local farmers. The essays that the author provides present some of the creative solutions that are being tried or proposed to meet these challenges.

Bellows, A. & Hamm, M. (2001). Local autonomy and sustainable development: Testing import substitution in more localized food systems. *Agriculture and Human Values* 18(3), 271-284.

Summary: Community initiatives to create more localized food systems often include the strategy of import substitution, i.e., increasing local food production for local consumption. The purpose of this policy is effectively to supplant some level of imported food into the region. The authors argue that such action can carry social and environmental risks as well as benefits and we have developed research parameters to measure the impact of such strategies. They propose local autonomy and sustainable development as positive indicators of a more localized food system. Three units of analysis are proposed to measure changes in local autonomy and sustainable development as a result of import substitution schemes: fair labor trade, equity and democracy, and environmental stewardship.

Blouin, C., et al. (2009). Local Food Systems and Public Policy: A Review of the Literature. Équiterre &
The Centre for Trade Policy and Law, Carleton University. Retrieved from http://socialeconomyhub.ca/sites/socialeconomyhub.ca/files/Local%20Food%20Systems%20and%20Public%20Policy%20-%20A%20Review%20of%20the%20Literature.pdf.

Summary: This paper reviews the state of knowledge about local food systems (LFS). It also reviews the agricultural policies adopted by federal and provincial authorities in Canada to assess whether they are supportive of LFS.

Blum-Evitts, S. (2009). *Designing a Foodshed Assessment Model: Guidance for Local and Regional Planners in Understanding Local Farm Capacity in Comparison to Local Food Needs*. Masters Theses, University of Massachusetts. Retrieved from http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1406&context=theses.

Summary: This thesis explores how to conduct a regional foodshed assessment and further provides guidance to local and regional planners on the use of foodshed assessments.

Borron, S. (2003). *Food Policy Councils; Practice and Possibility*. Congressional Hunger Center. Retrieved from http://commprojects.jhsph.edu/communications/idFive/mod_clfResource/files/downloads/Food%20Policy%20Councils%20Practice%20and%20Possibility.pdf/

Summary: In 1987, the city of Knoxville developed the first municipal food policy council to focus explicitly on issues related to food. Since then, other cities, counties, and even a few states have created food policy councils to address food issues holistically. These councils have developed projects and policies to improve their communities' access to food and overall nutrition as well as support local farmers and sustainable farming practices. Overall, food policy members "translate" the sometimes disconnected areas of community food security into common terms, and they transform win-lose situations into win-win opportunities to improve a community's health, economy, and environment (McRae 2002). This report describes how food policy councils uniquely make these translations from barriers to opportunities that result in more food-secure communities.

Braaten, D. & Coil, M. (2010). Legal Issues in Local Food Systems. *Drake Journal of Agricultural Law* 15(1), 9-32. Retrieved from http://students.law.drake.edu/aglawjournal/docs/agVol15No1-BraatenCoit.pdf.

Summary: The purpose of this article is to review some of the current laws that apply to local food systems in the United States, and to discuss how these laws are being changed and adapted to serve the needs of such systems.

Brinkley, C. (2013). Avenues into Food Planning: A Review of Scholarly Food System Research. *Int Plan Stud.* 18(2): 243–266. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4053247/.

Summary: This review summarizes several avenues of planning inquiry into food systems research, revealing gaps in the literature, allied fields of study and mismatches between scholarly disciplines and the food system life cycle. Planners and scholars in associated fields have identified and defined problems in the food system as 'wicked' problems, complex environmental issues that require systemic solutions at the community scale. While food justice scholars have contextualized problem areas, planning scholars have made a broad case for planning involvement in solving these wicked problems while ensuring that the functional and beneficial parts of the food system continue to thrive. This review maps the entry points of scholarly interest in food systems and planning's contributions to its study, charting a research agenda for the future.

Butler, M. (2013). *Analyzing the Foodshed: Toward a More Comprehensive Foodshed Analysis.* Geography Masters Research Papers. Retrieved from http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1003&context=geog_masterpapers.

Summary: Foodshed analysis may be a helpful tool that can be used to advise food system reform to the benefit of a community's economy, environment, and society, but, in order for this tool to be effective, communities and researchers must move beyond over-valuing proximity and embrace the complicated nature of food systems. Foodshed analysis researchers also need to address the problems of scale, boundaries, and variables that currently confound their studies. This paper explores an application of foodshed snalysis that respects and acknowledges the complexity of the issues it tackles, so that it can provide a comprehensive approach to analyzing, and perhaps improving, regional food systems.

Christy, E., Landman, K., Nowatschin, E., & Blay-Palmer, A. (2013*). Local Food Systems in North America; A Review of Literature*. Retrieved from http://nourishingontario.ca/wp-content/uploads/2013/07/NA-FoodHub-LitReview-2013.pdf.

Summary: The report is a survey of the prominent North American literature from academic, governmental, and non-governmental sources published within the last thirteen years on the subject of local food systems. The goal of this report is investigate current discussion on North American localized food systems and to identify the terms of engagement of participants seeking to access the perceived benefits of this form of food marketing.

Clancy, K. & Ruhf, K. (2010). Is Local enough? Some Arguments for Regional Food Systems. *Choices* 25(1). Retrieved from http://www.choicesmagazine.org/magazine/pdf/article_114.pdf.

Summary: The authors devote their attention to the concept of regional food systems. While many food system advocates use—and think of—the concepts as synonymous, they argue that such a merger obscures critical distinctions and fails to provide a meaningful framework upon which to build a more economically viable and environmentally sustainable food system. They suggest that a regional food system includes "local" but operates in a larger, more comprehensive scale. Many of their arguments and assumptions have not been tested yet, but offer fruitful opportunities for analysis, ways to work together, and a useful research agenda.

Columbus Health Department. (2005). *Improving Access to Healthy Food: A Community Planning Tool*. Retrieved from http://columbus.gov/uploadedfiles%5CPublic_Health%5CContent_Editors%5CPlanning_and_Performance%5CCardiovascular_Health%5CImproving_Access_to_Healthy_Foods.pdf.

Summary: A guide for local areas who wish to conduct a community food assessment and develop a local foodshed plan.

Feenstra, G. (1997). Local Food Systems and Sustainable Communities. *American Journal of Alternative Agriculture*. 12(01), 28-36. Retrieved from http://www.farmlandinfo.org/sites/default/files/local_food_and_sustainable_development_1.pdf.

Summary: People throughout the United States are designing and implementing sustainable, local food systems that are rooted in particular places, aim to be economically viable for farmers and consumers, use ecologically sound production and distribution practices, and enhance social equity and democracy for all members of the community. This paper reviews the existing literature on local food systems, examines a variety of strategies and initiatives that are currently underway, and identifies steps that community leaders and citizens can use to develop their own local food systems.

Feenstra, G. (2002). Creating space for sustainable food systems: Lessons from the field. *Agriculture and Human Values* 19(2), 99-106.

Summary: In response to growing trends in the current food system toward global integration, economic consolidation, and environmental degradation, communities have initiated alternative, more sustainable food and agricultural systems. Lessons may now be learned about the development and maintenance of local, sustainable food systems projects –those that attempt to integrate the environmental, economic, and social health of their food systems in particular places. Four kinds of space need to be created and protected– social space, political space, intellectual space, and economic space. Three important themes emerge from these community spaces: public participation, new partnerships, and a commitment to social, economic, and environmental justice principles.

Goodwin, H. (2013). Theme Overview: Developing Local Food Systems in the South. *Choices* 28(4). Retrieved from http://srmec.uark.edu/Choices%20LFS%20Theme_combined%202014.pdf.

Summary: This issue of Choice identifies the five most important issues related to Local Food System development in the South as identified by agricultural economists. Articles included:

- Risk Management Issues for Small Farms within Local Food Systems
- Response of Land Grant Universities to the Increase in Consumer Demand for Local Foods in the South
- Local Food Systems Markets and Supply Chains
- Food Safety Policies and Implications for Local Food Systems
- Local Food Systems in the South: A Call for a Collaborative Approach to Assessment

Goreham, G. & Stofferahn, C. (2001). *Enhancing Local/Regional Food Systems for Sustainable Development; Leader's Workbook.* North Dakota Extension Service, North Dakota State University. Retrieved from http://www.und.edu/org/ndrural/workbook.pdf.

Summary: In order to do provide a guide for local foodshed planning, the authors discuss in broad

terms the structure and dynamics of the community (Chapter 1); explore the concept of sustainability as it pertains to agriculture and to communities (Chapter 2) and the role local and regional food systems play in sustainability (Chapter 3); describes some of the ways that participatory "food circles," made up of a broad array of community residents, can examine the various components of communities (Chapter 4); offer specific steps to establish a baseline of information on the current conditions of the community (Chapter 5); steps to examine the community's food system are provided in Chapter 6; case examples of alternative food system components are described in Chapter 7; provide ideas on how to create a plan for local food system development in Chapter 8; and list ways to evaluate the plan's effectiveness in Chapter 9.

Guptill, A. & Wilkins, J. (2002). Buying into the food system: Trends in food retailing in the US and implications for local foods. *Agriculture and Human Values,* 19(1), 39-51.

Summary: The contemporary US food system is characterized by both an unprecedented concentration of corporate control as well as a fragmentation of sourcing and marketing processes, introducing both new constraints and new opportunities for more localized food systems. The purpose of the study is to explore these issues by investigating three key questions. First, what are the key trends in the US grocery industry? Second, how do different kinds of food outlets choose, procure, and promote food products? Finally, what are the implications of recent trends in the food retailing process for strengthening local flows of the production, distribution, and consumption of food?

Halweil, B. (2002). *Home Grown; The Case for Local Food in a Global Market*. Worldwatch Paper 163. Retrieved from http://www.libertyparkusafd.org/NatureFirst%20USA/curriculum%5CHome%20Grown%20-%20The%20Case%20for%20Local%20Food%20in%20a%20Global%20Market.pdf.
Summary: Contains a chapter on "Rebuilding the Local Foodshed", including examples of how areas in the U.S. have done so.

Hinrichs, C. & Lyson, T. (2009). *Remaking the North American Food System: Strategies for Sustainability (Our Sustainable Future)*. University of Nebraska Press.

Summary: Written by a diverse group of scholars and practitioners, the chapters in this volume describe the many efforts throughout North America to craft and sustain alternative food systems that can improve social, economic, environmental, and health outcomes. With examples from Puerto Rico to Oregon to Quebec, this volume offers a broad North American perspective attuned to trends toward globalization at the level of markets and governance and shows how globalization affects the specific localities. The contributors make the case that food can no longer be taken for granted or viewed in isolation. Rather, food should be considered in its connection to community vitality, cultural survival, economic development, social justice, environmental quality, ecological integrity, and human health.

Hodgson, K. (2011). *Food System Planning Briefing Paper*. American Planning Association. Retrieved from http://ucanr.edu/sites/MarinFoodPolicyCouncil/files/178441.pdf.

Summary: This briefing paper covers how planners can work with partners in the food systems sector and use creative strategies to achieve economic, social, environmental, and community goals.

Hughes, D. et al. (2007). *What Is the Deal with Local Food Systems: Or, Local Food Systems from a Regional Science Perspective.* Clemson University Department of Applied Economics and Statistics. Retrieved from http://www.clemson.edu/uced/working_papers/110701.pdf.

Summary: Various types of local food systems are being touted as a means of engendering local economic growth and reducing environmental impacts of food production in general (by reducing the so-called food mile). These systems include farmers' markets, community supported agriculture (CSAs), u-pick operations, and other forms of direct to consumers marketing. Also included are direct linkages between farmers and local restaurants or grocery stores. However, most discussions of local food systems have not received rigorous analysis based on tools of regional science. Using the Porter Diamond as a starting point, we

will provide a preliminary critique of the current literature and how regional science may be used in analyzing local food systems. We also include some discussion concerning local food systems as an economic development tool. Also included is an analysis of the literature concerning the potential environmental benefits of local food systems.

Hughes, D. & Boys, K. (2015). What We Know and Don't Know About the Economic Development Benefits of Local Food Systems. *Choices: The Magazine of Food, Farm & Resource Issues* 30(1), 1-6. Retrieved from http://www.choicesmagazine.org/magazine/pdf/cmsarticle_413.pdf.

Summary: The potential economic development benefits generated through local food systems are diverse. Numerous claims have been made concerning their possible benefits. However, many of these claims have not been tested by social science research. Of special importance to public and private decision makers is how local food systems (LFS) contribute to the development of the local entrepreneurial environment, economic clusters, regional branding opportunities, social capital, and local quality of life factors.

Jacobson, R. (2014). How To Build A Local Food System, To Make Local Food Actually Work. *Orion Magazine*. Retrieved from http://www.fastcoexist.com/3022170/how-to-build-a-local-food-system-to-make-local-food-actually-work#10.

Summary: Story of a food hub striving to help small farmers overcome the barriers to processing food due to regulatory pressures.

Kloppenburg, J., Hendrickson, J., & Stevenson, GW. (1996). Coming Into the Foodshed. *Agriculture and Human Values*. 13 (3): 33-42. Retrieved from http://www.cias.wisc.edu/coming-into-the-foodshed/.

Summary: While corporations which are the principal beneficiaries of a global food system now dominate the production, processing, distribution, and consumption of food, alternatives are emerging which together could form the basis for foodshed development. Just as many farmers are recognizing the social and environmental advantages to sustainable agriculture, so are many consumers coming to appreciate the benefits of fresh and sustainably produced food. Such producers and consumers are being linked through such innovative arrangements as community supported agriculture and farmers markets. Alternative producers, alternative consumers, and alternative small entrepreneurs are rediscovering community and finding common ground in municipal and community food councils. The foodshed can provide a place for us to ground ourselves in the biological and social realities of living on the land and from the land in a place that we can call home, a place to which we are or can become native.

Martinez, S., et al. *Local Food Systems: Concepts, Impacts, and Issues*. ERR 97, U.S. Department of Agriculture, Economic Research Service, May 2010. Retrieved from http://www.ers.usda.gov/media/122868/err97_1_.pdf.

Summary: This comprehensive overview of local food systems explores alternative definitions of local food, estimates market size and reach, describes the characteristics of local consumers and producers, and examines early indications of the economic and health impacts of local food systems. Statistics suggest that local food markets account for a small, but growing, share of U.S. agricultural production. For smaller farms, direct marketing to consumers accounts for a higher percentage of their sales than for larger farms. Findings are mixed on the impact of local food systems on local economic development and better nutrition levels among consumers, and sparse literature is so far inconclusive about whether localization reduces energy use or greenhouse gas emissions.

McCabe, M. (2011). Foodshed Foundations: Law's Role in Shaping our Food System's Future. *Fordham Environmental Law Review*, 22.

Summary: 1 This symposium Article analyzes how we can rethink the architecture of law based on a foodshed model to provide a greater role for local, state, and regional government in the American food system. In turn, greater roles for different levels of government may help America achieve greater efficiencies in domestic food safety, nutrition and related public health issues, sustainability, and international trade.

Meter, K. (2011). METRICS FROM THE FIELD; Seventeen Reasons to Do Food Assessments. *Journal of Agriculture, Food Systems, and Community Development* 2(1), 7-9. Retrieved from http://www.agdevjournal.com/attachments/article/217/JAFSCD_Meter_Column_FS_Planning_Nov-2011.pdf.

Summary: Emphasizes the importance of a food system assessment, details why it should be compiled, and underlines the potential for improvements of this process to better serve as a reflective and effective evaluation.

Peters, C., Bills, N., Wilkins, J., & Fick, G. (2008). *Foodshed analysis and its relevance to sustainability*. Cambridge University Press. Retrieved from http://transitionculture.org/wp-content/uploads/peters-et-al-2008-foodshed-analysis.pdf.

Summary: Tools are needed to determine how the environmental impact and vulnerability of the food system are related to where food is produced in relation to where it is consumed. To this end, analyses of foodsheds, the geographic areas that feed population centers, can provide useful and unique insights.

Pothukuchi, K., Joseph, H., Burton, H., and Fisher, A. (2002). *What's Cooking in Your Food System: A Guide to Community Food Assessment*. Community Food Security Coalition. Retrieved from http://www.downtowndevelopment.com/pdf/whats_cooking.pdf.

Summary: This Guide is aimed at informing and supporting the development of Community Food Assessments as a tool for increasing community food security and creating positive change.

Pothukuchi, K. (2004). Community Food Assessment: A First Step in Planning for Community Food Security. *Journal of Planning Education and Research* 23, 356-377. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/projects/FPN/academic_literature/pothukuchi%20community%20food%20assessment.pdf.

Summary: Through a study of nine CFAs, this article discusses common threads to planning, how a planning approach might strengthen CFAs, and what planners might learn from them.

Pothukuchi, K., Glosser, D., & Kaufman, J. (2007). *Community and Regional Food Planning*. PAS Memo. Retrieved from http://archive.clas.wayne.edu/Multimedia/DUSP/files/K.Pothukuchi/pasmemo0907.pdf.

Summary: This PAS Memo presents concrete examples of what planners and planning agencies are doing to support community and regional food systems. It also presents innovative actions undertaken by other government agencies and developers that support community and regional food systems, to suggest ways planners could collaborate with local, regional, or state agencies and organizations to promote sustainable food systems.

Shapiro, L., Hoey, L., Savas, S., Colasanti, K. (2015). *You Can't Rush the Process: Collective Impact Models of Food Systems Change*. University of Michigan, Michigan State University. Retrieved from http://foodsystems.msu.edu/uploads/files/Michigan_Good_Food/Collective_Impact_Models_of_Food_System_Change.pdf.

Summary: A review of websites, white papers, and academic articles specific to seven foodshed initiatives in the U.S. to provide lessons for Michigan's own initiatives going forward.

United State Department of Agriculture Economic Research Service. (2015). *Trends in U.S. Local and Regional Food Systems: A Report to Congress*. Retrieved from http://www.ers.usda.gov/media/1763057/ap068.pdf.

Summary: This report provides an overview of local and regional food systems across several dimensions. It details the latest economic information on local food producers, consumers, and policy, relying on findings from several national surveys and a synthesis of recent literature to assess the current size of and recent trends in local and regional food systems

United State Department of Agriculture Economic Research Service. (2016). *The Economics of Local Food Systems; A Toolkit to Guide Community Discussions, Assessments and Choices*. Retrieved

from https://www.ams.usda.gov/sites/default/files/media/Toolkit%20Designed%20FINAL%203-22-16.pdf.

Summary: A team of regional economists and food system specialists were assembled through a project hosted by Colorado State University (CSU) to develop a Toolkit comprised of food system assessment principles and economic indicators a community may expect to share. Given the real-world projects, experiences, and applied research of the CSU-led team, the Toolkit is grounded in practices that are credible and useable within the economic development discussions guiding communities. The goal of this Toolkit is to guide and enhance the capacity of local organizations to make more deliberate and credible measurements of local and regional economic activity and other ancillary benefits.

University of Michigan Urban & Regional Planning Capstone Project. (2009). *Building a Community-Based Sustainable Food System*. Retrieved from http://closup.umich.edu/publications/misc/Community-Based-Sustainable-Food-Systems.pdf.

Summary: Their research focuses on 15 case studies from across North America. Each case study highlights a specific sector of the food system that incorporates more sustainable practices. Based on the case studies, the authors distill short, medium, and long-term recommendations for individuals, community organizations, businesses, and municipal governments.

Virginia Cooperative Extension. (2011). *Community-Based Food System Assessment and Planning*. Retrieved from http://www.pubs.ext.vt.edu/3108/3108-9029/3108-9029_pdf.pdf.

Summary: Extension agents and local "champions" are encouraged to use this guidebook to help others in their communities work toward a community-based food system assessment and plan. In this guidebook, you will learn to (1) Assemble and work with a CFS Steering Committee to define your community food system, define your CFS goals and take stock of CFS assets, and create a Baseline Report and broaden the stakeholder base, (2) host a community work session to develop, evaluate, and prioritize strategies for enhancing your community's food system, and (3) develop an action plan to engage the community in accomplishing priority strategies.

2. Local Food– General

Biehler, D., Fisher, A., Siedenburg, K., Winne, M., & Zachary, J. (1999). *Getting Food on the Table: An Action Guide to Local Food Policy*. Community Food Security Coalition & California Sustainable Agriculture Working Group (SAWG). Retrieved from http://www.lasemillafoodcenter.org/uploads/8/4/6/8/8468672/gettingfoodonthetable.pdf.

Summary: This guidebook is designed to support local efforts to promote community food security by helping readers to understand the breadth of policies affecting their local food system.

Biermacher, J., et al. (2007). Economic Challenges of Small-Scale Vegetable Production and Retailing in Rural Communities: An Example from Rural Oklahoma. *Journal of Food Distribution Research* 38, 1-13. Retrieved from http://core.ac.uk/download/pdf/6407377.pdf.

Summary: Information regarding the economic potential of producing and retailing vegetables in rural communities is limited. This study determined the actual net return from producing and on-site retailing a mix of produce in a rural Oklahoma community and determined if consumers in the region were willing to pay differentiated prices for the locally grown vegetables. Although the project did not generate a profit, a wealth of insightful information was gained. Results show that a substantial number of consumers were willing to pay premiums for certain types of produce; however, there were not enough such consumers to overcome the production and harvesting expenses.

Broad Leib, E. (2013). The Forgotten Half of Food System Reform: Using Food and Agricultural Law to Foster Healthy Food Production. *J. Food L. & Pol'y* 9(17). Retrieved from http://nrs.harvard.edu/urn-3:HUL.InstRepos:11189866.

Summary: This article first describes the obesity and public health issues facing the United States and explains their links to the food and agricultural system. Part III then discusses the

two primary avenues for food system reform and illustrates the reasons we should focus more energy and resources than we currently do on supporting alternative food producers. Part IV. lays out some key barriers to alternative food producers—including programmatic and policy barriers, legal and regulatory hurdles, and obstacles that particularly impact mid-scale food producers, even though these mid-scale producers offer the most potential to increase healthy food access on the scale needed. Finally, Part V discusses the reasons for which the legal profession should use its unique skills to support alternative food producers and presents several important ways in which attorneys can play a key role in improving the viability of the alternative food system, thus promoting better public health outcomes by ensuring that fruits, vegetables, and other healthy foods will become more readily available.

Charles, D. (2016). Big Seed; How the Industry Turned from Small-Town Firms to Global Giants. *National Public Radio, The Salt.* Retrieved from http://www.npr.org/sections/thesalt/2016/04/06/472960018/big-seed-consolidation-is-shrinking-the-industry-even-further.

Summary: Story of the consolidation of the seed industry.

Coit, M. (2009). Jumping on the Next Bandwagon: An Overview of the Policy and Legal Aspects of the Local Food Movement. *Journal of Food Law & Policy*. Retrieved from http://nationalaglawcenter.org/publication/coit-jumping-on-the-next-bandwagon-an-overview-of-the-policy-and-legal-aspects-of-the-local-food-movement-4-j-food-l-policy-45-70-2008/wppa_open/.

Summary: The purpose of this article is to explore what the local food movement is, why consumers are interested in basing their food purchasing choices on where their food originates, current and future regulation of local food, and where this movement may be headed in the future.

Diamond, A. & Barham, J. (2012). *Moving Food Along the Value Chain: Innovations in Regional Food Distribution.* United States Department of Agriculture Agricultural Marketing System. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5097504.

Summary: This report examines the aggregation, distribution, and marketing of eight diverse food value chains to glean practical lessons about how they operate, the challenges they face, and how they take advantage of emerging opportunities for marketing differentiated food products. A focus on the operational details of food value chains—business networks that rely on coordination between food producers, distributors, and sellers to achieve common financial and social goals—demonstrates how to facilitate moving differentiated products from regional food suppliers and buyers to customers. By analyzing what has and has not worked within food value chains, the authors hope to show organizations interested in building local food systems lessons to build on, blunders to avoid, and inspiration to draw from.

Donaher, E. (2012). *Is Local More Expensive? Challenging Perceptions of Price and Investigating Availability in Local Food Systems.* A research paper presented to the University of Waterloo in fulfilment of the major research paper requirement for the degree of Master of Applied Environmental Studies in Local Economic Development. Retrieved from http://www.wrfoodsystem.ca/files/www/MRP_FINAL_-_Evonne_Donaher.pdf.

Summary: This research examines price and availability in local food systems to 1) identify whether the perception that local is more expensive is justified and 2) explore opportunities for improving access to local food. Overall, this study shows that the relationships between value laden qualities such as local and organic, the tangible factors of price and availability, and consumer decisions are complex. Researchers studying local food systems need to embrace these complexities and recognize that the assumption of local as more expensive is flawed. Proponents of local food can use the results of this study to inform program and policy development. Most notably, the study suggests that education around the distinction between local and organic as well as challenges to the price perception could be of benefit. In addition, two recommendations are made for outlet-based strategies to increase access to local and organic produce. First, local food advocates can raise awareness of the various outlet

types available to purchase local and organic and ensure physical and social access is provided. Second, partnerships with large grocery chains can help increase market penetration of local food with the general population.

Gayeton, D. (2014). *Local; The New Face of Food and Farming in America*. Harper Design.

Summary: Examining everything from GMOs and seed sovereignty to the politics of food and knowing your farmer, Gayeton advocates for crucial changes in the industrial food system.

Hamilton, N. (2002). *Farmers' Markets; Rules, Regulations, and Opportunities.* National Center for Agricultural Law Research and Information of the University of Arkansas School of Law. Retrieved from http://asapconnections.org/downloads/farmers-markets-rules-regulations-and-opportunities.pdf.

Summary: Regardless of their size or complexity, there are fundamental issues all farmers' markets must address, such as who administers the market, who determines who can sell what, and how the market will operate. As markets become more important – both for farmers and consumers – the operational issues can become complicated. Although farmers' market are based on relatively simple and straightforward transactions between farmers and consumers, concerns such as food safety, liability, competition with local businesses, and selection of vendors can pose difficult issues. It is important to understand how farmers' markets operate and the types of issues they may face.

Johnson, N., Brown, M., & Endres, A. (2012). Small Producers, Big Hurdles: Barriers Facing Producers of 'Local Foods'. *Hamline Journal of Public Law and Policy*, 33.

Summary: A complicated and inconsistently enforced system of federal, state and local food regulations, stands in the way of more robust localized food systems by creating barriers that drive up compliance costs and insert producer uncertainty into business planning and operations. This paper analyzes these legal hurdles and recommends a range of strategies, from state cottage food bills, to increased educational outreach designed to empower small farmers and expand the local foods movement.

Kivirist, L & Ivanko, J. (2015). *Homemade for Sale: How to Set Up and Market a Food Business from Your Home Kitchen*. New Society Publishers.

Summary: Homemade for Sale is an authoritative guide to conceiving and launching your own home-based food start-up. Packed with profiles of successful cottage food entrepreneurs, this comprehensive and accessible resource covers everything you need to get cooking for your customers, creating items that by their very nature are specialized and unique. Topics covered include: Product development and testing, Marketing and developing your niche, Structuring your business and planning for the future, Managing liability, risk, and government regulations

McFadden, S. (2004). *The History of Community Supported Agriculture, Part II; CSA's World of Possibilities*. The Rodale Institute. Retrieved from http://newfarm.rodaleinstitute.org/features/0204/csa2/part2.shtml.

Summary: When Steven McFadden first wrote about CSAs back in 1990, there were about 60 CSAs in the country. In 2004, he says, there are around 1,700 ... and he sees a strong potential for another wave of CSA development, a wave that could not only triple or quadruple the number of CSAs over the next few years, but also raise in importance the role these farms play in their communities. The article includes a discussion of the federal and state regulatory environment.

Mouillesseaux-Kunzman, H. (2005). *Civic and capitalist food system paradigms: a framework for understanding community supported agriculture impediments and strategies for success*. Cornell University.

O'Hara, J. (2011). *Market Forces; Creating Jobs Through Public Investment in Local and Regional Food Systems*. Union of Concerned Scientists. Retrieved from http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/market-forces-report.pdf.

Summary: In this report, the Union of Concerned Scientists (UCS) explores the recent remarkable growth of farmers markets and other manifestations of local and regional food systems, describes key features of these systems, evaluates

their economic and other impacts on the communities in which they operate, and offers surprising data on their potential to create jobs in those communities.

Pennsylvania Association for Sustainable Agriculture. (2012). *Guide to Legal Issues in Community Supported Agriculture (CSA): The road to the membership agreement*. Retrieved from http://www.pasafarming.org/resources/guide-to-legal-issues-in-csa-operations-1/at_download/file.

Summary: Four main areas of concern are addressed: starting a CSA, labor issues, duties to members, and the membership agreement. In each of the first three sections, the guide walks through you will be guided through an exercise to help the reader identify the legal issues and a set of resources that will help to address them.

Pinchot, A. (2014). *The Economics of Local Food Systems; A Literature Review of the Production, Distribution, and Consumption of Local Food*. University of Minnesota Extension. Retrieved from http://www.extension.umn.edu/community/research/reports/docs/2014-Economics-of-Local-Food-Systems.pdf.

Summary: The authors and contributors to this report found no comprehensive literature review concentrating solely on the economics of local or regional food system development. They seek to address this literature gap by providing a review and annotation of key publications on the economics of local food system development. Within this subject, they specifically focus on the characteristics of local food markets, local food consumers and motivations for purchases, local food producers and food hubs, and the role of food systems in community and economic development.

PolicyLink. (2015). *Equitable Development Toolkit; Local Food Procurement*. Retrieved from http://www.policylink.org/sites/default/files/edtk_local-food-procurement.pdf.

Summary: This toolkit provides an overview of how stakeholders can advocate for and implement local food procurement policies in a manner that ensures the equitable improvement of local and regional food systems. Public sector agencies and local government have begun to adopt and explore such policies, including those that set nutrition standards or vending machine criteria for food sold in government facilities.

Salatin, J. (2007). *Everything I Want to Do Is Illegal; War Stories from the Local Food Front*. Swoope, Virginia: Polyface, Inc.

Summary: Salatin explains with humor and passion why Americans do not have the freedom to choose the food they purchase and eat. From child labor regulations to food inspection, bureaucrats provide themselves sole discretion over what food is available in the local marketplace. Their system favors industrial, global corporate food systems and discourages community-based food commerce, resulting in homogenized selection, mediocre quality, and exposure to non-organic farming practices. Salatin's expert insight explains why local food is expensive and difficult to find and will illuminate for the reader a deeper understanding of the industrial food complex.

Trivette, S. (2012). *Farm-to-Fork: Understanding Locally-Oriented Farm-to-Vendor Food Systems: Access, Boundaries, and Power-Relations*. Dissertation, University of Massachusetts. Retrieved from http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1671&context=open_access_dissertations.

Summary: This dissertation studies a local food system in southern New England. Utilizing a mixed methods approach entailing social network analysis, in-depth interviews, fieldwork observations, and GIS analysis, this study interrogates how direct-to-vendor (DTV) local food systems operate. Includes an analysis of the challenges and constraints around developing a vibrant locally-based food system.

Pugh, C. (2003). *Liability Concerns for Farmers Involved in Direct Marketing of Farm Products*. Agricultural Law Research and Education Center, Pennsylvania State University, Dickinson School of Law. Retrieved from https://pennstatelaw.psu.edu/_file/aglaw/Direct_Farm_Marketing_2.pdf.

Summary: The purpose of this paper is to examine some of the various product liability claims related to food products and to address the liability challenges posed by the increase in direct marketing of farm products.

3. Food Hubs

Barham, J. (2011). *Regional Food Hubs: Understanding the scope and scale of food hub operations. Presentation*, USDA Agricultural Marketing Service. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5090409.

Summary: Presentation overviewing the status of food hubs in the United States, a survey of food hubs completed by USDA, and next steps for the USDA in their food hub research.

Barham, J., et al. (2012). *Regional Food Hub Resource Guide*. United States Department of Agriculture Agricultural Marketing Service. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5097957.

Summary: A USDA guide on various resources that are available to support regional food hubs.

Brislen, L., Woods, T., Meyer, L., & Routt, N. (2015). *Grasshoppers Distribution: Lessons Learned and Lasting Legacy*. Agricultural Experiment Station, University of Kentucky College of Agriculture, Food, and Environment. Retrieved from http://www2.ca.uky.edu/agc/pubs/SR/SR108/SR108.pdf.

Summary: This report from the University of Kentucky College of Agriculture describes and analyzes the demise of Grasshoppers Distribution LLC, a food hub that operated in Louisville, KY from 2006-2013. It provides a detailed history of operations, financials and decisions made; and points to key challenges encountered. Most importantly, the study offers recommendations for other food hubs based on factors that may be common elsewhere.

Fischer, M. et al. (2013). *Findings of the 2013 National Food Hub Survey*. Michigan State University Center for Regional Food Systems. Retrieved from http://kresge.org/sites/default/files/2013-national-food-hub-survey.pdf.

Summary: This report summarizes a wealth of information that was obtained in a survey of over 100 food hubs. It presents information on operational characteristics, finances, values, and services and activities. It also discusses challenges, opportunities and barriers to growth.

Hardy, J. et al. (2016). *Findings of the 2015 National Food Hub Survey*. Michigan State University Center for Regional Food Systems. Retrieved from http://www.ngfn.org/resources/ngfn-cluster-calls/food-hub-survey-2015.

Summary: This report summarizes a wealth of information that was obtained in a survey of over 100 food hubs. It presents information on operational characteristics, finances, values, and services and activities. It also discusses challenges, opportunities and barriers to growth.

Hartman, C., Kronick, S., & Crawford, J. (2013). *Starting a Food Hub: Successful Hubs Share Their Stories*. Presentation, National Good Food Network. Retrieved from http://www.ngfn.org/resources/ngfn-cluster-calls/starting-a-food-hub-successful-hubs-share-their-stories.

Summary: In this NGFN webinar, three successful food hubs share their stories about how they formed and operated during their first few years in action. They describe their business structure, services, finances, farmer recruitment, markets, facilities, staff and sales growth. Presenters from Tuscarora Organic Growers (PA), Eastern Carolina Organics (NC), and Headwater Foods (NY) discuss some of the decisions that helped their businesses to thrive and offer tips for other food hub start-ups.

Lindsey, T. (2012). *Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois*. Illinois Department of Commerce and Economic Opportunity. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5097191.

Summary: This guide includes descriptions of business structures, key functions, the regulatory environment, revenue models, best practices, and "how-to" strategies for food hub establishment and operation that are based on successful operating models. It is divided into sections on aggregation centers and processing centers. It also includes a section on the business development process for

food hubs using the stage-gate development model. Although it is aimed at an Illinois audience, the information is useful for those interested in establishing food hubs anywhere in the U.S.

Local Economies Project of the New World Foundation. (2013). *Hudson Valley Food Hubs Initiative: Research Findings and Recommendations*. Retrieved from http://pattern-for-progress.org/sites/default/files/food-hubs-initiative-report1.pdf.

Summary: This report provides a detailed analysis of whether food hubs are needed to support and strengthen sustainable agriculture and a regional food value chain in the NY Hudson Valley. It analyzes which food hub features would most benefit Hudson Valley farms and communities, and the most likely potential partners for food hub development in the area. Although focused on one specific region, this report is valuable for others doing food hub exploration and development anywhere in the U.S. It includes a discussion of the context for food hub development and a discussion of best practices for achieving financial sustainability gleaned from a review of 12 successful food hubs.

Matson, J., Sullins, M., & Cook, C. (2011). Keys to Success for Food Hubs. *Rural Cooperatives*. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5091434.

Summary: This article examines some of the ways food hubs can increase their odds of success, and thus continue to expand their role in promoting local foods.

National Good Food Network. (2013). *Food Hub Benchmarking Study: Report on Findings*. Retrieved from http://www.ngfn.org/resources/ngfn-database/knowledge/2013%20Food%20Hub%20Benchmarking%20Report.pdf.

Summary: This study establishes a baseline of financial performance and operational trends of food hub businesses, such as total sales, sales per employee, operational efficiency, etc. Although reporting was limited because only 15 food hubs participated in the study, valuable information was gathered to give similar businesses measurements for benchmarking their performance.

National Good Food Network. (2016). *Counting Values; Food Hub Financial Benchmarking Study*. Retrieved from http://www.ngfn.org/resources/ngfn-database/knowledge/Food%20Hub%20Benchmarking%20Study.pdf.

Summary: An update to the Network's 2013 report.

Slama, J. & Nyquist, K. (2010). *The Business of Food Hubs: Planning Successful Regional Produce Aggregation Facilities*. Presentation, National Good Food Network. Retrieved from http://ngfn.org/resources/ngfn-cluster-calls/the-business-of-food-hubs

Summary: This webinar discusses the process of feasibility studies and business planning for food hub ventures. The audience is walked through simple steps for creating a feasibility study citing two examples, one in Illinois and one in Virginia.

4. Consumer Perceptions and Marketing

Carpio, C. & Isengildina-Massa, O. (2008). *Consumer Willingness to Pay for Locally Grown Products: The Case of South Carolina*. Paper prepared for presentation at the Southern Agricultural Economics Association Annual Meeting, Dallas, TX.

Summary: The objective of this study is to evaluate South Carolina (SC) consumers' willingness to pay for "SC grown" products. Results indicate that consumers in SC are willing to pay an average premium of 27% for local produce and 23% for local animal products. Premiums for local products are influenced by age, gender, and income.

Baer, A. & Brown, C. (2007). Adoption of E-Marketing by Direct-Market Farms in the Northeastern United States. *Journal of Food Distribution Research* 38(2), 1-11. Retrieved from http://ageconsearch.umn.edu/bitstream/43492/2/3802fr05.pdf.

Summary: Many farms have begun operating websites in order to promote their businesses. This study uses data from a 2005 survey of farms in the northeastern United States to identify characteristics of farmers, farms, and farm businesses associated with website adoption. Following a technology-adoption framework, a

probit model of website use is estimated to identify significant relationships. Sales location, product type, number of advertising methods used, high-speed Internet connection, land tenure arrangement, and gross farm sales is found to be significantly related to website adoption. The northeast includes Maryland, New York, Pennsylvania, and West Virginia.

Diamond, A. et al. (2014). *Food Value Chains: Creating Shared Value to Enhance Marketing Success*. U.S. Dept. of Agriculture, Agricultural Marketing Service. Retrieved from http://www.thegreenhorns.net/wp-content/files_mf/1404014092foodvaluechains.pdf.

Summary: Values-based food supply chains (known as "food value chains") are strategic alliances between farmers or ranchers and other supply-chain partners that deal in significant volumes of high quality, differentiated food products and distribute rewards equitably across the chain. Food hubs are one type of food value chain. This report describes how food value chains are initiated and structured, how they function, and their benefits. It also discusses some key issues such as leadership, embedding values, and communication.

Hamilton, N. (2011). *The Legal Guide for Direct Farm Marketing*. Drake University and Drake University Law School. Retrieved from http://directmarketersforum.org/the-legal-guide-for-direct-farm-marketing/.
Summary: The Guide everything from licenses and inspections to zoning and buying clubs.

International Food Information Council Foundation. (2015). *Food & Health Survey 2015*. Retrieved from http://www.foodinsight.org/sites/default/files/2015-Food-and-Health-Survey-Full-Report.pdf.

Summary: The survey delves deeply into issues of health and diet, food components, food production, sustainability, and food safety. It includes discussion of American perceptions of and preference for local food.

King, R. (2010). Theme Overview: Local Food Perceptions, Prospects, and Policies. *Choices Magazine*. Retrieved from http://www.choicesmagazine.org/magazine/pdf/block_44.pdf.

Summary: Taken together, these papers help clarify perceptions about local foods, prospects for growth in their supply and demand, and policy issues affecting the development of local food systems.

Matson, J., Sullins, M., & Cook, C. (2013). *The Role of Food Hubs in Local Food Marketing*. USDA Rural Development. Retrieved from http://www.rd.usda.gov/files/sr73.pdf.

Summary: Food hubs fulfill various roles, including functioning as aggregators, processors, distributors, and marketers of local food. In all of these roles, food hubs provide a critical supply chain link for rural communities and farmers to reach consumers interested in purchasing local products. Food hubs are also beneficial in creating new marketing opportunities for farmers and ranchers, allowing them to expand the scope of their consumer market.

5. Low-Income Consumer Considerations

Babiak, L. (2013). *Exploring Local Food System Practices and Perceptions: Insights from Florida's SNAP-Authorized Farmers' Markets*. Thesis, University of South Florida, College of Arts and Sciences, Department of Geography, Environment, and Planning. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/07409711003708512#.VX-lk_zF98E.

Summary: Despite heightened interest in creating local food systems that enhance health of ecologies, economies, and all members of communities, the public space of farmers' markets is far less than inherently equitable. This research addresses the social justice implications of SNAP (food stamp) operations for locally oriented food systems. Pioneering practices of three of Florida's SNAP-authorized farmers' markets, and the attitudes and behaviors of one-hundred-seventy-six market patrons, were explored through customer surveys, market manager interviews, and environmental assessments. Qualitative results showed success in SNAP operations centered on extending the reach of healthy foods to greater share of community, enhancing local farm income, and repositioning farmers' markets from their reputation as exclusive and expensive. Quantitative results uncovered several benefits in attaching SNAP to farmers' markets: expanded diversity of patron

demographics, strengthened market-shopping behavior, diminished tension between economic and non-economic in food valuation, and fortification of the market as a social space for effecting change. The discoveries made in the article hint at the viability for SNAP to better position farmers' markets aiming to strengthen food system justice; and in so doing, bolster the role of farmers' markets in helping communities move towards their sustainability objectives.

Grace, C. & Grace, T. (2005). *Barriers to Using Urban Farmers' Market; An Investigation of Food Stamp Clients' Perception*. Oregon Food Bank. Retrieved from http://www.oregonfarmersmarkets.org/EBT/docs/BarrierstoUsingFarmersMarkets102206.pdf.

Summary: This paper explores the challenges farmers' markets face in attracting and retaining food stamp customers. They used Portland, Oregon as a case study to examine food stamp clients' perceptions of farmers' markets and grocery shopping habits. According to findings, farmers' market organizers face both negative perceptions and operational realities: higher prices, inconvenient hours, complex shopping experiences, and limited discount opportunities. The WIC Farmers' Market Nutrition Program (FMNP) appeared effective at motivating respondents to shop at markets. The FMNP may prove an effective model for using food stamp subsidies to encourage produce consumption and market use among low-income populations.

Hagey, A., Rice, S., & Flourney, R. (2012). *Growing Urban Agriculture: Equitable Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities*. PolicyLink. Retrieved from http://www.policylink.org/sites/default/files/URBAN_AG_FULLREPORT.PDF.

Summary: Growing Urban Agriculture lifts up the policies, practices, and programs that are working to sustain urban agriculture efforts in low-income communities and communities of color, drawing from the Urban Agriculture and Community Gardens tool in the PolicyLink Equitable Development Toolkit (located on our website). The report is grounded in extensive conversations with farmers, advocates, and policymakers to better understand the operational, financial, and social challenges that arise in making this work responsive and relevant to the needs of underserved communities. It highlights the creative solutions that are being implemented to make certain that the products remain affordable and accessible and that community interests are represented in the process.

Jones, P. & Bhatia, R. (2011). Supporting Equitable Food Systems Through Food Assistance at Farmers' Markets. *American Journal of Public Health* 101(5), 781-783.

Summary: The failure to consider access to food resources in an integrated way may lead to inequalities in nutritional opportunities among populations. Working with community groups and other public agencies, the San Francisco Department of Public Health has led interagency food system planning in San Francisco, California, since 2002. The authors report on one of the interventions within that initiative—a partnership between a public health agency, a local nonprofit organization, and the local food stamp program to institutionalize improved access to farmers' markets for federal food assistance beneficiaries. They further report on monitoring data collected at farmers' markets that documents significant and sustained increases of utilization by food stamp recipients since the initial intervention.

Levy, J. (2007). *10 Ways to Get Healthy, Local Foods into Low-Income Neighborhoods: A Minneapolis Resource Guide*. Minneapolis, MI: Inst. Agric. Trade Policy. Retrieved from http://www.iatp.org/files/258_2_97319.pdf.

Summary: This Minneapolis resource guide is for community leaders interested in addressing public health issues associated with poor diets and food insecurity in low-income neighborhoods. Its purpose is to provide ideas, links and contacts to help these leaders get started in addressing food access issues.

Markowitz, L. (2010). Expanding Access and Alternatives: Building Farmers' Markets in Low-Income Communities. *Foods and Foodways*, 18 (1), 66-80. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/07409710903708512#.VX-kXvzF98E.

Summary: In this article, the author examines the problems and prospects of establishing farmers'

markets that serve low-income customers. Creating such markets is complicated, requiring interplay between community-based efforts and government policies. To illustrate, he draws on a case study of alternative institution-building in Louisville, Kentucky. The account is framed in a review of the policies and political protagonism that have contributed to farmers' markets as sites for enhancing food access.

6. Local Food in Institutions – General

American Farmland Trust. (2015). *Linking Farmers to Institutional Markets; Providing opportunities for local farmers and healthy food in an institutional setting*. Retrieved from https://www.farmland.org/initiatives/farm-to-institution-new-york-state-finys.

Summary: List of activities of Farm to Institution New York State (FINYS), founded in 2013 by the American Farmland Trust.

Becot, F., Conner, D., Nelson, A., Buckwalter, E., & Erickson, D. (2014). Institutional Demand for Locally-Grown Food in Vermont: Marketing Implications for Producers and Distributors. *Journal of Food Distribution Research*, 45(2), 99-114. Retrieved from http://econpapers.repec.org/article/agsjlofdr/186927.htm.

Summary: Institutional food service operations have shown increasing interest in locally grown foods, and are providing a business opportunity for farmers and distributors. The purpose of this paper is to present and discuss the results and implications of a survey assessing institutional food service operations in Vermont. The authors used the 4 P's (price, product, place, and promotion) Marketing Mix framework to highlight marketing strategies for farmers and distributors wanting to increase their sales of local food to institutions.

Farm to Institution New England. (2015). *Leveraging Contracts for Local Food Procurement; A Guide for Institutions That Work With Food Service Management Companies*. Retrieved from http://www.farmtoinstitution.org/sites/default/files/imce/uploads/Guide_Leveraging%20Contracts%20for%20Local%20Food.pdf.

Summary: This guide aims to assist institutions that are managed by food service management companies (FSMCs) in influencing the request for proposal (RFP) and contract negotiation processes to increase purchases of local foods. It begins by describing the different types of contracts typically used with FSMCs and the ways by which local food procurement is incorporated in them. Then it describes the role of the RFP and provides questions to consider when soliciting proposals in order to vet companies to find one that best meets the institution's needs. Next, this document calls out key components of typical contracts that need to be negotiated to improve the ability of institutions to purchase local food products. Lastly, this document provides a brief resource section providing sample RFP and contract language and New England companies that specialize in food service contract negotiation.

Farm to Institution New England. (2015). *Food Service Management Companies in New England; Phase 1 Research Findings: Barriers & Opportunities for Local Food Procurement*. Retrieved from http://www.farmtoinstitution.org/sites/default/files/imce/uploads/Report_FSMCs%20in%20New%20England.pdf.

Summary: This report provides an overview of food service management company (FSMC) operations, including descriptions of purchasing practices, the rebate system, how vendors become approved, and the importance of contracts. The focus of this report is on the role of FSMCs in purchasing local food products for their institutional clients. It provides a synopsis of the main barriers and opportunities to local procurement and provides two examples of promising initiatives, both spearheaded by Sodexo.

Fitch, C. and Santo, R. (2016). *Instituting Change: An Overview of Institutional Food Procurement and Recommendations for Improvement*. Johns Hopkins Center for a Livable Future.

Summary: This report reviews the literature and key information resources regarding institutional food service procurement systems, presents the potential benefits of a largescale shift among institutional procurement policies, discusses some of the existing barriers to the adoption of policies that favor regionally and/or sustainably produced

food, and provides recommendations and tools for influencing institutional food procurement practices.

Hardesty, S., Allen, P., Feenstra, G., Ohmart, J., Perkins, T., & Perez, J. (2010). Institutional Food Distribution Systems; Bringing Students, Farmers, and Food Service to the Table. *Journal of Food Distribution Research* 41(1), 58-63. Retrieved from http://ageconsearch.umn.edu/bitstream/162259/2/Hardesty.pdf.

Summary: Discussion of the potential in institutional food distribution systems for the expansion of local food, related barriers, and recommendations of how to overcome said barriers.

7. Local Food in Institutions – Hospitals

Community Alliance with Family Farmers. *Implementing Local & Sustainable Food Programs in California Hospitals*. Retrieved from http://www.caff.org/wp-content/uploads/2015/03/web_hospitals_report1.pdf

Summary: This guide provides health care facilities with practical suggestions to utilize sustainable food programs that support local family farmers, ranchers, and associated businesses. It is targeted towards hospital administrators, food service directors, dieticians, and others involved with food purchasing decisions, in the hope that they will implement some of the suggestions presented.

Smith, B., Kaiser, H., & Gomez, M. (2013). *Identifying Factors Influencing a Hospital's Decision to Adopt a Farm-to-Hospital Program*. Charles H. Dyson School of Applied Economics and Management, Cornell University. Retrieved from http://ageconsearch.umn.edu/handle/159225.

Summary: Using data from our 2012 regional Farm-To-Hospital program survey of Hospital Food Service Directors in the Northeastern U.S. and from the U.S. Department of Agriculture, this study determines the factors that influence a hospital's decision to adopt a farm-to-hospital program. Among the explanatory variables, it is found that the Healthy Food in the Healthcare Pledge, the amount of meals prepared daily at a hospital, the percent of farms participating in Community Supported Agriculture, and a hospital's county classification have the greatest impact on influencing a hospital's decision to adopt a farm-to-hospital program.

8. Local Food in Institutions – Universities

Hoeberling, K. & Kohli, G. (2012). *Sustainable Food Systems UCLA; Final Report*. University of California Los Angeles. Retrieved from http://static1.squarespace.com/static/525d8521e4b0fb1ebe6d288c/t/52895a2be4b013f422366d80/1384733227428/Food_Sustainability_Final_Report-r4-oab.pdf.

Summary: A report regarding the projects the team worked on to provide the campus with a base of information necessary to increase sustainable food purchases at relatively low costs, including surveys of purchasing information, educational initiatives among UCLA students, and the development of a Buyer's Guide to help students make more informed decisions at local grocery stores.

Madden, A. (2014). *Toward a Truly Sustainable Campus Food System: A Challenge and Opportunity for Visionary Leadership at Trent University*. Presented at the My Trent 50th Anniversary Symposium, January 31, 2015. Retrieved from https://www.academia.edu/10779454/Toward_a_Truly_Sustainable_Campus_Food_System_A_Challenge_and_Opportunity_for_Visionary_Leadership_at_Trent_University.

Summary: Provides an overview of past efforts and nascent initiatives that seek to advance campus food system sustainability. The report includes an examination of the practical challenges that are emerging as a result of efforts to 'scale-up' local procurement and improve sustainability, and it concludes by identifying some next steps.

Stofferahn, C. (2000). *Institutional Purchases of Locally Produced Foods*. University of North Dakota. Retrieved from http://www.und.edu/org/ndrural/case%20study%204.und%20dining%20services.pdf.

Summary: This study investigates the extent to which the University of North Dakota Dining Services is involved in local food purchases.

9. Local Food in Institutions – Schools

Azuma, A., Fisher, A., & Gottlieb, R. (2001). *Healthy Farms, Healthy Kids: Evaluating the Barriers and Opportunities for Farm-to-School Programs*. Retrieved from http://mda.maryland.gov/farm_to_school/Documents/HealthyFarmsHealthyKids.pdf.

Summary: This article explores in-depth the opportunities and barriers related to school food services purchasing food from local farmers.

Berkenkamp, J. (2006). *Making the Farm/School Connection; Opportunities and Barriers to Greater Use of Locally Grown Produce in Public Schools*. University of Minnesota. Retrieved from https://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2006-01-making-farm-school-connection-opportunities-and-barriers-greater-use-locally-grown-produce-public-sc.pdf.

Summary: This report explores the feasibility of expanding use of fresh, locally grown fruits and vegetables in Minnesota's public K-12 schools. The core questions addressed in this study are "What would it take to make locally grown, fresh fruits and vegetables a mainstream element of a school district's food supply within the prevailing budgetary environment? What are the opportunities and barriers to using fresh, local food in significant volumes, on a sustained basis, and without additional outside subsidies?" This is part of a broader effort by University of Minnesota researchers, focused on the Hopkins, MN school district, to explore links between childhood obesity and the federal school lunch program.

ChangeLabSolutions. (2013). *Serving School Garden Produce in the Cafeteria.* Retrieved from http://www.changelabsolutions.org/sites/default/files/SchoolGardenLiability_Memo_FINAL_20130621.pdf

Summary: Provides a brief overview of laws governing local food in schools.

Fulton, A. (2011). *USDA Encourages Schools to Partner With Local Farms*. National Public Radio. Retrieved from http://www.npr.org/sections/health-shots/2011/04/29/135771070/new-usda-rule-encourages-schools-to-partner-with-local-farms.

Summary: Article on the part of the federal Healthy, Hunger Free Kids Act which promotes the purchase of local foods.

National Farm to School Network. (2014). *State Farm to School Legislative Survey, 2002-2013*. Retrieved from http://www.farmtoschool.org/Resources/State_Farm_to_School_Legislative_Survey_4_2014.pdf.

Summary: The State Farm to School Legislative Survey 2002-2013 provides a summary of each farm to school related bill proposed since 2002, whether enacted, defeated, or still pending. This document is an update of an August 2011 survey. As the report indicates, state farm to school legislation is on the rise across the country. In 2012 and 2013 alone, 20 states passed farm to school related legislation, and 17 other states introduced legislation.

Public Health Law Center. (2011). *Legal Issues Impacting Farm to School and School Garden Programs in Minnesota.* Retrieved from http://publichealthlawcenter.org/sites/default/files/resources/ship-f2s-school%20garden%20legal%20issues-2011.pdf.

Summary: Provides an overview of key legal issues involved in farm to school and school garden programs in Minnesota.

United States Department of Agriculture. *The Farm to School Census*. Available at http://www.fns.usda.gov/farmtoschool/census#/.

Summary: USDA distributed the Farm to School Census (the Census) to 13,133 public school districts in the United States, 9,887 of which completed the Census. 4,322 districts operating approximately 40,328 schools with 23,513,237 students in attendance are bringing the farm to school. Generally the information presented below is derived from only those school districts that participated in farm to school activities in the 2011-2012 school year.

Vallianatos, M., Gottlieb, R., & Haase, M. (2004). Farm-to-School: Strategies for Urban Health, Combating Sprawl, and Establishing a Community Food Systems Approach. *Journal of Planning Education and Research* 23, 414-423. Retrieved

from http://www.csun.edu/~jsides/FALL2010/food.pdf.

Summary: The article evaluates the significance of farm-to-school in relation to improving the health and nutrition of school-age children, particularly low-income youth; strengthening the capacity of local farmers, particularly those engaged in sustainable practices; adding to the toolkit of strategies designed to contain and ultimately reduce sprawl-inducing developments by helping preserve farmland; and helping establish a community food systems approach no longer entirely dependent on the global food system that has come to dominate food growing, processing, distribution, and consumption patterns around the world.

10. Local Fisheries

Brinson, A., Lee, M., & Rountree, B. (2011). Direct marketing strategies: The rise of community supported fishery programs. *Marine Policy*. 35, 542-548. Retrieved from http://www.nefsc.noaa.gov/read/socialsci/pdf/publications/The-rise-of-community-supported-fisheries-programs.pdf.

Summary: Discusses the issue of community supported fisheries (CSF), related regulations, benefits, and challenges.

French, C., Cullen, K., Manalo, A., & Jones, E. (2014). *Consumer and Retailer Demand for Local Seafood: Opportunities in the N.H. Marketplace*. Penn State College of Agricultural Sciences. Retrieved from http://aese.psu.edu/nercrd/publications/other-published-resources/consumer-and-retailer-demand-for-local-seafood-opportunities-in-the-n.h.-marketplace.

Summary: Report resulting from a study to explore consumer and retailer demand for locally-caught seafood. Specifically, the study seeks to:

- Characterize consumer preferences and demand for NH-caught seafood, particularly underutilized species such as redfish, hake and Pollack.
- Understand what seafood product characteristics - including species and product quality - retailers, restaurants and other market outlets are looking for with respect to seafood products.
- Identify new markets for local seafood, as well as opportunities to add value to seafood products so that fishermen capture more revenue.

Greenberg, P. (2014). *American Catch; The Fight for Our Local Seafood*. New York: The Penguin Press.

Summary: In American Catch, the author tells the surprising story of why Americans stopped eating from their own waters. It includes the analysis of New York oysters, gulf shrimp, and Alaskan salmon, and what can be done to bring back local seafood.

National CSF Summit Planning Committee. (2012). *Starting and Maintaining Community Supported Fishery (CSF) Programs; A Resource Guide for Fisherman and Fishing Communities*. Retrieved from http://www.localcatch.org/wp-content/uploads/2015/04/csf-rg.pdf.

Summary: This guide provides general information to assist fishermen and fishing communities with starting and/or maintaining a Community Supported Fishery (CSF), providing an introduction to the CSF concept, identify common business, management, and legal issues, and direct fishermen and fishing communities to additional resources that can help them develop their businesses.

National Summit on Community Supported Fisheries Planning Committee. (2012). *National Summit on Community Supported Fisheries; Building a Network, Identifying Challenges and Opportunities & Defining Next Steps*. Retrieved from http://www.localcatch.org/wp-content/uploads/2015/04/Summit_Report.pdf.

Summary: The purpose of the National Summit on Community Supported Fisheries, hosted in Portsmouth, New Hampshire, was to bring together CSFs from across North America to share experiences, learn from each other, and identify challenges and opportunities for supporting the evolution and long-term viability of CSFs. The two-day summit drew participants from 9 states and 2 Canadian provinces, representing 21 CSFs and a small group of government, academic, and non-profit interests. This document provides an overview of the planning, implementation and

immediate outcomes of the Summit, highlighting the breadth of information that was gathered.

Nelson, C., Lowitt, K., Nagy, M., & Bavington, D. (2013). Future research approaches to encourage small-scale fisheries in the local food movement. *Journal of Agriculture, Food Systems, and Community Development*. 3 (4), 177-181. Retrieved from http://www.agdevjournal.com/component/content/article/372-small-scale-fisheries-commentary.html.

Summary: To date, the local food system movement has focused primarily on the agri-food system. In their commentary, we suggest some ways of moving forward that may help ensure that research and discourse in the area of sustainable food systems more actively consider the role of small-scale fisheries. Specifically, we point to the need for a more integrated food system that includes both marine and freshwater fish as part of the food system, considers food and fisheries as complex and adaptive systems, and supports cross-sector policy-making for local food systems across agriculture and fisheries systems.

Olson, J., Clay, P., & Pinto da Silva, P. (2014). Putting the seafood in sustainable food systems. *Marine Policy*. 43, 104-111. Retrieved from http://www.sciencedirect.com/science/article/pii/S0308597X1300105X.

Summary: Increasing attention by consumers to the social and environmental dimensions of the food they eat has generated many different responses, including certification programs, watch lists and local/slow food movements. This article examines the more recent entry of seafood into these consumer social movements. Although a concern with the family farm—as well as tendency to equate national security with food security—has long connected terrestrial food production with other cultural concerns, fisheries have tended to be regarded more as natural resources. Considering seafood as part of the "food system" would enhance the management of fisheries, while the long engagement in fisheries with co- and adaptive management and the politics of knowledge would enrich the debate in the agri-foods literature. The article also offers suggestions on how fisheries management could better govern for sustainable food systems, and provides further ideas about food, sustainability and governance.

Stoll, J. et al. (2010). *Walking Fish; Steps towards a viable future in small-scale fisheries.* Retrieved from http://www.localcatch.org/Walking_Fish_Report_2009.pdf.

Summary: This document supports the Walking fish CSF located in North Carolina, explaining its planning and development and summarizing the results and lessons learned.

Stoll, J., Dubik, B., & Campbell, L. (2015). Local Seafood: Rethinking the Direct Marketing Paradigm. *Ecology and Society* 20(2): 40. Retrieved from http://www.localcatch.org/wp-content/uploads/2015/06/ES-2015-7686.pdf.

Summary: Direct marketing arrangements can increase the ex-vessel value of seafood and profitability of operations for fishers by circumventing dominant wholesale chains of custody and capturing the premium that customers are willing to pay for local seafood. This analysis reports on the economic value being generated for fishers in a cooperatively owned and operated direct marketing arrangement in eastern North Carolina.

Witter, A. (2012). *Local Seafood Movements and Seafood Sustainability in North America; A case study on a community supported fishery in Monterey, California*. Thesis for the fulfilment of the Master of Science in Environmental Sciences, Policy & Management at Lund University. Retrieved from http://www.localcatch.org/wp-content/uploads/2015/04/Allison_Witter_LU_2012_final.pdf.

Summary: The aim of this study is to contribute to a better understanding of how CSFs may fill gaps left behind by public regulation (fisheries policy) and private regulation (sustainable seafood initiatives) towards improved seafood sustainability. A case study analysis is completed of the Local Catch Monterey Bay (LCMB) CSF in California. Lessons include the need to recognize the importance of (1) the differences between the sustainable seafood and local seafood movements, (2) specific contextual factors associated with CSFs, and (3) applying socio-economic considerations to fisheries policy and sustainable seafood initiatives.

11. Local Meat and Processing

Agribusiness Accountability Initiative. *Hogging the Market: How Powerful Meat Packers are Changing our Food System and What We can do About it*. Tufts University. Retrieved from http://www.ase.tufts.edu/gdae/Pubs/rp/AAI_Issue_Brief_4.pdf.

Summary: Meat packers and processors have an immense amount of power over the shape of our food system, and the power that they exercise can have harmful effects on both ends of the hourglass—closing markets to independent livestock producers and affecting the price and safety of meat for consumers—as well as on the safety and health of the workers these packers employ. This issue brief, which is one in a series on agribusiness concentration, lays out some of the major issues in meatpacking and processing. Then, it discusses strategies and resources for getting involved and creating something better.

Food & Water Watch. (2009). *Where's the Local Beef? Rebuilding Small-Scale Meat Processing Infrastructure*. Retrieved from http://documents.foodandwaterwatch.org/doc/WheresTheLocalBeef.pdf.

Summary: This report documents changes in the slaughter and processing industry across the country, identifies the reasons for the disappearance of the small plants, presents examples of next generation processors and suggests policy changes necessary for rebuilding this sector of the meat industry.

Halloran, A. (2011). Helping Remove Barriers to Local Meat Processing. *Food Safety News*. Retrieved from http://www.foodsafetynews.com/2011/05/helping-remove-barriers-to-local-meat-processing/#.VcUKQfzF98E.

Summary: Although slaughterhouses aren't always close or available when farmers need them, there are efforts being made to address that, and resources to help small-scale meat and poultry producers meet the growing demand for food fresh from the farm. The Niche Meat Processor Assistance Network, or NMPAN, is connecting people across the country with information, tools and each other. The organization is part of the Cooperative Extension System's eXtension, an Internet-based collaborative learning service that consolidates the resources of the land grant universities.

Henry, T. (2013). Take action to block the FDA's imprisonment of free-range chicken. *NaturalNews*. Retrieved from http://www.naturalnews.com/042109_FDA_free-range_chicken_take_action.html#ixzz3i9rMJC6u.

Summary: Advocacy article against new federal regulations which and their impact on free-range chicken farming.

Janzen, K. (2004). Loss of Small Slaughterhouses Hurts Famers, Butchers & Consumers. *Farming Magazine*. Retrieved from http://www.aamp.com/news/documents/LossofSmallSlaughterhouses.pdf.

Summary: Outlines the struggles of small farmers who face a shrinking number of facilities where they can process their meat.

Taylor, D. (2008). Does One Size Fit All?: Small Farms and U.S. Meat Regulations. *Envir. Health Perspect.* 116(12), A520-A531. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2599784/.

Summary: Some small farm owners and advocates insist that the U.S. system for food inspection and safety—particularly in meat and poultry production—exacerbates an increasing centralization of American farming, squeezing small farms economically and hampering the local food movement. Moreover, they claim, the Hazard Analysis and Critical Control Point (or HACCP) plans required by the USDA of meat producers are skewed against small farms. Instead of the current mode of federal inspection and risk management, small-scale farmers and farm advocates believe rules should be based on independently measurable standards of sanitation and quality, with sensitivity to scale of the operation being assessed.

Johnson, R., Marti, D., & Gwin, L. (2012). *Slaughter and Processing Options and Issues for Locally Sourced Meat*. United States Department of Agriculture. Retrieved from

http://www.ers.usda.gov/media/820188/ldpm216-01.pdf.

Summary: This report evaluates the availability of slaughter and processing facilities for local meat production and the extent to which these may constrain or support growth in demand for locally sourced meats. Types, number, location, and other salient characteristics of slaughter and processing facilities are outlined by State. Further disaggregation of facilities by capacity and annual volume by species also provides information on slaughter and processing options for local meat producer marketers. Findings suggest that access to Federal or State-inspected slaughter and processing facilities is limited in some parts of the country. In addition, alternative small-scale slaughter and processing facilities may not be economically feasible in all areas due to a lack of consistent throughput. Solutions are presented.

Lewis, C. & Peters, C. (2012). A capacity assessment of New England's large animal slaughter facilities as relative to meat production for the regional food system. *Renewable Agriculture and Food Systems* 27(3), 192-199.

Summary: The authors tested the hypothesis that a shortage of slaughter and processing infrastructure constrains the production of livestock for meat in New England. The region's large animal slaughter facility owners and managers were surveyed to determine current slaughter and processing capacity and identify challenges facilities face in meeting increased producer demand. The estimates of current capacity were then compared to USDA data on livestock slaughter and large animal marketings. The region's existing abattoirs could slaughter 63–84% of all animals marketed, but could process only 29–43%. New England's infrastructure for slaughter operated at only 38% of total physical capacity in 2009, while on-site processing infrastructure operated at 66% of total physical capacity (78% if only on-site inspected capacity is considered). Moreover, surveys with facility operators showed that the primary constraints faced by existing slaughterhouses are a shortage of skilled labor and the seasonality of the livestock industry, with periods of very high demand for slaughter in the fall and very low demand in the spring and early summer. Additional infrastructure, particularly for processing, would be needed were regional livestock production to increase.

Promar International. (2011). *Consumer and Food Safety Costs of Offshoring Animal Agriculture*. Prepared for the United Soybean Board. Retrieved from: http://unitedsoybean.org/wp-content/uploads/Consumer-and-Food-Safety-Costs-of-Offshoring-Animal-Agriculture.pdf.

Summary: The farmers, ranchers, and the innumerable companies involved in manufacturing and delivering the meat, egg, and dairy products that make up a key part of the American diet operate in a regulated world. And they are threatened by additional potential regulatory measures that would further constrain or control the manner in which livestock and poultry products are produced. Laws and regulations imposed by federal, state, and local governments can make domestic farmers and ranchers uncompetitive with competitors overseas and drive them out of business. Just as manufacturing and service jobs have been "offshored" to Mexico, China, South Korea, India, and other countries, excessive regulation could eventually cause animal agriculture to move offshore.

Roots, R. (2001). A Muckraker's Aftermath: The Jungle of Meatpacking Regulation after a Century. *William Mitchell Law Review*. 27(4), 1-21. Retrieved from http://open.wmitchell.edu/cgi/viewcontent.cgi?article=1819&context=wmlr.

Summary: This paper will address American meat processing in the aftermath of Upton Sinclair's book The Jungle. It will show that, although the book brought on a healthy sense of scrutiny on the part of the American consumer, the governmental mechanisms it spawned failed to provide a sure, safe, and completely hazard-free meat supply. The post-Jungle world of American meat-packing regulation is no safer than the pre-Jungle world. As many critics have pointed out, the history of American meat quality regulation is typified by political posturing and reaction rather than rational, scientific decision-making.

Swanson, A. (2015). Small Meat Producers Take Their Slaughterhouse Gripes to Congress. *National Public Radio*. Retrieved from

http://www.npr.org/sections/thesalt/2015/10/15/448942740/small-meat-producers-take-their-slaughterhouse-gripes-to-congress.

Summary: Story of how meat producers struggle with finding sufficient processing facilities.

United States Department of Agriculture. *Private Market Mechanisms: Meat and Poultry*. Retrieved from http://www.ers.usda.gov/topics/food-safety/market-incentives-government-regulation/meat-poultry.aspx.

Summary: USDA overview and analysis of regulations that impact meat and poultry production in the U.S., related costs to businesses and how this impacts their operations.

Worsz, M., Knight, A., Harris, C., & Connor, D. (2008). Barriers to Entry Into the Specialty Red Meat Sector: The Role of Food Safety Regulation. *Southern Rural Sociology*. 23(1), 170-207. Retrieved from http://www.ag.auburn.edu/auxiliary/srsa/pages/Articles/SRS%202008%2023/1/SRS%202008%2023%201%20170-207.pdf.

Summary: Historically, the rules governing red meat food safety in the U.S. were driven as much by global trade and industry rationalization as by food safety. Contemporary and historical documents, statutes, and regulations; a survey of producer and farmers' market representatives; and key informant interviews show that these rules, and their implementation, have affected the current development of niche marketing opportunities. Three significant issues arise from this research: a) the elimination of the state meat inspections limits producer access to slaughter; b) the Hazard Analysis and Critical Control Points (HACCP) rule limits producer access to processing; and c) uncertainty at the local level limits producer access to direct markets.

12. Food Safety Policies and Regulations

Andrews, J. (2011). Relaxing the Rules for Small, Local Food Sellers. *Food Safety News*. Retrieved from: http://www.foodsafetynews.com/2011/03/loosening-the-rules-for-small-local-food-sellers/#.VcTg4fzF98E.

Summary: This article provides an overview of federal and state actions to relax food safety laws to lower their burden on local food sellers.

Best, B. et al. (2007). *Understanding Food Safety Regulations for Farm-Direct Sales: A Study of Connecticut, Massachusetts, New York and Vermont*. Northeast Ag Works!. Retrieved from http://nesawg.org/sites/default/files/NESAWGUnderstandFoodSafetyRegs.pdf.

Summary: The authors explore the role of food processing and inspection regulations for farm-direct sales in a four contiguous states: Connecticut, Massachusetts, New York, and Vermont. The report is directed at policymakers and regulators as well as farmers' market managers, farm direct-sales association leaders and other farm organizations. The purpose is to facilitate both market opportunity and regulatory compliance in a constructive environment for farm-direct sales in the region. They explain in general terms, how food safety regulation of farm-direct food sales works at each level of government. They look more closely at regulations in the four neighboring states across a mix of foods typically sold at farmers' markets, and offer policy recommendations.

Brashear, G. (2013). Local Food Hub helps small farmers prep for big changes to food safety laws. *c-ville.com*. Retrieved from http://www.c-ville.com/local-food-hub-helps-small-farmers-prep-for-big-changes-to-food-safety-laws/#.VcT_j_zF98E.

Summary: The Food Safety Modernization Act (FSMA) puts what was previously a voluntary and industry-driven effort to avoid produce contamination under the direct supervision of the Food and Drug Administration, which will have broad new powers to regulate the growth, harvest, and distribution of fruits and vegetables. The article describes efforts by a food hub in Virginia which seeks to help farmers prepare for changes under the law.

Buckley, J. (2015). Food safety regulation and small processing: A case study of interactions between processors and inspectors. *Food Policy*. 51, 74-82.

Summary: As interest in small-scale food processing increases, so does interest in assuring that food safety regulations accommodate rather

than hinder small processors. Some practitioners and advocates charge that regulations are unfairly slanted against smaller producers and favor large food manufacturers. Studies of regulatory implementation have suggested that inspection practices offer possible policy accommodations to small food businesses. Yet there has been little research on food safety inspections of small processors. This article describes a study of food safety inspections of small processors in the US state of Michigan. Interactions between inspectors and processors were explored using a qualitative ethnographic approach. Results indicate that these interactions have the potential to achieve accommodative regulatory outcomes. Inspectors took a collaborative, assistive approach which appeared to benefit processor operations as well as improve compliance. These results have implications for policymaking for small processors, and they lay the groundwork for further research on food safety regulatory implementation.

Colorado Department of Public Health and Environment. (2012). *A Farm Food Safety Toolkit: A Nationwide Survey*. Retrieved from http://coloradofarmtoschool.org/wp-content/uploads/downloads/2012/11/Farm-Food-Safety.10.26.12.pdf.

Summary: The Colorado Farm to School Task Force commissioned this report to investigate the variety of approaches that states are using to address farm food safety. The report reflects the findings of a 50-state survey of farm food safety initiatives, demonstrating the diversity and creativity driving farm food safety initiatives across the nation.

Comegno, C. (2015). New Jersey farmers prepare for new food safety regulations. *Courier-Post*. Retrieved from http://www.courierpostonline.com/story/news/local/new-jersey/2015/03/23/new-jersey-farmers-prepare-new-food-safety-regulations/70354222/.

Summary: Article discussing the gradual implementation of the U.S. Food Safety Modernization Act (FSMA) between 2017 and 2019 and its impact on small farmers in New Jersey.

Hamm, M. (2008). Linking Sustainable Agriculture and Public Health: Opportunities for Realizing Multiple Goals. *Journal of Hunger and Environmental Health*. 3(2-3), 169-185. Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/19320240802243241.

Summary: The realms of public health and sustainable agriculture are fundamentally disconnected from one another. A simple investigation of farm policy and dietary guidelines quickly illustrates this reality with domestic agricultural production currently incapable of providing a diet to all Americans that is in line with current dietary guidelines. Agricultural production is becoming increasingly consolidated with a loss of mid-scale agriculture just as consumers are seeking locally grown foods in the marketplace. This talk explores both the difficulties and the opportunity in linking diet-related public health guidelines with agricultural production nationally as well as in communities across the country. Building on current discordance in this arena presents a strategy for using a food system rather than food supply strategy for approaching public health goals. This strategy brings other sectors of interest into the discussion-especially environmental, economic and community development – and allows for richer partnerships. Brief case studies will be utilized to illustrate the opportunities.

Linnekin, B. (2015). Stricter Food Safety Regulations Mean Fewer Local Food Options. *Reason.com*. Retrieved from http://reason.com/archives/2015/02/14/stricter-food-safety-regulations-mean-fe.

Summary: Small competitors typically can't comply with regulations written for large producers. That means big food producers get bigger, and smaller ones disappear. That consolidation is then used to justify the need for more stringent regulations, which leads to more consolidation, which leads to calls for stricter regulations. It's a death spiral that is crushing small, local food producers.

Meyer, S. et al. (2012). Reconnecting Australian consumers and producers: Identifying problems of distrust. *Food Policy*. 37(6), 634-640.

Summary: A growing gap between the production and consumption of food has led to a decline in consumer trust in food, and a desire for increased regulation of food. The aim of this study was to

investigate the nature of consumer trust in food production and regulation in the wake of shifts in food technology, globalisation and production. Semi-structured interviews (n = 47) were conducted in 2009 with participants living in rural and metropolitan South Australia. Rural participants were more trusting of food production because of their direct experience with producing food than their metropolitan counterparts. Consumers' embeddedness in food production impacts their trust in food. Increasing local food production and consumption may increase consumer trust in food, and decrease consumer dependence on government regulation.

Miller, S. (2014). A Coordinated Approach to Food Safety and Land Use Law at the Urban Fringe. *American Journal of Law and Medicine*. Retrieved from: http://poseidon01.ssrn.com/delivery.php?ID=055111099081019088108117127116031087063040063045057050005107064121024115122098120031031061097043039126023023065096120076126030049054066026045122092082070068004086123005051012098111071015114030093015025116075031125104071110066116097125102006017020101&EXT=pdf&TYPE=2.

Summary: Much has been written about the rise of the local food movement in urban and suburban areas. This essay tackles an emerging outgrowth of that movement: the growing desire of urban and suburban dwellers to engage rural areas where food is produced not only to obtain food but also as a means of tourism and cultural activity. This represents a potentially much-needed means of economic development for rural areas and small farmers who are increasingly dependent on non-farm income for survival. The problem, however, is that food safety and land use laws struggle to keep up with these changes and, as a result, often waffle between over-regulation and de-regulation. This essay posits a legal path forward to steer clear of regulatory extremes and to help the local food movement grow and prosper at the urban fringe.

North Dakota State University. (2015). *Regulation of the U.S. Food Processing Sector*. Retrieved from https://www.ag.ndsu.edu/foodlaw/safe-408-608/foodprocessingregulation.

Summary: The food processing sector is extensively regulated by the FDA or USDA FSIS, depending on the food product. Each of the regulated topics is based on the goal of wanting to prevent adulterated or misbranded food from reaching the consumer. It is the food business' burden to establish that the food is not adulterated or misbranded. Until that burden is met, a reasonable belief that the food is adulterated or misbranded authorizes the FDA or FSIS to take appropriate enforcement actions. This article provides an overview of federal food safety laws and procedures.

Prenguber, B & Gilroy, A. *A First Look at Produce Safety Practices and Costs on Oregon's Small and Medium Sized Fresh Fruit and Vegetable Farms*. Oregon Public Health Institute. Retrieved from http://www.ophi.org/download/PDF/producesafety_paper_final_OPHI.pdf.

Summary: Sixteen small and medium-sized diversified fruit and vegetable Oregon growers were surveyed to determine GAP&GHP certification status and associated costs. Findings from this study suggest that costs added by food safety measures will be passed on to produce customers when market demand is strong. Market research and a literature review of cost studies suggest that many small fresh fruit and vegetable growers serving local buyers would be hard hit by implementing a GAP&GHP program, unless they are able to recoup costs by increasing the farm-level value. In some instances, on-farm food safety practices may be a cost that the market (consumer) will bear in higher produce prices.

Schieber, G. (2013). The Food Safety Modernization Act's Tester Amendment: Useful Safe Harbor for Small Farmers and Food Facilities or Weak Attempt at Scale-Appropriate Farm and Food Regulations? *Drake Journal of Agricultural Law*. 18(1), 239-288. Retrieved from http://students.law.drake.edu/agLawJournal/docs/agVol18No1-Schieber.pdf.

Summary: This Note focuses on the potential effects FSMA may have on small farmers and food processors, and whether the provisions of FSMA and the Tester Amendment are sufficient to protect and grow the vitality of small farmers and food processors nationwide and the local markets they are more frequently beginning to serve. Part II provides background on FSMA and the Tester Amendment, highlighting the specific provisions of

the Tester exemption. Part III discusses the weaknesses of the Tester Amendment, and FSMA as a whole, in protecting the vitality of small farmers and food processors. Part IV provides suggestions for alternative approaches in providing a safe food supply while at the same time promoting the vitality of small farms and food processors as they struggle to compete with large players in the industry in the face of un-scaled regulations. Finally, the conclusion in Part V calls for further examination of other un-scaled legislation that inhibits local food production, processing, and distribution, in an effort to strengthen local food systems and rural economies.

Trexler, N. (2011). "Market" Regulation; Confronting Industrial Agriculture's Food Safety Failures. *Widener Law Review*. 17, 311-345. Retrieved from http://widenerlawreview.org/files/2011/03/Trexler.pdf.

Summary: Part I of this article provides important background concerning the current regulatory system, which is marred by conflicts and failed communication between fifteen federal agencies implementing more than thirty laws. Furthermore, it identifies the problems presented by industrial agriculture, which have only served to exacerbate the futility of century old laws lagging in the distant past. Part II outlines necessary regulatory reform focused on addressing the industrial model and centered on increased authority within the existing structure of our food safety bureaucracy. Finally, Part III describes the importance of lawmakers' consideration of the affect of proposed reform on local food systems and advocates an increase in the law's support and promotion of such systems to provide safe food for American dinner tables.

Wengle, S. (2013). How Food Safety Regulations Produce the Producers. *Chicago Policy Review*. Retrieved from http://chicagopolicyreview.org/2013/08/14/how-food-safety-regulations-produce-the-producers/.

ZumBrunnen, M. et al. (2015). *Small Farmers Can Make Food Safety Work; The GroupGap Pilot Project in Michigan's Upper Peninsula*. Michigan State University Center for Regional Food Systems. Retrieved from http://foodsystems.msu.edu/uploads/files/resources/Group_GAP_Michigan_Upper_Peninsula.pdf.

Summary: Due to changing federal regulations found in the 2011 Food Safety Modernization Act as well as pressure from larger food buyers to minimize the risk of legal action and food recalls, it appears that in the near future all farms (regardless of size) may need farm food safety certification to sell to certain markets. This pilot project investigated group food safety certification as a scale-neutral, cost-effective alternative to individual certification. This case study provides a brief background of the collective certification model called GroupGAP and an overview of the Michigan Upper Peninsula (U.P.) pilot project, including implications for small, rural farmers interested in exploring wholesale markets that require more robust food safety standards than direct markets currently require. The study found that collective certification is cost-effective, is scalable, and opened new markets for small and very small farmers.

13. Local Food State and Local Policy Analysis – General

American Farmland Trust Farmland Information Library. (2001). *State Farmland Protection Statutes by Category*. Retrieved from http://www.thecre.com/fedlaw/legal2/fpkeytab.htm.

Summary: Table summarizing state farmland protection statutes, categorizing them into agricultural districts, zoning, growth management, conservation easements, property tax relief, etc. http://www.farmlandinfo.org/law has more up-to-date information by state.

Baden-Meyer, A. & Paul, K. (2013). *Can Food Sovereignty Laws Protect Local Farms from Annihilation?*. Organic Consumers Association. Retrieved from http://www.reddit.com/r/food/comments/1molbe/can_food_sovereignty_laws_protect_local_farms/.

Summary: In the U.S., states, counties and cities have passed, or are working to pass, local food sovereignty laws to protect their communities from contamination by GMO crops, and to free local farmers and food producers and retailers from the constraints of federal and state food regulation. This article provides an overview of the issue.

Brown, J. (1998). The State Regulation of Agricultural Credit. *Drake Journal of Agricultural Law*. 305-316. Retrieved from http://students.law.drake.edu/aglawjournal/docs/agVol03No2-Brown.pdf.

Summary: This article traces the regulation, de-regulation, re-regulation, and the recent second de-regulation of agricultural credit. This analysis includes the reasons for this vacillating legislation and concludes by offering alternatives that may be more successful in meeting the public policy goals (largely the protection of the "family farm").

Condra, A. (2013). *Cottage Food Laws in the United States*. Harvard Food Law and Policy Clinic. Retrieve from http://blogs.law.harvard.edu/foodpolicyinitiative/files/2013/08/FINAL_Cottage-Food-Laws-Report_2013.pdf.

Summary: Cottage food laws vary widely in the requirements and limits set by the states, and this report is intended to provide an overview of all the state laws.

Denning, B., Graft, S., & Wooten, H. (2010). Laws to require purchase of locally grown food and constitutional limits on state and local government: Suggestions for policymakers and advocates. *Journal of Agriculture, Food Systems, and Community Development*. 1 (1), 139-148. Retrieved from http://www.ilsr.org/wp-content/uploads/files/local-food-laws-article.pdf.

Summary: Locally grown food laws that require, or provide incentives for, purchasing food grown within a defined geographic boundary are vulnerable to challenge under the U.S. Constitution's restrictions on local and state laws that discriminate against goods and commerce from other states, known as the dormant Commerce Clause doctrine (DCCD). Policymakers and advocates for local food should understand the impact of these restrictions and should take advantage of an important exception to these restrictions when drafting policies to encourage purchase of locally grown food. In particular, they should (1) consider using the "market-participant exception" to the DCCD and tailor policies to apply to government's direct food purchasing or agreements with food service contractors; (2) avoid using tax credits and instead use direct cash subsidies when providing incentives for local food purchasing by private (nongovernmental) entities, and (3) make "locally grown" geographic definitions as broad as possible (especially to include out-of-state territory).

Dillon, C. (2007). *Counties and Local Food Systems; Ensuring Healthy Foods, Nurturing Healthy Children*. National Association of Counties Center for Sustainable Communities. Retrieved from http://www.farmlandinfo.org/sites/default/files/LocalFoodSystems_1.pdf.

Summary: This publication contains four methods and case studies for how county governments can support their local food systems. It was written with a focus on obesity prevention, but readers interested in the links between agriculture and economic development, environmental protection, and food security will also find the content useful.

Food Truck Laws by City & State. Available at http://www.foodtrucklaws.com/.

Summary: Website summarizing food truck laws and regulations throughout the United States. Includes laws in Baltimore, Washington, D.C., and Richmond.

Forager.com.

Summary: This website provides an overview of cottage food laws by state.

Geigher, Q. (2015). *Cottage Food Laws*. Retrieved from http://www.bringinghomethebaking.com/?page_id=282.

Summary: List of state cottage food laws.

Hamilton, N. (2002). Putting a Face on Our Food: How State and Local Food Policies Can Promote the New Agriculture. *Drake Journal of Agricultural Law*. 7(2), 408-453. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/projects/FPN/academic_literature/PUTTING_A_FACE_ON_OUR_FOOD_HOW_STATE_AND_LOCAL_FOOD_POLICIES_CAN_PROMOTE_THE_NEW_AGRICULTURE.pdf.

Summary: The reality is farmers, rural communities, and states cannot simply rely on federal programs to provide a farm and food policy specially designed for their needs. That is why it is essential to consider the potential role of state and local food policies. This article discusses the state perspective, identifying example state and local policies which have been enacted and proposing model state laws to support local food systems.

Hand, J. (1984). *Right-to-Farm Laws: Breaking New Ground in the Preservation of Farmland*. University of Pittsburgh Law Review. Retrieved from http://nationalaglawcenter.org/publication/hand-right-to-farm-laws-breaking-new-ground-in-the-preservation-of-farmland-45-univ-pittsburgh-l-rev-289-350-1984-2/wppa_open/.

Summary: Overview of right-to-farm statutes in the United States as of the 1980s.

The Harvard Law School Food Law and Policy Clinic. (2012). *Good Laws, Good Food: Putting Local Food Policy to Work for Our Communities*. Retrieved from http://www.law.harvard.edu/academics/clinical/lsc/documents/FINAL_LOCAL_TOOLKIT2.pdf.

Summary: This guide was formulated in response to the recent growth in the number of new local food policy councils, with these food policy councils intended as our main audience. However, this toolkit should also be helpful to a wide range of individuals and groups— extending from nonprofits to city planners to local government agencies—interested in enacting change in their local food system. The information and advice provided here are general enough to assist any interested individual or organization, but as our main goal is to serve local food policy councils, specific suggestions and details geared towards these entities are emphasized throughout.

The Harvard Law School Food Law and Policy Clinic. (2012). *Good Laws, Good Food: Putting State Food Policy to Work for Our Communities*. Retrieved from http://blogs.law.harvard.edu/foodpolicyinitiative/files/2012/12/FINAL-full-state-toolkit.pdf.

Summary: The state policy version of the previous document.

Johns Hopkins Center for a Livable Future. (2016). *Dietary Guidelines Ignore Broad American Support for Food Sustainability*.

Summary: A national survey of 800 Americans shows that 74 percent of adults believe the newly released Dietary Guidelines should include environmental provisions and support sustainable agriculture practices. The survey commissioned by the Johns Hopkins Center for a Livable Future and conducted by Greenberg Quinlan Rosner Research found broad support for the inclusion of sustainability language, despite the decision by the Administration to exclude any reference to sustainable agriculture in the final 2015-2020 Guidelines.

Leib, E. (2013). All (Food) Politics is Local: Increasing Food Access through Local Government Action. *Harvard Law & Policy Review*. Retrieved from http://dash.harvard.edu/bitstream/handle/1/11189975/All%20Food%20Politics%20Is%20Local.pdf?sequence=1.

Summary: Municipalities across the nation are working to comprehensively improve their food systems as part of the overarching goal of ensuring that their citizens are healthy, safe, and productive. Local governments have the unique ability to give individuals a voice in redesigning the food system, and they should create mechanisms to capitalize on this strength as they work to implement successful food systems for the future.

Liang, C. (2015).What Policy Options Seem to Make the Most Sense for Local Food?. *Choices Magazine*. 30(1). Retrieved from http://www.choicesmagazine.org/magazine/pdf/cmsarticle_414.pdf.

Summary: Provides a brief overview of federal and state policies promoting the purchase local food.

Mirus, S. *Agritourism: A Legal Update*. National Agricultural Law Center. Retrieved from http://www.agmrc.org/media/cms/Agritourism_Mirus_5AF3CC3E0B12C.pdf.

Summary: Describes actions states have taken to support agritourism, including defining the term, promotional activities, tax incentives, zoning &

building regulations, and liability protections. In the Bay watershed, Delaware, Pennsylvania, and West Virginia all have agritourism statutes.

National Conference of State Legislatures. (2015). *Harvesting Healthier Options; State Legislative Trends in Local Foods*. Retrieved from http://www.ncsl.org/research/environment-and-natural-resources/state-legislative-trends-in-local-foods-2012-2014.aspx.

Summary: This report focuses on state legislation in all 50 states enacted between 2012 and 2014 that aimed to strengthen various components of local food systems. The report is organized into chapters focused on six policy areas with the most state legislative action: local food system approaches; farm to school; farmers' markets; community gardens and urban agriculture; healthy grocery retail; and food policy councils. The report was created using NCSL bill and law searches; communication with established and new local food system contacts; analysis and synthesis of existing research and case studies; and numerous interviews with state lawmakers, state agency staff, relevant nonprofits and other stakeholders.

Neuner, K., Kelly, S., and Raja, S. (2011). *Planning to Eat? Innovative Local Government Plans and Policies to Build Healthy Food Systems*. Food Systems Planning and Healthy Communities Lab, University at Buffalo, The State University of New York. Retrieved from http://cccfoodpolicy.org/sites/default/files/resources/planning_to_eat_sunybuffalo.pdf.

Summary: Official plans adopted by local governments guide future public investments and shape development patterns in a community. Official plans have a profound and lasting influence on the health of communities' food systems and on residents' ability to access healthful and affordable foods. Recognizing this influence, many local governments seek to strengthen their community's food systems through official plans. Local governments incorporate food in official plans using a variety of strategies. Some include food as an element, or, sub-element, within their comprehensive plans along with more traditional plan elements such as land use, housing, and transportation. Food also appears as an element within sustainability or environmental plans. A small, but growing, number of governments are adopting stand-alone food systems plans, while others are adopting plans for a particular component of the food system such as urban agriculture.

Oatfield, C. *Summary of Cottage Food Laws in the U.S. Sustainable Economies Law Center*. Retrieved from http://d3n8a8pro7vhmx.cloudfront.net/theselc/legacy_url/300/Summary-of-Cottage-Food-Laws-in-the-US-31.pdf?1392426351.

Summary: State-by-state summary of cottage laws, with links to sources.

Pothukuchi, K. & Kaufman, J. (1999). Placing the food system on the urban agenda: The role of municipal institutions in food systems planning. *Agriculture and Human Values* 16(2), 213-224.

Summary: The report examines existing or potential city institutions that could offer a more comprehensive look at the urban food system. These include the city department of food, the food policy council, and the city-planning department.

Public Health Law & Policy. (2011). *State Laws Promoting Use of Locally Grown Food and Agricultural Products in Public Contracts.* Retrieved from http://changelabsolutions.org/sites/default/files/documents/Local_Food_StateLaws_Table_FINAL_20120328.pdf.

Summary: This chart highlights state statutes that require state or local agencies to give purchasing preferences to agricultural products or food grown or produced in the state or locally. Developed in connection with the fact sheet "Local Food for Local Government: Considerations in Giving Preference to Locally Grown Food " this chart is designed to help show when a government agency can give a purchasing preference to locally grown or produced food. It does not comprehensively capture all procurement preferences for purchases of state food and agricultural products.

Puget Sound Regional Council. *Local Food Procurement Policies*. Retrieved from http://www.psrc.org/assets/9560/procurement.pdf.

Summary: State governments, school districts, and private business have adopted locally grown food

purchasing policies or practices in recent years. There are few examples of local governments who have passed these policies, making this a real opportunity for leadership in Washington State. By establishing such practices, organizations can use their food purchasing power to support the local food economy, offer healthier options for their customers, and in the long run, improve the environment.

Sanders, B. & Shattuck, A. (2011). *Policy Brief No. 19. Cutting Through the Red Tape; A Resource Guide for Local Food Policy Practitioners & Organizers*. Institute for Food and Development Policy. Retrieved from http://foodfirst.org/wp-content/uploads/2013/12/PB19-Cutting_Through_the_Red_Tape.pdf.

Summary: This document is organized with policies and tools for each area of the food system: production, processing, distribution, consumption, and food waste recovery. The types of actions that are highlighted consist of city-level ordinances and zoning changes as well as pilot projects. Each of the five sections contains "toolkits" created by a range of non-profits, universities, or think tanks. These featured documents are intended to provide food policy councils, advocates and local governments with ideas and information for designing and implementing projects to improve regional food systems.

Scully, M. (2011). *Government Purchasing Preference that Support Local Farmers: A 50 State Review*. Colorado Department of Public Health and Environment. Retrieved from http://coloradofarmtoschool.org/wp-content/uploads/downloads/2012/11/State-food-procurement-report-FINAL.pdf.

Summary: This report surveys state procurement laws in the 50 states. Research reflects the findings of a 50-state survey of enacted, pending and unsuccessful legislative proposals. The report examines individual procurement statutes, describes six nationwide trends and details Colorado's current procurement statute governing local food purchases. In sum, the District of Columbia and 28 states use statutory preference policies to promote the purchase of food produced within the state. Nationwide trends for local food purchasing preference policies include: (1) Tie-Breaker Preference, (2) Price Reasonably Exceeds Preference, (3) Price Percentage Preference, (4) Reciprocal Preference, (5) Quotas and (6) Grants.

Shirley, M. (2013). Food Ordinances: Encouraging Eating Local. *Wm. & Mary Envtl. L. & Pol'y Rev*, 37 (2), 511-537. Retrieved from http://scholarship.law.wm.edu/wmelpr/vol37/iss2/5.

Summary: This Note introduces and provides context for the local food movement by providing a background on the United States agricultural industry and local foods, explaining the improvements in moving from a centralized, industrial agricultural system to a regional food system. Relevant to this discussion, the Note includes a discussion of federal and state initiatives, positive aspects of local level regulation, and the potential challenges associated with implementing local food regulations and expanding local food networks. Some of these include: challenges by the federal government to local ordinance measures that oppose federal regulations, significant costs of direct marketing, and lack of infrastructure to increase the net usage of local food systems.

SourceWatch. (2015). *Local Food and Self Governance Ordinance*. Food Rights Network. Retrieved from http://www.sourcewatch.org/index.php/Local_Food_and_Self-Governance_Ordinance.

Summary: Local Food and Self Governance Ordinances, first drafted in four towns in Hancock County, Maine, are town ordinances establishing local food governance in response to increased federal regulation via the "Food Safety Modernization Act". This article provides a summary of ordinances in Main, Massachusetts, Vermont, and California.

Wixhwe, V. and Eicher-Miller, H. (2015). Using Food Policy Councils to Address Rural Food Issues. Perdue Extension, Center for Rural Development. Retrieved from https://extension.purdue.edu/extmedia/EC/EC-795-W.pdf.

Summary: This article defines Food Policy Councils (FPCs), discusses the challenges and opportunities that communities may face when starting and sustaining FPCs, and presents policy implications for rural decision makers.

14. Local Food State and Local Policy Analysis – Land Use/Planning

Bartling, H. (2012). A chicken ain't nothin'but a bird: local food production and the politics of land-use change. *Local Environment* 17(01), 23-34.

Summary: As discourses of sustainability and the awareness of the environmental and health impacts of factory farming have become more widespread in recent years, many residents of urban and suburban communities have become interested in producing their own food. Gardening and food production has gained popularity in recent years. While much of this activity is allowable (and encouraged) by local governments, some urban agricultural activity falls outside the limits of permissibility in local zoning codes and land use ordinances.

Campbell, M. (2004). Building a Common Table; The Role for Planning in Community Food Systems. *Journal of Planning Education and Research*, 23 (4) 341-355.

Summary: This article investigates the nature of emerging food systems conflicts by exploring the major stakeholder groups and their values, interests, and positions. Applying environmental and public policy dispute resolution theory and techniques, the article explores opportunities for planners to bridge food systems tensions. The article recommends specific actions that planning practitioners and planning academics can take to foster food systems discourse and to build a more economically and environmentally sound and socially just food system.

Covert, M. (2012). *Growing the Desert: Urban Agriculture Land Use Policy in the American West*. Thesis, Master of Science, University of Wisconsin-Madison. Retrieved from https://minds.wisconsin.edu/bitstream/handle/1793/61971/Thesis_MattCovert.pdf?sequence=1.

Summary: In this thesis, the author utilizes detailed case studies in two Western cities, Albuquerque and Denver, to examine whether these communities approach urban agriculture differently between each other and compared to other cities in the country because of the region in which they are located. Interview responses are analyzed and compared, and background research on existing policies, ordinances, planning efforts, grassroots organization, and nonprofit work is examined to elucidate similarities and differences in how local governments interact with various urban agriculture stakeholders.

Lapping, M., Penfold, G., & Macpherson, S. (1983). *Right-to-farm laws: Do they resolve land use conflicts?* Retrieved from http://www.farmlandinfo.org/sites/default/files/RIGHT-TO-FARM_LAWS_DO_THEY_RESOLVE_LAND_CONFLICTS_NOV-DEC_1983_1.pdf.

Summary: A review of the "right-to-farm" laws in 30 states and their effectiveness.

The Liberty Prairie Foundation. (2010*). Building Communities with Farms: Insights from Developers, Architects and Farmers on Integrating Agriculture and Development*. Retrieved from http://www.farmlandinfo.org/documents/38781/Prairie_Crossing_Building_Comm._with_Farms.pdf.

Summary: Report objectives stipulate that the document intends to "explore the potential benefits and challenges of building communities with farms, Provide case studies of communities that have successfully included farms in their designs, Encourage landowners, developers, design consultants and public officials to consider development models that include agriculture for future projects, and Establish the Liberty Prairie Foundation as a research and design center for the communities with farms development mode."

Morales, A. & Kettles, G. (2009). *Zoning for Public Markets and Street Vendors*. American Planning Association. Retrieved from https://www.planning.org/zoningpractice/2009/pdf/feb.pdf.

Summary: Public markets and street vendors can be temporary uses or more permanent responses to consumer demand, economic inequality, and mobility-constrained populations, particularly when it comes to making local food available to the population. This article places public markets and street vendors in a historical context, examines regulatory approaches, and makes recommendations for zoning practice.

Mukherji, N. & Morales, A. (2010). *Zoning for Urban Agriculture*. American Planning Association. Retrieved from https://www.planning.org/zoningpractice/2010/pdf/mar.pdf.

Summary: This article places urban agriculture in a historical context, examines regulatory approaches, and makes recommendations for planning and zoning practice.

Pothukuchi, K. & Kaufman, J. (2000). The Food System; A Stranger to the Planning Field. *Journal of the American Planning Associaiton*, 66(2), 113-124. Retrieved from http://clas.wayne.edu/Multimedia/seedwayne/files/kami/1_4JAPA.pdf.

Summary: Analysis of the low attention among U.S. planners for food system planning, and suggest ideas for planning involvement in the field going forward.

Raja, S., Born, B., & Russel, J. (2008). *A Planners Guide to Community and Regional Food Planning: Transforming Food Environments, Facilitating Healthy Eating*. American Planning Association. Retrieved from https://phillyfoodjustice.files.wordpress.com/2011/06/2008_apa_planners-guide-to-food-planning.pdf.

Summary: Through community and regional planning that examines food quality and availability systemically, planners can play a significant role in shaping the food environment of communities, and thereby facilitate healthy eating. Drawing lessons from six case studies of communities nationwide, this report outlines strategies that planners can adopt to facilitate healthy eating through community and regional food planning.

Salkin, P. & Lavine, A. (2011). *Regional Foodsheds: Are Our Local Zoning and Land Use Regulations Healthy?*. Tuoro College Jacob D. Fuchsberg Law Center. Retrieved from http://digitalcommons.tourolaw.edu/cgi/viewcontent.cgi?article=1490&context=scholarlyworks.

Summary: This article focuses on how existing land use plans and regulations can promote healthier and more sustainable communities through the foodshed movement. In particular, this article discusses specific land use strategies that can be implemented in urban and suburban settings to facilitate local and regional food production and distribution that go beyond farmland preservation strategies and examine, among other things, smaller-scale community gardens, residential agricultural uses and farmers markets.

Thibert, J. (2012). Making Local Planning Work for Urban Agriculture in the North American Context : A View from the Ground. *Journal of Planning Education and Research* 32, 349-357. Retrieved from http://www.arch.utah.edu/cgi-bin/wordpress-cmp/wp-content/uploads/2012/09/Thibert2012.pdf.

Summary: A small but growing literature is investigating the benefits of urban agriculture (UA) in North America, but there has been little analysis of the practical planning and policy implications of these practices. A review of the recent literature and an analysis of UA in Detroit, Toronto, and Montreal based on interviews with practitioners and other actors suggest that UA practices vary significantly and face cultural as well as legal and technical challenges. These findings support the view that UA belongs within planning and that municipalities have an important role to play in facilitating its development.

15. Urban Policies

Berg, E. (2014). Bringing Food Back Home: Revitalizing the Postindustrial American City through State and Local Policies Promoting Urban Agriculture. *Oregon Law Review*, 92 (3). 783-836. Retrieved from https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/17955/Berg.pdf?sequence=1.

Summary: The article focuses on the revitalization of postindustrial U.S. cities through urban agriculture in 2014. Topics include the establishment of local food policy, the local promotion of urban agriculture, and land use planning strategies. A case study is presented on the impact of urban agriculture on Detroit, Michigan.

Brown, K. (2002). *Urban Agriculture and Community Food Security in the United States: Farming from the City Center to the Urban Fringe*.

Urban Agriculture Committee of the CFSC. Retrieved from http://community-wealth.org/sites/clone.community-wealth.org/files/downloads/report-brown-carter.pdf.

Summary: The primer begins with an overview of the variety of forms that urban agriculture is taking in the United States, and the range of farmers found there. It also addresses some of the positive impacts – current and potential – of urban agriculture on community food security. It lists some of the challenges facing urban agriculture and suggests ways that these might be addressed. Also, it outlines key policy changes that can further expand the effectiveness of urban agriculture. The final section provides additional contacts and resources for those who are promoting sustainable and just urban food systems.

Fletcher, M., Rushlow, J., & Berky, J. *Overcoming Barriers to Cultivating Urban Agriculture*. Retrieved from http://law.pace.edu/sites/default/files/LULC/Conference_2013/Overcoming%20Barriers%20to%20Cultivating%20Urban%20Agriculture%20-%20Full.pdf.

Summary: Discussion of related issues and recommendations on how to resolve them.

Food and Agriculture Organization of the United Nations. (2011). *Food, Agriculture and Cities; Challenges of food and nutrition security, agriculture and ecosystem management in an urbanizing world*. Retrieved from http://www.fao.org/3/a-au725e.pdf.

Summary: This position paper addresses a wide audience, from field workers to decision makers, to help understand the challenges that continuing urbanization brings to food, agriculture, and the management of natural resources. The approach proposed here is based on four dimensions that characterize, design and implement food systems for cities. The paper has been prepared as a support for all actors to help advocate for political support and to assist in developing operational strategies adapted to local realities.

Goldstein, M. et al. (2011). *Urban Agriculture; A Sixteen City Survey of Urban Agriculture Practices Across the Country*. Emory Law Turner Environmental Law Clinic. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/projects/FPN/Urban_Community_Planning/URBAN_AGRICULTURE_A_SIXTEENCITY_SURVEY_OF_URBAN_AGRICULTURE_PRACTICES_ACROSS_THE_COUNTRY.pdf.

Summary: This report surveys the zoning ordinances of 17 cities and explores how these cities have incorporated urban agriculture into their land use plans. Each city was chosen either because of its long-standing urban agriculture practices or because of its recent efforts to revise its zoning ordinances. All information contained within this report is current as of June 1, 2011. Of note for our study, the survey includes Baltimore, MD, Philadelphia, PA, and Washington, D.C.

Kaufman, J. & Bailkey, M. (2000). *Farming Inside Cities: Entrepreneurial Urban Agriculture in the United States*. Lincoln Institute of Land Policy. Retrieved from http://www.urbantilth.org/wp-content/uploads/2008/10/farminginsidecities.pdf.

Summary: The report investigates the nature and characteristics of for-market city farming, obstacles to such activities, and ways of overcoming these obstacles. It also offers proponents of urban agriculture suggestions to advance the cause of city farming in environments where many are either uninformed of the multiple benefits of entrepreneurial urban agriculture, disinterested, or skeptical about its durability and longer lasting significance. Certain important groups—local, state and federal governments, local foundations, and community development corporations—who could lessen obstacles to entrepreneurial urban agriculture, if they so choose, are also targets for suggestions on ways they could be more proactive in support of city farming.

McMillan, T. (2016). Urban Farms Feul Idealism. Profits? Not So Much. *National Public Radio*. Retrieved from http://www.npr.org/sections/thesalt/2016/03/07/469500509/urban-farms-fuel-idealism-profits-not-so-much.

Summary: Story regarding the low profits facing urban agriculture.

Sustainable Economies Law Center. (2013, December 9). *9 Urban Food Policies for Strong*

Local Food Systems. Retrieved from http://www.shareable.net/blog/9-urban-food-policies-for-strong-local-food-systems.

Summary: Urban farms, food gleaning programs, community-supported food enterprise, home-based food enterprise, mobile vending, and shared commercial kitchens build food economies based on local production, processing, and exchange. This approach promotes health, local jobs, and community interaction, while reducing the environmental degradation, food insecurity, health risks, and unequal access associated with industrial agriculture and disjointed food systems. Cities can play a major role in removing legal barriers and facilitating the transition to community-based food production. This article provides six example policy areas where cities can harness the sharing economy to expand local food production.

Weaver, A. (2013). *Fresh Squeezed: The Dilemma of Local Food Production along Colorado's Front Range Urban Corridor*. A Dissertation Presented to the Faculty of Natural Sciences and Mathematics University of Denver. Retrieved from http://labs.libhub.org/denverpl/resource/etOIuMed/.

Summary: As development and food production are starting to challenge the finite limits of the land, there are choices to make regarding land, development, and local food production. By combining data from the U.S. Agricultural Census with results of an author-driven survey of local producers in Colorado, this project considers these choices and illuminate the complex web of their interdependence. The principal results display that Colorado faces increasing competition for food production and urban development space potentially pressuring local food prices upward and forcing producers to peripheral land or out of food production.

16. *Food System/Foodshed Studies in Other Regions*

Alexander Communications et al. (2014). *Southeastern Massachusetts Food System Assessment*. Retrieved from http://semaponline.org/se-mass-food-security-network-releases-its-local-food-system-assessment/.

Summary: The goals of the Assessment, which covers Bristol, Norfolk, and Plymouth Counties, with some special focus on the cities of New Bedford and Fall River, are to: (1) Provide the community with key baseline data on, and initial evaluation of, each element of the food system in Southeastern Massachusetts, (2) assess the potential for increasing both the production and consumption of local foods by residents of the region, and (3) provide an initial identification of gaps, barriers, and needs.

Almeida, T. et al. (2003). *Food for Growth; A Community Food System Plan for Buffalo's West Side*. The University at Buffalo Department of Urban and Regional Planning. Retrieved from http://www.nyupstateplanning.org/Award04-FoodForGrowth.pdf.

Summary: This plan makes recommendations to strengthen the West Side neighborhood's community food system such that following four strategic objectives are met.
1) Enhancing local food production through land use planning
2) Promoting food based economic development
3) Increasing transportation access to food
4) Promoting food-based youth development through food based project

Anegon, A. (2014). *Evaluating the Local Food System of Manhattan, Kansas: Producer and Institution Perspectives*. Master Thesis, Kansas State University College of Agriculture. Retrieved from https://krex.k-state.edu/dspace/bitstream/handle/2097/17608/AngelaAnegon2014.pdf?sequence=3.

Summary: The goal of this study was to evaluate the characteristics and perceptions of the local food system supporting Manhattan, Kansas – a metropolitan area located in North Central Kansas. Specifically, we wanted to understand producer barriers to expanding beyond direct markets into institutional markets such as school dining services, grocery stores, and hospital food services. The objectives were to 1) understand producer concerns for selling to institutions, 2) identify resources producers need to access institutional markets, 3) understand institutional preferences for local purchasing, and 4) understand producer and institution definitions of "local" food. In February 2013, a survey was mailed to 162

Kansas producers identified within a 150 mile distance of Manhattan, Kansas. Producer concerns for selling to institutions included low prices, small production quantities, and delivery costs. Institution concerns included product quantities, quality, and seasonality, quality of communication, and food safety. There was no consensus on a definition for "local" food systems. Opportunities for developing the local food system of Manhattan, Kansas include increasing seasonal production, increasing producer access to resources, and fostering relationships between local producers and institutions.

Board of County Commissioners. (2010). *Clackamas County, Oregon. Agricultural Investment Plan*. Retrieved from http://www.clackamas.us/business/agriculture_plan.html.

Summary: The Agricultural Investment Plan focuses on creating new emergent markets for the county's agricultural base by exploring interconnections among activities and optimization of various land use within the agricultural sector. As a partnership with Economic Development, Sustainability and Tourism this project focuses on four key areas of opportunity, including renewable energies, regional food systems, regional impact form the equine industry, and agricultural tourism.

Born, B. et al. (2011). *Central Puget Sound Food System Assessment*. Prepared by University of Washington Graduate Students for the Puget Sound Regional Food Policy Council. Retrieved from http://courses.washington.edu/studio67/psrcfood/.

Summary: This project represents the final product of a twenty-week graduate studio course in the Department of Urban Design and Planning at the University of Washington's College of Built Environments. The Regional Food Policy Council enlisted the University of Washington studio team to identify and pursue research topic areas examining the regional food system. The Council sought to meet two major goals: creating a common knowledge base among Council members about the region's food system and informing the development of early action items on the Council's work plan.

Born, B. & Martin, K. (2011). *Western Washington Foodshed Study: Evaluating the potential for Western Washington to meet its food needs based on locally produced foods*. University of Washington Program on the Environment & College of Built Environments, Department of Urban Planning. Retrieved from http://www.urbanfoodlink.com/wp/wp-content/uploads/2013/01/WesternWashingtonFoodshedStudy.pdf.

Summary: The following report outlines the objectives, methods, and results of the Western Washington Foodshed Study which was undertaken in an effort to establish the potential for Western Washington to meet its food needs based on locally produced foods. A mass balance was performed to compare the amount of food produced in Western Washington to the amount of those same foods consumed in order to identify surpluses and deficits. Several additional sub-questions were investigated regarding production and consumption of organic foods, consumption of locally sourced foods, and the consumption behavior of Western Washington residents as compared to National trends and USDA dietary guidelines.

Buck, K., Kaminski, L., Stockmann, D., & Vail, A. (2007). *Investigating Opportunities to Strengthen the Local Food System in Southeastern Michigan*. Masters Project, University of Michigan. Retrieved from http://deepblue.lib.umich.edu/bitstream/handle/2027.42/50468/Local?sequence=2.

Summary: The primary objective of this project was to help the Food System Economic Partnership develop resources and tools in support of its mission to "catalyze change in the local food system." The project team accomplished this by conducting research on the local food system within a five-county region of southeastern Michigan (Jackson, Lenawee, Monroe, Washtenaw and Wayne counties). Research included reviewing existing food system literature; compiling regional data; developing, implementing and analyzing a multi-sector food system survey; conducting interviews with food system stakeholders; and engaging in Participatory Action Research while working with FSEP's Leadership Team and committees. The research will support the development of local, agricultural economic

development opportunities, food system networks and collaborative multi-stakeholder partnerships in southeastern Michigan.

Building a Thriving San Diego Regional Food System: Priorities for Action. (2013). County of San Diego Health and Human Services Agency. Retrieved from http://healthyworks.org/sites/default/files/PrioritiesforAction.pdf.

Summary: The County of San Diego Health and Human Services Agency (HHSA) commissioned this report to assess needs, assets, and priorities for action to build a healthy and thriving regional food system. It builds on work conducted over the last three years by the San Diego Food System Working Group, the San Diego Urban-Rural Roundtable, the HHSA Healthy Works project, the San Diego Farm Bureau, and many other organizations and individuals in the San Diego region. The recommended actions focus on the near-term (the next one to three years) and provide a starting point for prioritization of activities by governments, businesses, educational institutions, and community-based organizations.

Center for Environmental Farming Systems. (2010). *From Farm to Fork: A Guide to Building North Carolina's Sustainable Local Food Economy*. Retrieved from http://www.cefs.ncsu.edu/resources/stateactionguide2010.pdf.

Summary: This action guide is the product of a yearlong "Farm to Fork" initiative, involving well over 1,000 North Carolinians interested in becoming actively engaged in food and farming issues. Participants in this process included people and organizations working in the fields of agriculture, commercial fishing, community organizing, education, faith, finance, local government, nutrition, philanthropy, planning, public health, public policy and youth outreach. The intent of this guide is to provide key action ideas for building a sustainable food economy in North Carolina at the state and local levels. We hope that implementation of these action steps will lead to significant economic development, stewardship of natural and agricultural resources, and better health and nutrition for all North Carolina residents.

Centralina Council of Governments and Catawba Regional Council of Governments et al. (2014). *Food Systems Assessment Report*. Retrieved from http://www.carolinafarmstewards.org/wp-content/uploads/2014/06/connect-Food-System-Assessment-Report-7.29.14.pdf.

Summary: Assessment of a 14 county region in North and South Carolina.

Chen, Y., Kaczmarek, A., & Ventola, J. (2012). *Worcester Community Food Assessment*. Worcester Polytechnic Institute. Retrieved from https://www.wpi.edu/Pubs/E-project/Available/E-project-030813-173340/unrestricted/foodprod_final_3-10-13--FINAL.pdf.

Summary: This study for the Worcester Food & Active Living Policy Council, examined food production resources in Worcester as well as distribution networks, such as farmers markets, community-supported agriculture, and community gardens. Our goal was to help our sponsor better understand the local food system and to identify opportunities to increase the availability of nutritious and healthy food in low-income neighborhoods.

Cogan Owens Cogan, LLC. (2012). *Clackamas County Agriculture and Foodshed Strategic Plan*. Retrieved from http://www.clackamas.us/business/documents/CC_Foodshed_Strategy_FINAL.pdf.

Summary: This Agriculture and Foodshed Strategic Plan (Plan) is a strategic analysis of the potential to expand the County and regional food system cluster. Primary data was collected through interviews and surveys conducted with more than 1,000 agricultural producers in Clackamas County. Interviews and surveys also were conducted with 42 unique processors, distributors and institutional purchasers. The analysis of supply and demand reveals gaps in the regional food system as well as opportunities that have the potential to drive market development and job creation in Clackamas County. The implementation strategy includes recommendations on ways to promote agricultural investment, protect and grow the regional foodshed and support foundational farmland.

Colasanti, K. and Hamm, M. (2010). Assessing the local food supply capacity of Detroit, Michigan. *Journal of Agriculture, Food Systems, and Community Development*, 1(2): 41-58. Retrieved from http://www.agdevjournal.com/volume-1-issue-2/137-assessing-the-local-food-supply-capacity-of-detroit-michigan.html?catid=62%3Aurban-agriculture-call-papers-vol01-issue2.

Summary: Urban agriculture is touted as a strategy for more locally reliant food systems, yet there is little understanding of its potential food provisioning capacity. Using Detroit, Michigan as an example, they use secondary data to develop a methodology for estimating the acreage required to supply, as far as seasonally possible, the quantity of fresh fruits and vegetables consumed by city residents. They compare these requirements with a catalog of the publicly owned, vacant parcels in Detroit to assess the feasibility of producing significant quantities of the fresh produce consumed within city limits.

Cruze, S. & Curtis, J. *Cabarrus County Food System Assessment*. Center for Environmental Farming Systems. Retrieved from http://www.cefs.ncsu.edu/whatwedo/foodsystems/cabarruscountyfoodassessment.pdf.

Summary: In 2010, the County hired the Center for Environmental Farming Systems (CEFS) to conduct a Food System Assessment to: 1) provide an initial evaluation of the food system in the County, 2) highlight assets and challenges within different segments of the food system, and 3) make recommendations for action. This assessment, summarized below, identifies key findings and recommendations derived from secondary data sources and interviews with over 60 different stakeholders involved in the County's food system.

Cutright, D. (2007). *Envisioning Local Food Distribution in Chattanooga, Tennessee*. Thesis, M.A., University of South Carolina. Retrieved from http://oatd.org/oatd/record?record=oai%5C%3Augakr.libs.uga.edu%5C%3A10724%5C%2F27919.

Summary: This thesis is a feasibility study for a low-volume processing and distribution center for local food in Chattanooga, Tennessee. It begins with an investigation into the popularity of the local food movement and a justification of why this project is necessary to help citizens and retailers access high quality local products in Chattanooga. The analysis considers the current structure of distribution and its failings, relevant regulations and policies that may affect business growth, current market conditions, relevant business models and the most suitable location for such an operation. This is intended as an applied research thesis; it is hoped to be the first step towards creating a legitimate business model.

Dane County Local Food Policy Advisory Subcommittee. (2005). *Recipe for Success: Recommendations of the Dane County Local Food Policy Advisory Subcommittee*. Retrieved from http://danedocs.countyofdane.com/webdocs/pdf/foodcouncil/Recipe_for_Success.pdf.

Summary: The LFPAS met regularly over one year (June 2004-July 2005), and convened a Local Food Summit Conference in February 2005 that brought together key stakeholders and the broader community to generate information and ideas to improve the local food system. Out of these efforts, the subcommittee developed a range of recommendations that address areas of need and also capitalize upon the county's comparative advantages, including efficient and innovative producers and consumers dedicated to supporting local foods.

Ellsworth, S. & Feenstra, G. (2010). *Assessing the San Diego County Food System: Indicators for a More Food Secure Future*. Retrieved from http://asi.ucdavis.edu/resources/publications/sandiegoreport.pdf.

Summary: This assessment is the product of collaboration among a unique coalition of governmental, public health, social service, environmental and agricultural experts from throughout San Diego County and is intended to serve as a catalyst for community based policy change. In particular, the goal of this document is to examine the overall viability of the food system in San Diego County and in so doing, to identify key steps necessary to strengthen the foundation for a thriving local food system.

Fairview Growing; An Agricultural Economic Development Plan. (2011). Retrieved from

http://www.co.fairfield.oh.us/rpc/images/Fairfield_Full_Plan_082411.pdf.

Summary: The report contains an analysis of the agricultural system of Fairview County, Ohio, and a plan to move towards greater reliance on local food sources, including analysis of barriers and recommendations on how to overcome those barriers.

Hellwinckel, C. et al. (2014). *Knoxville Regional Foodshed Assessment*. University of Tennessee Agricultural Policy Analysis Center. Retrieved from http://www.planeasttn.org/DesktopModules/Bring2mind/DMX/Download.aspx?EntryId=1404&Command=Core_Download&PortalId=0&TabId=143.

Summary: The assessment defines the foodshed as a 50 mile radius ecompassing 11 counties where farmers find Knoxville as the nearest large market to sell their produce. The goal of the Knoxville Regional Foodshed Assessment to was to:

1. Evaluate current food production in the Knoxville region, and identify strong points and missing components,
2. Measure the economic impacts of increasing local food production, and
3. Recommend next-steps in building our local food system.

The study found that the foodshed's crop and pastureland could potentially supply the current demand for all fruit, vegetable, dairy and meat, however, the demand from our growing population by 2040 could not be met. The assessment also posed an interesting goal of what achieving 20% local food production would mean for the local economy.

Illinois Local and Organic Food and Farm Task Force. (2009). *Local Food, Farms & Jobs: Growing the Illinois Economy*. Retrieved from http://www.agr.state.il.us/newsrels/taskforcereport-outside.pdf.

Summary: This report shows how the state of Illinois can facilitate development of a local food system that complements the existing global farm and food system. It reflects the work of the 32-member Illinois Local and Organic Food and Farm Task Force which was created by the Illinois General Assembly through the Illinois Food, Farms and Jobs Act of 2007. This law authorized formation of the Task Force to develop a plan containing policy and funding recommendations for expanding and supporting a statewide local farm and food system.

Inman, P. and Megara, M. (2012). 5. *The Suburban Cook County Food System: An Assessment and Recommendations*. Suburban Cook County Food System Steering Committee. Retrieved from http://www.cookcountypublichealth.org/files/pdf/chronic-disease/foodsystemreport3.19.12.pdf.

Summary: This report is a snapshot of the current food system in suburban Cook County and lays the groundwork for broader regional planning around local food. While this report focuses on suburban Cook County, its conclusions call for county-wide collaboration around creation of a food system that is health-promoting, sustainable, resilient, diverse, fair, economically balanced, and transparent.

Inwood, S. (2004). *Assessing Opportunities for Organic and Sustainably Grown Local Foods for Restaurant and Retail Food Store Distribution in Ohio*. A Thesis Presented for the Degree Master of Science to the Graduate School of the Ohio State University. Retrieved from https://books.google.com/books/about/Assessing_Opportunities_for_Organic_and.html?id=nN5mpwAACAAJ.

Summary: Few of Ohio's family farmers are pursuing direct marketing of produce, meat and dairy products beyond farmers' markets and CSAs to serve the growing demand for local and organic foods among culinary and retail communities. Statewide social surveys and interviews with 100 restaurants and food stores examine perceptions of local foods and assess the opportunities and barriers for marketing and distribution. Findings indicate a strong preference for low-input foods; respondents expressed difficulty sourcing products and the desire for a regional local foods distributor carrying a diverse array of high quality and culturally appropriate products to satisfy emerging needs of new ethnic and established communities. Understanding current regional market demands and purchasing patterns in Ohio can reveal new market opportunities for local farmers, local processors and distributors. These market opportunities could become a catalyst to adopt new farming techniques that would increase grower

profitability while simultaneously abating pollution associated with agriculture.

Ives, B. (2011). *Cumberland County Foodshed Assessment*. University of Southern Maine. Retrieved from http://efc.muskie.usm.maine.edu/docs/ccfa_executive_summary.pdf.

Summary: A first step towards a Foodshed Plan for Cumberland County, Maine.

Jackson, C. and Perrett, A. (2011). *Food and Farm Assessment: Clay County, North Carolina*. Retrieved from http://asapconnections.org/downloads/asap-food-and-farm-assessment-clay-county.pdf.

Summary: This report provides the results of research conducted by Appalachian Sustainable Agriculture Project (ASAP) for the Clay County Small Farms Initiative in Clay County, North Carolina. The purpose of the research is to: (1) explore what food and farm products are currently produced in the region; (2) examine how much of what is produced is also consumed in the region; (3) consider the potential impacts of increased purchasing of locally-produced food and farm products; and (4) identify points where investment of resources or other actions could support local farms and local food. This report presents a wide-ranging collection of information on the region's food and farm economy which can form the basis for future efforts to expand local markets for local farm products.

Johnson County Food Policy Council. (2014). *2014 Recommendations*. Retrieved from http://www.johnson-county.com/WorkArea/DownloadAsset.aspx?id=16158.

Summary: The Johnson County Food Policy Council is charged by the Johnson County Board of Supervisors to provide the Supervisor's policy recommendations that aim to strengthen our community food system. Last year, the Council provided several general recommendations for the county to reduce obstacles for farming in Johnson County, to promote local food and to adapt the county's land use plan. This year, the Council's recommendations serve to provide specific actions the Board of Supervisors can take to strengthen our community food system by giving new farmers access to land, increasing resources to citizens and by creating a stronger market for food grown in Johnson County.

Journal of Food Distribution Research. 45 (3). Retrieved from http://www.fdrsinc.org/wp-content/uploads/2014/12/JFDR-453-Complete.pdf.

Summary: Contains articles analyzing (1) Two Rivers Winery & Chateau on the West Slope of Colorado and how agritourism has bolstered their success as a local producer, (2) Zia Taqueria a full-service restaurant in Durango, Colorado whose owners have steadily increased the proportion of local vegetables and how the business has organized new food supply chains, (3) the of Sandhills Farm to Table Food Hub in North Carolina and how this business utilizes an innovative organizational structure to connect producers, consumers, and workers to each other and the community, (4) Kriemhild Dairy Farms in New York and how their entrepreneurial strategy for producing and marketing its pasture-raised butter takes advantage of the company's ability to leverage alternative (local food system) and conventional resources and infrastructure, (5) Lone Pine Farms Moody Meats Inc. (Moody Meats) a vertically-integrated farm-to-retail business operating in the central Indiana local food system, and (6) Limehouse Produce in South Carolina which nurtures the restaurant community by facilitating the exchange of information and resources between channel members, and acting as a trusted intermediary.

Kansas State University and Douglas County Food Policy Council. (2011). *Building a Deep-Rooted Local Food System; A Food System Analysis for Douglas County, Jefferson County, & Leavenworth County in Kansas*. Retrieved from http://old.kansasruralcenter.org/publications/LFPCfullreport.pdf.

Summary: The goal of this document is to identify the benefits, challenges and opportunities for a successful and sustainable local food system in Douglas County and the surrounding region.

Letts, G. & Hemphill, J. (2014). *Growing the Food System within the Headwaters Region*. Headwaters Food & Farming Alliance. Retrieved from

https://www.academia.edu/7496550/Growing_the_Food_System_within_the_Headwaters_Region_Promoting_Local_Agriculture_and_Food_Security.

Summary: A report summarizing discovered barriers to the development of a food system in the Headwaters Region in Oregon, and recommending policies to remove those barriers.

Louge, J. (2009). *Sustaining Agriculture in the Granite State; A Citizen's Guide to Restoring Our Local Foods, Farms and Independence.* The New Hampshire Coalition for Sustaining Agriculture. Retrieved from http://www.aconservationtrust.org/Keep%20Growing%20resources/SustainingNHAgriculture.pdf.

Summary: An analysis of local food in the State and a series of recommendations on how to enhance the local foodshed of New Hampshire.

Markram, L., Paino, J., & Greene, H. (2013). *Why Local: An Examination of Motivations and Barriers to Integrating Local Food in Saratoga Restaurants*. Environmental Studies Program, Skidmore College. Retrieved from https://www.skidmore.edu/wri/documents/MarkramPainoGreene.pdf.

Summary: In this study, the authors seek to combine existing research on food systems theory with market theory in order to: determine why Saratoga, California restaurants purchase local, analyze the existing barriers to incorporating greater amounts of local food into menus, and understand the consumer demand for local foods.

Martin, S., et al. (2012). *Growing a Sustainable Portland Metropolitan Foodshed*. Report produced for the Western Sustainable Agriculture Research and Education, Project SW-143. Retrieved from http://www.westernsare.org/content/download/68709/973461/Martin-OR-SW10-143.small.pdf.

Summary: The purpose of the Sustainable Agriculture Research and Education (SARE) grant project is to identify ways to strengthen the regional food production system. The project identifies key challenges that face our foodshed growers and producers and develops tools for both planners and growers to overcome them. This project attempts to help find solutions to address these unique challenges for both existing and emerging urban farmers.

Masi, B., Schaller, L., and Shuman, M. (2010). *The Benefits of Food Localization for Northeast Ohio and How to Realize Them*. Retrieved from http://www.neofoodweb.org/sites/default/files/resources/the25shift-foodlocalizationintheNEOregion.pdf.

Summary: The study analyzes the impact of the 16-county Northeast Ohio (NEO) region moving a quarter of the way toward fully meeting local demand for food with local production. It suggests that this 25% shift could create 27,664 new jobs, providing work for about one in eight unemployed residents. It could increase annual regional output by $4.2 billion and expand state and local tax collections by $126 million. It could increase the food security of hundreds of thousands of people and reduce near-epidemic levels of obesity and Type-II diabetes. And it could significantly improve air and water quality, lower the region's carbon footprint, attract tourists, boost local entrepreneurship, and enhance civic pride.

Metcalf, S. & Widener, M. (2011). Growing Buffalo's capacity for local food: A systems framework for sustainable agriculture. *Applied Geography*. Retrieved from http://www.sciencedirect.com/science/article/pii/S0143622811000099.

Summary: This paper employs a systems framework to explore sustainable agriculture as a source of food in Buffalo, NY and other Rust Belt cities that exhibit an abundance of abandoned property and vacant lots in core urban areas. Considering land as a common stock proves helpful for determining whether or not a system is sustainable, such that stocks of natural resources are not depleted faster than they can be replenished. By identifying feedback relationships in the local food system, planners and activists in these cities are redesigning their food production and distribution systems to meet the needs of food-insecure residents.

Metropolitan Area Planning Council. (2015). *Massachusetts Food System Plan: Phase I Report*. Retrieved from

http://www.mass.gov/eea/docs/agr/boards-commissions/ma-food-system-plan-phase-1-report-02-12-15.pdf.

Summary: The Commonwealth of Massachusetts is engaged in an exciting effort to develop its first comprehensive food system plan since 1974. In August, 2013, the Massachusetts Department of Agricultural Resources (MDAR) released a Request for Proposals (RFP) on behalf of the Massachusetts Food Policy Council (MFPC), seeking consultants to facilitate the development of this plan. The MFPC is a 17-member entity comprising state agency, legislative, and industry representatives, established by the Legislature and Governor in November, 2010 (MLG Chapter 20 Section 6C). This document includes a full report on the progress made in order to complete Phase I of the project.

Mid-East Commission and Carolina Farm Stewardship Association. (2013). *Healthy, Fresh, Local Food: An Action Plan for Beaufort County, NC*. Retrieved from http://www.carolinafarmstewards.org/wp-content/uploads/2013/11/KBR-Beaufort-Co-Final-Action-Plan-web.pdf.

Summary: Between June and November 2013, the Carolina Farm Stewardship Association (CFSA) and the Mid-East Commission (MEC), along with many community partners, conducted an assessment of Beaufort County, North Carolina to identify approaches to improve Beaufort County residents' access to healthy, fresh, local, foods.

Mid-Ohio Regional Planning Commission. (2010). *Central Ohio Local Food Assessment and Plan*. Retrieved from http://www.morpc.org/pdf/CentralOhioLocalFoodAssessmentAndPlan2010.pdf.

Summary: The Central Ohio Agriculture and Food Systems Working Group is a multi-county team convened by the Mid-Ohio Regional Planning Commission (MORPC) to promote the production, processing, distribution and consumption of food within the region. The local-food assessment, provides a snapshot of existing local-food-system components in central Ohio. By compiling this substantial listing and overview of those efforts, we can now begin to make connections among them and develop a credible plan to increase their size and scope.

Multnomah County Office of Sustainability. (2010). *Multnomah Food Action Plan; Local Action on Health, Equity, Environment and Jobs in our Food System 2010 - 2025*. Retrieved from https://multco.us/file/36863/download.

Summary: The Multnomah Food Action Plan builds upon the existing work of the community by providing a roadmap with a shared community vision and shared goals. This Plan is also a call to action and identifies key collaborative actions for our community that are critical for achieving our goals.

New York City Council. (2010). *FoodWorks; A Vision to Improve NYC's Food System*. Retrieved from http://council.nyc.gov/downloads/pdf/foodworks_full report_11_22_10.pdf.

Summary: FoodWorks is the result of over a year of research and more than 100 meetings with New Yorkers involved in every phase of the food system: gardeners, chefs, small business owners, researchers and academic experts, not-for-profits, emergency food providers, and manufacturers, as well as officials at every level of government. The 59 proposals in the report outline a strategy for a healthier, greener, and more productive food system. It contains ideas that the City Council can begin implementing immediately, and ideas that will require a commitment from our state and federal colleagues.

Parker, B. & Osdoba, T. (2010). *Lane County Local Food Market Analysis*. Prepared by Community Planning Workshop. Retrieved from https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/10929/LCFoodExecSumm_FINAL.pdf?sequence=1.

Summary: This report presents a market analysis of the local food system in Lane County with the core objective of identifying the opportunities to expand local markets for locally produced food. They identify many challenges to achieving this objective, and propose a set of implementation strategies that the private sector, local governments, and nonprofits should consider to

achieve the goal of increasing local production and consumption of food products.

Pascuito, K. (2010). *Central Coast Foodshed Guide; Information and Resources for the Development of a Foodshed Identity for the SLO County Region*. Central Coast Agriculture Network. Retrieved from http://pasofoodcooperative.com/wp-content/uploads/2013/03/CENTRAL-COAST-FOODSHED-GUIDE-1.pdf.

Summary: The guide contains an overview of food system analysis, the current state of agriculture in San Luis Opisbo County in California, and discussion of potential roles for the County and the State to support the local foodshed.

Peters, C., Lembo, A., & Fick, G. *A Tale of Two Foodsheds: Mapping Local Food Production Capacity Relative to Local Food Requirements*. Department of Crop and Soil Sciences, Cornell University. Retrieved from https://scisoc.confex.com/crops/responses/2005am/226.pdf.

Summary: They test two approaches to mapping potential local foodsheds and estimating the minimum distance within which food needs could be met for Rochester, New York. One method uses an iterative approach involving buffer zones. The other method uses a linear optimization model. Results from both approaches indicate that the basic caloric needs of Rochester could be supplied within a short distance, an average of 10.7 km (optimization) to 17.5 km (buffering). Because of the ability to consider multiple cities simultaneously, optimization is the superior approach.

Peterson, H., Selfa, T., & Janke, R. (2010). Barriers and Opportunities for Sustainable Food Systems in Northeastern Kansas. *Sustainability*. 2, 232-251. Retrieved from http://www.mdpi.com/2071-1050/2/1/232/pdf.

Summary: Survey responses of producers and institutional buyers in northeastern Kansas (United States) were analyzed to understand barriers and opportunities for sustainable food systems in the region where their emergence has been limited. Producers and buyers identified barriers previously noted regarding mismatches of available quantities and prices. Producers' enthusiasm to supply locally exceeded buyers' interest to source locally. Transportation was identified as one of the major concerns by producers, and their responses to choice tasks revealed producers' preferences to sell locally while pricing their products to secure sales revenue and to cover their logistics expenses at least partially.

Pirog, R. (2011). *Iowa Local Food & Farm Plan; Report to the Iowa Legislature from the Leopold Center for Sustainable Agriculture*. Retrieved from http://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2011-01-iowa-local-food-and-farm-plan.pdf.

Summary: A local food and farm plan mandated by Iowa law containing policy and funding recommendations for supporting and expanding local food systems and for assessing and overcoming obstacles necessary to increase locally grown food production.

Puget Sound Regional Council. (2012). *Food Policy Blueprints*. Retrieved from http://www.psrc.org/assets/9600/policy_blueprint_complete.pdf.

Summary: This report includes policy recommendations to local jurisdictions to support healthy food access and the local food economy through planning, zoning, economic development, and procurement policies. The recommendations focus on examples from the Puget Sound region to show steps some local jurisdictions have already taken. The blueprints aim to address challenges and opportunities for local communities. Challenges include health disparities and access to healthy food, preserving agricultural resources, and ensuring resiliency in the food system during emergencies. Food system planning can create opportunities to grow the local food economy and provide other community benefits.

Rehmann, M. and Colasanti, K. (2014). *Advancing a Local Food Council Network in Michigan; An Assessment*. Michigan State University Center for Regional Food Systems. Retrieved from http://foodsystems.msu.edu/uploads/files/advancing_a_local_food_council_network_assessment.pdf.

Summary: Findings in this assessment have been drawn from responses obtained during phone interviews conducted with Michigan local food

council leaders and council member feedback collected during network formation meetings on July 30, 2014 and Oct. 27, 2014, to gauge the potential for creating a statewide network of local food councils.

Santa Fe Food Policy Council. (2013). *Planning Santa Fe's Food Future*; *Querencia—A Story of Food, Farming and Friends.* Retrieved from http://www.farmtotablenm.org/wp-content/uploads/2013/02/SFFoodPlan-2.pdf.

Summary: This plan represents the first step to building a local food system for Santa Fe County. Their process will culminate in the development of a final strategic food plan for the city and county of Santa Fe---a detailed roadmap for action and accountability.

Seeds of Change Appalachia Coalition. (2012). *Food and Farm Assessment for a Five-County Region in the Southern Appalachians.* Retrieved from http://asapconnections.org/downloads/asap-food-and-farm-assessment-high-country.pdf.

Summary: This report provides the results of research conducted by the Local Food Research Center of ASAP (Appalachian Sustainable Agriculture Project) for the Seeds of Change Initiative project of Heifer International. The purpose of this research is to analyze agricultural production, local food consumption, and food spending for the five county region of Alleghany, Ashe, Watauga, and Wilkes counties in North Carolina and Johnson County in Tennessee. The assessment utilizes surveys and other data to analyze regional trends in agriculture and the food and farm products currently produced, as well as examine the relationship between foods grown in the region and consumption and spending by local residents and visitors.

Scenic Hudson, Inc. (2015). *Securing Fresh, Local Food for New York City and the Hudson Valley; A Foodshed Conservation Plan for the Region*. Retrieved from http://www.scenichudson.org/sites/default/files/Foodshed_Conservation_Plan.final_.web_.pdf.

Summary: This plan presents a strategic approach to conserve the agricultural land that can supply fresh, local food to the people of the Hudson Valley and New York City. It answers several fundamental questions:

- How much land is there to be conserved?
- How many farms are in the region's foodshed?
- Which farmland is most critical to save?
- What will it cost to conserve the highest priority farmland?
- And perhaps most importantly, what must be done to save it?

Sonoma County Food System Alliance. (2011). *Sonoma County Community Food Assessment*. Retrieved from http://sonomacofsa.org/cm_vault/docs/Sonoma_County_Community_Food_System_Assessment.pdf.

Summary: Assessment of the existing food system in this county in California.

Southeast Alaska Food System Assessment. (2014). Retrieved from http://www.seconference.org/sites/default/files/FoodAssess_3.0_email.pdf.

Summary: Report analyzing data from Southeast Alaska identifying existing food system challenges to target areas of change and actions that can be taken to promote self-sufficient communities and a more resilient food system.

Starr, A. et al. (2003). Sustaining local agriculture: Barriers and opportunities to direct marketing between farms and restaurants in Colorado. *Agriculture and Human Values* 20, 301–32. Retrieved from http://link.springer.com/article/10.1023%2FA%3A1026169122326.

Summary: Research explored methods for "shortening the food links" or developing the "local foodshed" by connecting farmers with food service buyers (for restaurants and institutions) in Colorado. Telephone interviews were used to investigate marketing and purchasing practices. Findings include that price is not a significant factor in purchasing decisions; that food buyers prioritize quality as their top purchasing criterion but are not aware that local farmers can provide higher quality, that institutions are interested in buying locally; that small farms can offer comparable or higher quality produce and service;

and that farmers need to show buyers what the quality of produce and service they can provide.

Stork, A., Qazi, J., and Hunter, C. (2009). *North Central Washington Regional Food System Baseline Assessment*. Initiative for Rural Innovation and Stewardship. Retrieved from http://irisncw.org/Programs/Regional-Food-Systems/RegionalFoodSystemBaselineAssessment.pdf.

Summary: In March of 2009, the Initiative for Rural Innovation and Stewardship (IRIS) contracted with a team of researchers across the region to conduct a baseline assessment of the regional food system in North Central Washington. The goal of the project was to: "Produce an assessment of the regional food system that will provide IRIS and our partners with information about the direct market sector. This information can be used to build a common vision and inform near and longer term actions across the region from Chelan, Douglas, and Okanogan counties to the Quincy Basin of northern Grant County."

Stringer, S. (2010). *FoodNYC; A Blueprint for a Sustainable Food System*. Retrieved from http://urbanomnibus.net/redux/wp-content/uploads/2010/02/foodnyc.pdf.

Summary: An analysis of current policies in NYC, and policy recommendations for promoting regional food production in and around NYC.

Syring, D. (2012). Exploring the Potential for a More Local Food System in the Western Lake Superior Region. *CURA Reporter*, 42 (3): 10-16. Retrieved from http://www.cura.umn.edu/sites/cura.advantagelabs.com/files/publications/42-3-Syring.pdf.

Summary: This article summarizes research on several key elements related to possibilities for expanding the local food system in the Western Lake Superior region. It presents data about the available land base that could contribute to food production in the region; insights based on in-depth interviews with farmers who already grow food in the region, including policy ideas that they offered to support the work of growing more local food; and findings from a regional survey of citizens regarding their willingness to purchase local foods. The author concludes with a discussion of policy possibilities for supporting the regional food system.

Temple University for Norristown Food System Task Force. (2014). *Norristown Food System Assessment.* Retrieved from http://www.temple.edu/ambler/crp/research/documents/Norristown-Food-System-Assessment.pdf.

Summary: Assessment of this borough, county seat of Montgomery County, Pennsylvania.

Thompson, E., Harper, A., & Kraus, S. (2008). *San Francisco Foodshed Assessment.* Retrieved from http://brentwoodaglandtrust.org/pdfs/San_Francisco_FoodShed_Assessment.pdf.

Summary: This report includes a thorough analysis of the challenges and potential for expanding the local food system in San Francisco and the Bay area.

Unger, S. & Wooten, H. (2006). *A Food Systems Assessment for Oakland, CA: Toward a Sustainable Food Plan*. Oakland Mayor's Office of Sustainability and University of California, Berkeley, Department of City and Regional Planning. Retrieved from http://clerkwebsvr1.oaklandnet.com/attachments/14033.pdf.

Summary: Each chapter represents an element or set of elements of the food system (production, distribution and processing, consumption, waste) for which they provide a general description of that food system element, baseline information for Oakland, and areas of critical challenges and opportunities. The assessment uses both quantitative and qualitative analyses of local activities and efforts that contribute to the food system. The end of each chapter includes a summary of key findings as well as some of the barriers that they discovered to a sustainable food system in Oakland. The last chapter of the report focuses on recommendations for each element and provides case studies of sustainable food system initiatives in several cities.

Veazey, L, Mazze, S., & Doppelt, B. (n.d.).*Willamette Valley Food Systems: Opportunities for Increasing Climate Change Mitigation and Preparedness, Food Security, and*

Economic Development. The Resource Innovation Group. Retrieved from http://static1.1.sqspcdn.com/static/f/551504/21901511/1360620412777/WV+Food+Report+Final_2.5.13.pdf?token=8Um%2BvJ8K22RtRzKIm5bHlmDosOQ%3D.

Summary: The authors examine local food initiatives and policies in ten Willamette Valley counties and identify major opportunities for increased collaboration between counties to better achieve local food goals.

Viens, G. (2012). *A Growing Town: Developing a Local Food System in Orono, Maine*. Honors College. Paper 83. Retrieved from http://digitalcommons.library.umaine.edu/cgi/viewcontent.cgi?article=1084&context=honors.

Summary: This research explores three existing local food system models and examines the extent to which Orono, Maine could support these models. A suitability analysis of Orono was used to identify possible locations that could contribute to a new agricultural infrastructure. Prospective locations were identified that would be useful in the infrastructure of a local food system, and possible distribution locations were identified through GIS analysis. It is important for any local food system to properly plan and map out the system, since the connection between the community and local food systems is so strong.

Vermont Sustainable Jobs Fund. (2013). *Farm to Plate Strategic Plan; A 10-Year Strategic Plan for Vermont's Food System*. Available at http://www.vtfarmtoplate.com/plan/.

Summary: A key goal of the F2P plan is to identify infrastructure investments and public policy recommendations that will support new and existing agricultural enterprises that increase local resiliency in today's changing times. There are both historic and recent threats to the future of agriculture in the state, including the loss of dairy farms, rising energy and feed costs, the volatility of commodity markets, global competition, and climate change. There are also many signs of expansion and opportunity, especially for diversified and organic farm operations as the model of industrial agriculture faces increasing public scrutiny. The F2P Plan's ultimate purpose is to encourage policies and strategic investments that accelerate the movement toward strong local and regional food systems.

Washington State Department of Health. (2013). *Growing Nourishing Food Systems; A Guide for Local Governments to Improve Health Eating in Washington State*. Retrieved from http://here.doh.wa.gov/materials/food-systems-guide/15_FoodToolkit_E13L.pdf.

Summary: The Growing Nourishing Food Systems toolkit guides local governments to use policy strategies
to increase healthy eating in their communities. The Washington State Department of Health Healthy Eating Active Living Program developed this guide. The guide uses research and recommendations from state and national organizations.

Watson, A. (2014). *North Kootenay Lake Food Shed; Implementation Plan for Economic Viability*. North Kootenay Lake Community Services Society. Retrieved from http://nklcss.org/documents/food/foodshed.pdf.

Summary: Contains a survey of various local stakeholder groups, analysis of the existing foodshed landscape, and a plan for implementing.

17. Food System-Related Studies in the Chesapeake Bay Region

American Farmland Trust. (2005). *Regional Economic Development Strategy for Resource-Based Industries on Maryland's Upper Easter Shore*. Retrieved from http://www.farmlandinfo.org/documents/29973/FINAL_ESLC_Regional_strategy_01-10-05.pdf.

Summary: Highlights the importance of a regional approach in order to best address challenges facing agriculture, forestry and fisheries on the Upper Shore (as determined by the Working Landscapes Task Forces). Provides a strategy and suggests solutions to achieve a sustainable working landscape.

American Farmland Trust, Conservation Law Foundation, and Northeast Sustainable Agriculture Working Group (NESAWG). (2014). *New England Food Policy: Building a Sustainable Food System*. Retrieved from http://www.clf.org/wp-

content/uploads/2014/03/1.New_England_Food_Policy_FULL.pdf.

Summary: Guides citizens, organizations, coalitions, agencies and policymakers in identifying barriers to a strong regional agricultural economy and expanded food production in New England. Focusing on five issue areas, including food production and land preservation and access, the report suggests policies and areas where New England states and other stakeholders could most effectively cooperate to build a sustainable food system across the region.

Arabella Advisers. (2016). *Good Food for All; An Assessment of Food System Efforts in the Chesapeake Foodshed*. Retrieved from http://www.arabellaadvisors.com/wp-content/uploads/2016/03/Good-Food-for-All-Chesapeake-Food-System-Assessment.pdf.

Summary: An assessment of the current landscape of food system initiatives in the Chesapeake Bay watershed and identifying the most crucial gaps and challenges in order to help food system stakeholders align their priorities strategically and direct resources to the greatest needs and most promising levers for strengthening the regional food system.

Carpenter, J. and Lynch, L. (2002). *Is There a Critical Mass of Agricultural Land Needed to Sustain an Agricultural Economy? Evidence from Six Mid-Atlantic States*. University of Maryland, Agricultural and Resource Economics. Retrieved from http://www.farmlandinfo.org/documents/36923/Is_There_a_Critical_Mass_of_Ag_Land_Needed.pdf.

Summary: Assesses the rate of farmland and farm loss for Delaware, Maryland, New Jersey, New York, Pennsylvania and Virginia over the past 50 years and suggests a relationship between the level of productive agricultural land and the rate of farmland and farm loss. Rate of farmland loss has been decreasing in the past 25 years.

Cheng, M., Bills, N., & Uva, W. (2011). Farm-Direct Sales in the Northeast Region: A County-Level Analysis. *Journal of Food Distribution* 42(1), 22-25. Retrieved from http://ageconsearch.umn.edu/bitstream/139273/2/Cheng_42_1.pdf.

Summary: This study uses the USDA Census of Agriculture data and regression analysis to identify major factors associated with farm-direct marketing sales in the Northeast region across counties. The preliminary regression results show that the variables, including average farm size, type of farming such as vegetable production, beef production, available farmland, number of farmers markets, participation of the farm to school program, available farmland, farming as operators' primary occupation, farms with high-speed internet access, household income, and population, together explain most of the variation in farm-direct food sales in the Northeast. These findings serve as a baseline for our further research that intends to understand the recent growth and trends of farm-direct food sales in the Northeast, using previous USDA Census of Agriculture data. These results can imply potential marketing plans and policy constructed for the future.

Chesapeake Bay Foundation. (2005). *Vital Signs; Assessing the State of Chesapeake Agriculture in 2005*. Retrieved from http://www.cbf.org/document.doc?id=136.

Summary: Presents twelve indicators that are grouped into three categories (Community, Economics, and Environment in order to assess the health of agriculture in the Chesapeake. Even though agriculture in the region is productive and extraordinarily important, it faces serious and growing threats.

Chesapeake Bay Foundation. (2006). *A Guide to Preserving Agricultural Lands in the Chesapeake Bay Region: Keeping Stewards on the Land*. Retrieved from http://www.cbf.org/document.doc?id=186.

Summary: Addresses the importance of farmland preservation and the concerns of modern development. Identifies various ways to think about and act on the objective of saving farmland.

Crossroad Research Center. (2007). *Food and Farm Economy of the East Chesapeake Bay Region*. Retrieved from http://www.crcworks.org/crcdocs/mdchessum07.pdf.

Summary: Fact sheet that presents information from the 2002 U.S Agriculture census regarding farms, cash receipts, poultry, livestock and crops.

Lists a country-by-county breakdown of census data for the Chesapeake region as well.

Delaware Valley Regional Planning Commission. (2010). *Greater Philadelphia Food System Study*. Retrieved from http://www.dvrpc.org/reports/09066A.pdf.

Summary: This document explores Greater Philadelphia's agricultural industry, food distribution network, regional food economy, and social capital. While Greater Philadelphia is a part of a global food system, the study focused on the assets, challenges, and opportunities within its 100-Mile Foodshed, a geographic area from which a population's food may theoretically be sourced.

Delaware Valley Regional Planning Commission. (2011). *Eating Here; Greater Philadelphia's Food System Plan*. Retrieved from http://www.dvrpc.org/reports/10063.pdf.

Summary: This document identifies opportunities to develop the regional economy and strengthen our agricultural sector, decrease waste and want, improve public health, protect the region's soil and water, and encourage diversity, innovation, and collaboration. It contains the Committee's specific priority recommendations, based on values.

Haskell, J. (2011). *Assessing the Landscape of Local Food in Appalachia*. Appalachian Regional Commission. Retrieved from http://www.arc.gov/assets/research_reports/AssessingLandscapeofLocalFoodinAppalachia.pdf.

Summary: A report assessing what exists in the region now, identifying gaps and challenges in each category, and recommending strategies to improve the region's burgeoning food economy. Includes an analysis of local food in Maryland, New York, Pennsylvania, Virginia, and West Virginia in our study.

The Northeast Ag Works! Project. (2006). *Regionalist Approaches to Farm and Food System Policy; A Focus on the Northeast*. Retrieved from http://www.farmlandinfo.org/sites/default/files/NAW-RegionalismWhitepaper-Dec06_1.pdf.

Summary: Articulates the importance of "regionalism" while considering agriculture and food system policy. With federal policy in mind, this report concentrates on the Northeast U.S. and how an inclusive grouping of programs and policies can serve entire populations.

Oberholtzer, L. (2004). *Community Supported Agriculture in the Mid-Atlantic Region: Results of a Shareholder Survey and Farmer Interviews*. Small Farm Success Project. Retrieved from http://www.smallfarmsuccess.info/CSA_Report.pdf.
Summary: To better understand CSA farms in the Mid-Atlantic region, researchers with the Small Farm Success Project, a collaborative effort focused on supporting and expanding marketing opportunities for smallscale farmers in the region, explored the functioning of CSA farms and analyzed the key opportunities and limitations of these farms. The study area spans Maryland, Pennsylvania, and Virginia. The research consisted of interviews with 13 current and former CSA farmers, conducted primarily in the fall of 2001, and a survey of 276 CSA shareholders from 4 farms, conducted in the first months of 2003. This report provides an analysis of the important challenges faced by CSA farmers in the region, as revealed by the farmer interviews, as well as a more in-depth study of CSA shareholder satisfaction and retention.

Regional Agricultural Workgroup. (2012). *What Our Region Grows; A Look at Agricultural Production and Demand in the Washington Area Foodshed!* Retrieved from: https://www.mwcog.org/uploads/committee-documents/bF1cXVpZ20121025124048.pdf.

Summary: This brochure is intended to give an informative overview of agriculture in the Washington region. It examines regional agricultural production and estimated local demand, as well as opportunities and limitations facing the 21st century farmer.

Washington Regional Food Funders. (2013). *Food Hubs 101; A Learning Event & Stakeholder Convening in Greater Washington*. Retrieved from https://www.washingtongrantmakers.org/sites/default/files/resources/food-hubs-101.pdf.

Summary: Food Hubs 101 was an event that gathered about 70 people interested in learning about food hubs in various stages of development in the Greater Washington region. During this first gathering of its kind focused on the region, policy

experts and practitioners gave presentations and participated in panel discussions on how food hubs operate and how they can be leveraged to improve equity and inclusion throughout the food system. Recommendations were provided on how funders can support the development of these organizations. Challenges and success stories from a cross-section of food hubs were also shared to provide real life examples of issues raised by presenters.

Washington Regional Food Funders. (2014). *Report on Funding Greater Washington's Food System: Opportunities Available through the 2014 Farm Bill*. Retrieved from https://www.washingtongrantmakers.org/sites/default/files/resources/Funding%20Greater%20Washingtons%20Food%20System_Meeting%20Summary%20and%20Handouts%20.pdf.

Summary: A report from a meeting October 17, 2014 with 110 representatives from Greater Washington nonprofit organizations, businesses, local, state, and federal government, food policy councils, and philanthropic organizations. The purpose was to share information about U.S. Department of Agriculture (USDA) programs available through the 2014 Farm Bill which can support the development of a more equitable regional food system in Greater Washington.

Washington Regional Food Funders. (2014). *Strategic Plan*. Retrieved from https://www.washingtongrantmakers.org/sites/default/files/resources/Washington%20Regional%20Food%20Funders%20Strategic%20Plan_May%202014.pdf.

Summary: Mission statement, goals, and plan for the Washington Regional Food Funders, a group that envisions a cohesive framework for action to ensure access to good food throughout the Greater Washington region within the next 5 years.

Washington Regional Food Funders. (2015). *An Equitable Regional Food System for Greater Washington: The Imperative and Opportunity for Change*. Retrieved from https://www.washingtongrantmakers.org/sites/default/files/resources/Washington%20Regional%20Food%20Funder%20Policy%20Brief_January%202015.pdf.

Summary: Creating a better food system in the Washington D.C. region requires more work within and among our jurisdictions and collaboration across state lines. This is not happening in a comprehensive, consistent way and it is time for a regional agenda to ensure access to good food throughout Greater Washington and beyond. This brief describes the imperative for this agenda and the opportunity for change in the food system. It reviews some the improvements being made in the District of Columbia, Maryland, and Virginia, including some of the unique local efforts that merit regional exposure. Finally, this brief recommends leadership actions the states can take to advance and scale the work that's been started.

18. Federal Policies

Alternative Farming Systems Information Center. (2015). *Grants and Loans for Farmers*. Retrieved from http://afsic.nal.usda.gov/farms-and-community/grants-and-loans-farmers.

Summary: Although limited, financial support for small farms and farm-related businesses is available from a variety of Federal, state and local agencies and from nongovernmental organizations.

Anderson, M. (2013). *The Beginning Farmer and Rancher Development Program: An Analysis of Policy Successes and Failures*. Retrieved from https://roanoke.edu/Documents/Anderson_Fowler_2013_B.pdf.

Summary: This study examines the effects of federally-funded agriculture grant programs, specifically the Beginning Farmer and Rancher Development Program (BFRDP). A case study method of analysis was utilized in order to evaluate this policy's effectiveness. It was predicted that the BFRDP was an accessible program that allowed for "collaborative State, tribal, local, or regionally-based network or partnership of public or private entities" to apply for federal funding in order to establish education, training, and mentor programs that would assist beginning farmers and ranchers with the obstacles of starting a farm (e.g. basic farm education, high cost, financial and business planning, marketing, and limited land availability) (USDA, 2011). For the most part, this prediction was supported; however, it was found that applying for a BFRDP grant is a rather

complex process, especially for someone who is unfamiliar with grant writing.

Bakst, D. & Katz, D. (2013). A Farm Bill Primer: 10 Things You Should Know About the Farm Bill. The Heritage Foundation. Retrieved from http://www.heritage.org/research/reports/2013/05/a-farm-bill-primer-10-things-you-should-know-about-the-farm-bill.

Summary: Congress is once again preparing to take up the "farm bill," a multi-billion-dollar tangle of agriculture subsidies, welfare payments, and environmental patronage. The time is particularly ripe to create meaningful reform and reduce the excessive burden imposed on taxpayers and consumers. Farmers are pulling in record levels of income and carrying record-low levels of debt. Agriculture policy must be freed from the politics of welfare and the blight of farm subsidies, price controls, and tariffs that do more harm than good.

Congressional Budget Office. (2005). *Effect of the Federal Estate Tax on Farms and Small Businesses*. Retrieved from http://www.cbo.gov/sites/default/files/07-06-estatetax.pdf.

Summary: Critics of the federal estate tax argue that it can hinder families who wish to pass on a farm or small business, because heirs must sometimes liquidate the farm or business to pay the tax. This Congressional Budget Office (CBO) paper examines the effects of the estate tax on small businesses and family farms, focusing on how it might alter the behavior of farmers and small-business owners during their lives and on the extent to which their estates have enough liquid assets to pay the estate taxes owed. The paper also looks at the impact on those groups of setting the amount of assets exempt from the estate tax at $1.5 million, $2 million, or $3.5 million..

Conservation Law Foundation. (2015). *Federal Food Work; Making the Food Safety Modernization Act (FSMA) Work for Farmers Big and Small*. Retrieved from http://www.clf.org/our-work/healthy-communities/farm-and-food-initiative/federal-food-work/.

Summary: The Food Safety Modernization Act (FSMA) is the biggest overhaul of federal food safety law since 1938. Signed into law in 2011, it was Congress's response to several high-profile food illness outbreaks traced to raw produce. For the first time, the FSMA requires the U.S. Food and Drug Administration (FDA) to regulate on-farm activities, including how farmers grow food. The FDA's regulations will have a tremendous impact on small- to medium-size farms across New England. CLF is working to ensure the rules create both a safer and more sustainable food system.

Erchull, C. (2014). The Dormant Commerce Clause—A Constitution Barrier to Sustainable Agriculture and the Local Food Movement. *Western New England Law Review*. 36 (3), 371-405. Retrieved from http://www1.wne.edu/assets/205/Erchull_final_ocr.pdf.

Summary: This note discusses analyzes the relationship between the dormant Commerce Clause and the movement towards agricultural sustainability, explaining how the dormant Commerce Clause treats state policies with respect to agriculture, and discussing a variety of actual and hypothetical state efforts to promote sustainable agriculture through the lens of the dormant Commerce Clause.

Eubanks, W. (2012). The Future of Federal Farm Policy: Steps for Achieving a More Sustainable Food System. *Vermont Law Review* 37, 957-986. Retrieved from http://lawreview.vermontlaw.edu/files/2013/08/11-Eubanks.pdf.

Summary: This Article first presents the argument for a major and urgent shift in U.S. agriculture and food policies to achieve sustainability. It then provides a counterview, arguing instead for several narrower and more gradual reforms to achieve many of the same goals, highlighting examples of targeted challenges and ways to strengthen support for existing programs that sorely need the public's backing to achieve a healthier food system.

Farquhar, D. (2012). *Lawmakers are balancing strict food safety laws with policies to encourage small food entrepreneurs*. Retrieved from http://www.ncsl.org/Portals/1/Documents/magazine/articles/2012/SL_0512-Taste.pdf.

Summary: Overview of federal food safety laws and how they impact farmers.

Fitzgerald, K., Evans, L., & Daniel, J. (2010). *The National Sustainable Agriculture Coalition's Guide to Federal Funding for Local and Regional Food Systems*. Retrieved from http://sustainableagriculture.net/wp-content/uploads/2010/05/NSAC_FoodSystemsFundingGuide_FirstEdition_4_2010.pdf

Summary: The guide begins with a general overview of the USDA's structure, and continues with descriptions and details of fifteen grants and programs that are relevant to local and regional food systems development. Each program description also includes a case study of a real-world regional food system project that received program funding.

Gillibrand, K. (2015). *A Guide to Agriculture and Rural Development Funding Opportunities and Incentives; How to Navigate the Funding Process*. Retrieved from http://www.gillibrand.senate.gov/imo/media/doc/Gillibrand%20Agriculture%20and%20Rural%20Development%20Funding%20Guidebook%202015.pdf.

Summary: A starting point in providing information from relevant federal agencies about what resources are available to individuals, businesses, community organizations and local governments. The information in this guidebook details energy program grants, loans, and tax credits.

Johnson, R., Cowan, T., & Aussenberg, R. (2012). *The Role of Local Food Systems in U.S. Farm Policy*. Congressional Research Service. Retrieved from https://fas.org/sgp/crs/misc/R42155.pdf.

Summary: This report is organized into three parts. First, it provides background on local and regional food systems, focusing on available data on direct-to-consumer sales, farmers' markets, farm-to-school programs, community-supported agriculture (CSA),1 and community gardens. Second, it highlights available resources within existing federal programs administered by USDA and other agencies that may be applied to support local food systems. It also describes some of the Obama Administration's initiatives that leverage existing USDA programs to support local food systems. (A more comprehensive table and description of existing programs is included in the Appendix). Finally, it discusses some of the legislative options and proposals in the 112th Congress intended to broaden support for local and regional food systems, as part of the next farm bill debate.

Johnson, R. & Cowan, T. (2015). *Local Food Systems: Selected Farm Bill and Other Federal Programs*. Congressional Research Service. Retrieved from http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43950.pdf.

Summary: This report describes some of the federal programs that support local and regional food production.

King, M. (2014). *Rethinking Food Security through a Local and Regional Governance Model*. Working paper for presentation at the: Western Political Science Association. Retrieved from http://wpsa.research.pdx.edu/papers/docs/King-Rethinking%20Food%20Security%20through%20a%20Local%20and%20Regional%20Governance%20Model-WPSA.pdf.

Summary: Unlike other regions of the world that are starting to view agriculture as a multifunctional commodity that impacts much more than merely food production, the US government controls the quantity and quality of our food through the Farm Bill, with little concern for its impact on health, local economic development, environmental sustainability, or national security. This paper evaluates the role of food in the above mentioned issues and argues the US government should devolve some food policy decisions to state and local governments, who are already starting to approach food systems policy holistically. The author uses food hubs, food policy councils, and a regional food organization as case studies to demonstrate local organizations and governments are making concerted efforts to increase food security. The author end with a call to rethink the Farm Bill to acknowledge the multifunctionality of agriculture and homeland security policies to address the impact of climate change on our vital natural resources.

Krome, M. & Reinstad, G. (2014). *Building Sustainable Farms, Ranches and Communities; A Guide to Federal Programs for Sustainable*

Agriculture, Forestry, Entrepreneurship, Conservation, Food Systems, and Community Development. United States Department of Agriculture. Retrieved from http://www.southernsare.org/content/download/864/7092/file/building_sust_farms.pdf.

Summary: This guide is written for anyone seeking help from federal programs to foster sustainable and innovative initiatives in this country associated with agriculture and forestry. Sustainability is commonly understood to embrace the triple concepts of economic, environmental and social viability. Specifically, the guide provides information about program resources pertaining to economic development, farm loans, insurance and risk management, natural resources conservation and management; nutrition and consumer food access, renewable energy and energy conservation, research and outreach, and value added and marketing innovations.

Morath, S. (2014). The Farmer in Chief: Obama's Local Food Legacy. *Oregon Law Review*. 93, 91-154. Retrieved from http://works.bepress.com/sarah_morath/8/.

Summary: This Article identifies and assesses recent changes to federal laws and policies as they affect "local food" and describes local farmers' awareness of and reaction to these changes. These changes and the farmers' responses show greater recognition of local food by President Barack Obama and the federal government in three ways: increased inclusion of local food in legislation and policy discussions; increased awareness of the benefits of local food production and consumption; and increased consumer access to local food. But the farmers' responses also highlight areas where improvements can be made. Specifically, farmers need to be better informed about funding opportunities, and funding opportunities need to be available to a greater number of farmers.

National Agricultural Law Center. (2015). *Local Food Systems*. Retrieved from http://nationalaglawcenter.org/category/local-food-systems/.

Summary: A listing of major statutes, regulations, case law, administrative law decisions, etc. regarding local food.

National Association of State Departments of Agriculture Research Foundation. (2009). *Federal Environmental Laws Affecting Agriculture*. Retrieved from http://efotg.sc.egov.usda.gov/references/public/NY/Federal.pdf.

Summary: Guide on related laws and their impact.

National Sustainable Agriculture Coalition. (2009). *Food Safety on the Farm; Policy Brief and Recommendations*. Retrieved from http://sustainableagriculture.net/wp-content/uploads/2008/08/NSAC-Food-Safety-Policy-Brief-October-20091.pdf.

Summary: The following position paper addresses some of the current legislative food safety proposals that have been introduced in the 111th Congress, as well as administrative developments within the Obama Administration, the FDA, and the USDA. The paper focuses on fresh produce and microbial pathogens because they are at the center of current food safety debates. The background section provides an overview of microbial pathogens and summarizes the existing federal authorities over food safety, as well as some of the current legislative and administrative proposals. The Policy Principles and Recommendations section will continue to be updated as new legislative and administrative authorities over on-farm food safety are considered, and as new research findings emerge.

National Sustainable Agriculture Coalition. (2014). *2014 Farm Bill Drilldown: Local and Regional Food Systems, Healthy Food Access, and Rural Development*. Blog post. Retrieved from http://sustainableagriculture.net/blog/2014-farmbill-local-rd-organic/.

Summary: NSAC blog detailing provisions of the 2014 Farm Bill.

National Sustainable Agriculture Coalition. (2015). *Grassroots Guide to Federal Farm and Food Programs*. Accessed at http://sustainableagriculture.net/publications/grassrootsguide/.

Summary: This guide walks the reader through dozens of the federal programs and policies most important to sustainable agriculture and how they

can be used by farmers, ranchers, and grassroots organizations nationwide.

National Sustainable Agriculture Coalition. (2016). RELEASE: Food LINC Initiative Connects Rural Farmers with Urban Buyers. Accessed at http://sustainableagriculture.net/blog/release-food-linc/.

Summary: Announcement of the creation of the Leveraging Investment for Network Coordination ("Food LINC") initiative, which is designed to grow local and regional food economies chain development.

National Young Farmers' Coalition. *Federal Programs for Young, New & Beginning Farmers.* Retrieved from http://www.thegreenhorns.net/wp-content/files_mf/1335236200NYFC_Federal_Programs_for_Young_Farmers.pdf.

Summary: Details in brief training, cost sharing, farm acquisition, conservation, and loan programs for new farmers.

Penn State Extension. (2013). *Marketing Poultry Slaughtered Under USDA Exemption*. Retrieved from http://www.pasafarming.org/resources/poultry-marketing-fact-sheet/at_download/file.

Summary: Brief summary of federal rules.

Pipkin, W. (2016). US Ag secretary; Local foods are 'here to stay'. *Bay Journal*. Retrieved from http://www.bayjournal.com/blog/post/local_foods_are_here_to_stay_us_ag_secretary_says.

Summary: Article highlighting federal efforts to bolster local food systems.

Slama, J. (2013). Will Feds Bankrupt Small Farms With Food Safety Rules?. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/jim-slama/food-safety-rules_b_4235080.html.

Summary: Raises concerns with new proposed safety roles which would raise safety costs to small farms.

Sustainable Agriculture Coalition (2008). *Presidential Transition Briefing Papers on Urgent Sustainable Food and Farming Policies.* Retrieved from http://sustainableagriculture.net/wp-content/uploads/2008/08/sac-transition-briefing-papers-full-document1.pdf.

Summary: This briefing provides a list of federal policies that support agriculture, and how they can be revamped to match the Obama Administration's campaign promises regarding agriculture.

United States Department of Agriculture. (2014). *USDA Awards Over $52 Million in Grants to Grow Organic and Local Food Economies*. Press release. Retrieved from http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2014/09/0216.xml.

Summary: Description of the allocation of the funding, and where that funding will be invested.

United States Department of Agriculture. (2015). *Grants, Loans & Support*. Retrieved from http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_GRANTS.

Summary: Know Your Farmer, Know Your Food (KYF2) is helping communities scale up local and regional food systems and strengthen their economies. USDA has many financial resources available to support this work, but determining which is right for your community is no small task. This page lists over two dozen programs at USDA that can help build local and regional food systems. Each link will take you to a short, easy to understand description of the program, an explanation of how it can be used to support a local or regional food project, and a link to the USDA agency webpage where you can find more information about the application process.

United States Department of Agriculture. (2015). *Know Your Farmer Know Your Food Compass*. Available at http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_COMPASS.

Summary: Website with various guides on local food initiatives in the United States, and supports that exist.

19. Delaware

Delaware Department of Agriculture. (2006). *Delaware Food Processing Regulations for On-Farm Kitchens. Sections 101 and 302 (3 Del.C. §§101 and 302).* Retrieved from http://dda.delaware.gov/foodprod/food_processing_safety/food_processing_regs.pdf.

Summary: Regulations to ensure the maximum protection of the public health and to reduce the risk of foodborne illness, while exempting certain small food processors, who process and produce specified non-potentially hazardous products on-farm utilizing domestic kitchens, from the statutory requirements of Title 16 Delaware Code, Chapter 1, §122 and §134, and from the regulatory requirements of State of Delaware Food Code; and the program will ensure protection of the public health through processor compliance with regulatory requirements of the On-farm Home Food Processing Program.

Delaware Regulations. *701 Farmland Preservation Program*. Title 3 Agriculture: 700 Planning Farmland Preservation. Retrieved from http://regulations.delaware.gov/AdminCode/title3/700/701.pdf.

Summary: The Agricultural Lands Preservation Program was created as a long-term response to the depletion of valuable farmland. It is designed to provide landowners with an incentive to remain in agriculture as opposed to subdividing and selling productive farmland. The Agricultural Lands Preservation Foundation was established to develop and implement a comprehensive agricultural lands preservation program. These program guidelines represent policies and procedures of the Program.

Delaware Valley Regional Planning Commission. (2013). *A Citizen's Guide to the Regional Planning Process*. Retrieved from http://www.dvrpc.org/GetInvolved/CitizensGuide/.

Summary: The Commission's initiatives include "Food Systems Planning." DVRPC's food system planning program aims to facilitate local food production and distribution, incorporate farming and food into economic development policies and funding programs, and forge partnerships between land trusts, public agencies, and future farmers to increase food production within the region.

Gallons, J., Toensmeyer, U., Bacon, J., and German, C. (1997). An analysis of consumer characteristics concerning direct marketing of fresh produce in Delaware: a case study. *Journal of Food Distribution Research* 28(1), 98-106. Retrieved from http://ageconsearch.umn.edu/bitstream/26603/1/28010098.pdf.

Summary: A study to develop a data base of consumer needs and requirements for direct marketing outlets in Delaware.

Kalesse, R. (2015). *Food trucks create a moveable feast in city*. Delaware Business Times. Retrieved from http://www.delawarebusinesstimes.com/food-trucks-create-a-moveable-feast-in-city/.

Summary: Article regarding food trucks in towns in Wilmington, Delaware, and regulations that limit their existence.

Pizzi, J. (2015). Locally grown food market to open in Trolley Square. *The News Journal*. Retrieved from http://www.delawareonline.com/story/news/local/2015/05/27/locally-grown-food-market-open-trolley-square/28032115/.

Summary: Local story about the Delaware Local Food Exchange, and the opening of new local food retail location in Trolley Square in Wilmington.

United States Department of Agriculture. (2015). *Delaware Agricultural Programs*. Retrieved from http://www.fsa.usda.gov/FSA/stateoffapp?mystate=de&area=home&subject=landing&topic=landing.

Summary: List of programs to support agriculture in Delaware.

University of Delaware Center for Energy and Environmental Policy. (2011). *Local Food System Policy and Planning for Sustainability*. Retrieved from http://ceep.udel.edu/wp-content/uploads/2013/08/2011_sd_Local_Food_Sustainability_2.pdf.

Summary: This report provides a review and assessment of local food systems and their

applicability to the State of Delaware. A summary of local foods research is presented in this report along three general categories: energy and environment; economics; and health and equity. The research team conducted: a review of federal, state, and local policies and programs related to local food systems; a review of studies conducted by governmental agencies and research institutions; and interviews with professionals in the field.

WBOC16. (2014). *Federal Funding Supports Oyster Farming in Delaware's Inland Bays*. Retrieved from http://www.wboc.com/story/26701181/federal-funding-supports-oyster-farming-in-delawares-inland-bays.

Summary: Story of various federal programs supporting oyster aquaculture in the Delaware Bay.

20. District of Columbia

The D.C. Farm to School Network. (2010). *A Guide to Purchasing and Serving Local Foods in Schools; Getting Started – Farm to School in Washington, D.C.* Retrieved from http://dcgreens.org/wp-content/uploads/2013/05/A-Guide-to-Purchasing-and-Serving-Local-Foods-in-Schools-.pdf.

Summary: Guide to help schools and food service providers find cost-effective to serve healthy, local foods in school meals.

D.C. Greens. *DC Food Policy Summary*. Retrieved from http://dcgreens.org/summary/.

Summary: List of existing policies/laws in D.C. which promote local food.

D.C. Healthy Schools. *D.C. Healthy Schools Act.* Brochure. Retrieved from http://dchealthyschools.org/.

Summary: The Healthy Schools Act is a landmark law designed to improve health and wellness and reduce hunger among students attending D.C. public and public charter schools. Schools are required to implement this Act beginning in the 2010-2011 school year. This brochure gives an overview of the Healthy Schools Act nutrition requirements and the funding available for schools that comply with them.

D.C. Healthy Schools. (2013). *Progress on the D.C. Healthy Schools Act.* Retrieved from http://dchealthyschools.org/WNS%20-%20Progress%20on%20HSA%20-%20Factsheet%20030714.pdf.

Summary: Provides an update of Act implementation, including that 100% of schools serve locally grown and unprocessed foods to students. For example, 89% of schools serve local apples at least once per month and 77% of schools serve local collard greens at least once per month. Other local foods commonly served in schools include: kale, pears, peaches, strawberries, sweet potatoes, and tofu.

Holt, S. (2015). *Could Washington, D.C., Become the American Capital of Urban Farming?*. TakePart. Retrieved from http://www.takepart.com/article/2015/01/26/washington-dc-urban-farming-revolution.

Summary: Story about the D.C. Urban Agriculture and Food Security Act of 2014, which aims to recruit an army of urban growers to farm dozens of vacant, district-owned parcels of land. Initially, the city will identify 25 vacant lots of at least 2,500 square feet that "could potentially be used for successful urban farming ventures." For privately owned land, the bill offers as much as a 50 percent reduction in property taxes if undeveloped land is leased to a farm.

Sidman, J. (2014). D.C.'s Farmers' Markets Face More Scrutiny Under New Regulations. *Washington City Paper*. Retrieved from http://www.washingtoncitypaper.com/blogs/youngandhungry/2014/04/23/d-c-s-farmers-markets-face-more-scrutiny-under-new-regulations/.

Summary: This article contains a discussion of regulations adopted in 2014 in Washington, D.C. which add layers of regulatory food safety oversight to local food options which had not been in regulated before, and discusses the implications for farmer's markets.

Sustainability D.C. (2012). Retrieved from http://www.sustainabledc.org/wp-content/uploads/2012/10/SDC-Final-Plan_0.pdf.

Summary: Sustainable DC is the District of Columbia's major planning effort to make DC the

most sustainable city in the nation. Led by the Department of Energy & Environment and the Office of Planning, it is a collaborative effort involving the input and participation of thousands of members of the District community.

Washington D.C. Cottage Food Amendment Act of 2013. Retrieved from http://legiscan.com/DC/text/B20-0168/id/894577/Washington_D_C_-2013-B20-0168-Engrossed.pdf.

Summary: The law allows cottage food operations to make a wide variety of food, but unfortunately they are only allowed to sell at farmers markets and other public events. Furthermore, CFOs are limited to $25,000 per year of sales.

21. Maryland

ACDS, LLC and North County Preservation, Inc. (2009). *Rural Baltimore County Agricultural Profitability Study and Action Plan*. Retrieved from http://www.northcountypreservation.org/docs/FinalReport.pdf.

Summary: Study provides a road map of priority initiatives that can improve the profitability of agricultural operations in Baltimore County and allow farming to reestablish itself as a viable career choice. Recommendations include Ag Development and Marketing, Training and Education, and Policy and Regulations.

Baltimore City Planning Commission. (2013). *Homegrown Baltimore: Grow Local; Baltimore City's Urban Agriculture Plan*. Retrieved from http://www.baltimoresustainability.org/sites/baltimoresustainability.org/files/HGB%20Grow%20Local%20Urban%20Ag%20Plan%20final.pdf.

Summary: Urban agriculture has a long history in the City of Baltimore, and can offer solutions to address a wide range of problems. Numerous urban agriculture projects are currently underway in the city, including urban farms (both community-oriented and commercially-oriented), community gardens, school gardens, home and rooftop gardens, aquaculture projects, apiaries, and orchards. New policies related to urban agriculture support the development of these projects, and the rewrite of Baltimore's Zoning Code which is currently underway will further promote agricultural uses of land lying within the city boundaries. A wide range of government agencies and partners also provide critical resources to support these projects. Challenges remain, however, that should be addressed in order to maintain and expand Baltimore's urban agriculture sector. The plan includes multiple recommendations regarding land security, ensuring access to water, improving soil, providing capital (funding), and agencies that can provide support.

The Board of County Commissioners of Washington County. (2003). *An Ordinance to Provide for the Protection of the Right to Farm in Washington County, Maryland by Enacting a New Ordinance Entitled "Right to Farm Ordinance for Washington County, Maryland*. Retrieved from https://www.washco-md.net/county_attorney/pdf/rt_2_farm_final.pdf.

Summary: Washington County, Maryland's right to farm ordinance.

Center for Agricultural & Natural Resource Policy. (2013). *Understanding Agricultural Liability: Maryland's Right-to-Farm Law*. Retrieved from http://drum.lib.umd.edu/bitstream/1903/15012/1/MD%20RTF%20Fact%20sheet.pdf.

Summary: Maryland's Right-to-Farm law is designed to protect agricultural operations, such as dairy, grain, fruit, vegetable, and poultry, or traditional forestry operations, with an affirmative defense to nuisance suits.

Center for Agricultural & Natural Resource Policy. (2014). *A Guide to Agricultural Labor Laws: How Best to Comply with the Relevant Federal and Maryland State Standards*. Retrieved from http://drum.lib.umd.edu/bitstream/handle/1903/15079/Guide%20to%20Labor%20Laws.pdf;jsessionid=8DF963384BC52FDA80916D8B6B14C32D?sequence=1.

Summary: Agricultural producers looking to hire employees are often presented with a host of federal and state laws that impact their ability to do so. Many of you may ask, do minimum wage laws apply?, can my 12 year old work on the farm?, and are there any other federal and state limitations of which I should be aware? The

purpose of this guide is to identify a few of the key Federal and Maryland state labor laws that impact agricultural labor.

Dimitri, C., Hanson, J., & Oberholtzer, L. (2012). Local Food in Maryland Schools: A Real Possibility or a Wishful Dream?. *Journal of Food Distribution Research*, 42 (2). Retrieved from http://drum.lib.umd.edu/bitstream/1903/15017/1/2010F2SMDResearch.pdf.

Summary: In 2008, Maryland passed the Jane Lawton Act, an unfunded program encouraging schools to serve Maryland produced food in schools. Similar federal policy exists. However, school lunches are subject to numerous constraints, including regulatory and budget constraints. Using primary quantitative and qualitative data collected by the research team, this paper explores the feasibility of local food in Maryland schools. They identify scale and socioeconomic barriers to the use of local food in schools, suggesting that policy support would enhance the likelihood of long term success of serving local food in schools.

Endy, K. & Karp, K. (2014). *A Roadmap for Anchor Institution Local Food Purchasing in Baltimore.* Karp Resources. Retrieved from http://c.ymcdn.com/sites/www.abagrantmakers.org/resource/resmgr/bipWebsiteFiles/Final_Final_Report_BIP_KR_11.pdf.

Summary: Anchor institutions, working closely with food service providers, can take immediate steps to identify and support local food businesses. Anchor institutions can also move this work forward by taking action to revise internal policies and work with government agencies and the legislature to strengthen law, regulation and policy that will support existing economic development initiatives by encouraging local food procurement. Many of these initiatives can be broadly applied outside of the food to other areas of anchor purchasing and may be explored by BIP as the anchor work moves forward.

Gardner, B. (2002). *Economic Situation and Prospects for Maryland Agriculture*. Center for Agricultural and Natural Resource Policy. Retrieved from http://aese.psu.edu/nercrd/publications/rdp/rdp14.pdf.

Summary: A report covering the problems and positive indicators regarding Maryland agriculture in the new millennium.

Haering, S. & Franco, M. (2010). *The Baltimore City Food Environment*. Johns Hopkins School of Public Health, Center for a Livable Future. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/research/clf_publications/pub_rep_desc/bal_city_food_env.html.

Summary: Three categories of stakeholders with varying experiences, knowledge, and influence are working to improve the Baltimore City food environment. The first group is made up of residents, advocates, community groups, and local businesses. The second is the City of Baltimore, composed of elected officials, policymakers, educators, and regulators. The third is public health researchers, represented locally by the Johns Hopkins Center for a Livable Future but also supported by national and international investigators concerned with diet, nutrition, food security, food production, and environmental and human health. This report reflects some of the results of our research, numerous case reports, and recommended interventions to improve the Baltimore City food environment.

John, G. *Farmer's Market Legislation & Food Safety Regulation*. Maryland Department of Health & Mental Hygiene. Retrieved from http://mda.maryland.gov/about_mda/Documents/farmersmarketfoodsafetyregs.pdf.

Summary: Presentation provides an overview of how Maryland legislation and food safety regulations impact farmer's markets.

Johns Hopkins Center for a Livable Future. (2012). *Maryland Food System Map.* Available at http://mdfoodsystemmap.org/resources/.

Summary: The Center has collected a number of resources about food systems, including other projects at the Center for a Livable Future. In addition, there are a growing number of organizations and projects also using GIS and other mapping technology to examine different aspects of the food system.

Johns Hopkins Center for a Livable Future. (2015). *Mapping Baltimore City's Food Environment*. Retrieved from http://mdfoodsystemmap.org/wp-content/uploads/2015/06/Baltimore-Food-Environment-Report-2015-11.pdf.

Summary: The Baltimore Food Policy Initiative (BFPI) and the Johns Hopkins Center for a Livable Future (CLF) created this 2015 Food Environment Map and Report in order to better understand Baltimore's food environment and food deserts - areas where residents lack both access and sufficient economic resources to purchase healthy food - and to more proactively and effectively promote equitable access to healthy food.

Lilly, A. (2012). *UMD Dining Services' Sustainable Food Action Plan*. UMD Dining Services. Retrieved from http://dining.umd.edu/dining_umd_edu/wp-content/uploads/2015/10/UMD-Dining-Services-Sustainable-Food-Action-Plan_Final_Oct-2012-1.pdf.

Summary: The UMD Dining Services Sustainable Food Action Plan provides UMD's Department of Dining Services with a proposal for how to increase sustainable food availability at the University of Maryland, College Park. The action plan also addresses educational and promotional opportunities for the Sustainable Food Working Group, a new group on campus led by Dining Services tasked with managing and implementing the goals of the Sustainable Food Action Plan. Per the plan, food is considered sustainable if it has any of the following attributes: local, fair, ecologically sound, or humane.

Luckenback, M., et al. (2008). *A Framework for Native Oyster Aquaculture Development in Maryland*. CRC Publ. No. 08-166, Edgewater, MD. Retrieved from http://www.chesapeake.org/pubs/Native%20Oyster%20Aquaculture%20Development%20in%20Maryland.pdf.

Summary: The goal of this document is to provide a framework that helps chart a course for the development of a profitable, sustainable and environmentally-responsible, private oyster aquaculture industry in Maryland.

The Maryland Agricultural Commission. (2006). *A Statewide Plan for Agricultural Policy and Resource Management*. Retrieved from http://www.farmland.org/resources/reports/documents/AFT_MD_Statewide_Strategic_Plan_06.pdf.

Summary: In light of the growing strains on Maryland farmers and the challenges they face that threaten both the industry as a whole and the land that maintains it, the Maryland Agricultural Commission and the American Farmland Trust (AFT)were consulted to formulate a strategic planning process, a report and recommendations for future steps. Three overall issues identified included enhancing profitability, ensuring an adequate base of well-managed agricultural land, and advancing research, education and the advocacy of agriculture. Identifies 30 policy recommendations.

Maryland Department of Agriculture. Annual Reports. Retrieved from http://mda.maryland.gov/Pages/Annual_Reports.aspx

Summary: Status of agriculture in Maryland.

Maryland Department of Agriculture. (2013). Summary of GICA Survey Results. Retrieved from http://mda.maryland.gov/about_mda/Documents/GICA_Survey_Results_11-13.pdf.

Summary: Summary of survey of farmers in Maryland regarding the challenges they face regarding zoning/land use laws.

Maryland Department of Agriculture. (2016). Summary of Planning and Zoning Issues Related to Agritourism/Agriculture at the County Level. Retrieved from http://mda.maryland.gov/about_mda/Documents/Planning-Zoning-Issues.pdf.

Summary: A summary of planning and zoning issues related to agriculture at the county level.

Maryland Department of Planning. (2012). *Managing Maryland's Growth; Planning for the Food System*. Models & Guidelines, Volume 28. Retrieved from http://planning.maryland.gov/PDF/OurProducts/Publications/ModelsGuidelines/mg28.pdf.

Summary: This Models and Guidelines report provides information to local governments and interested citizens about the food system—production, processing, marketing, distribution, consumption, and waste management—and how public policies, including planning, can improve the system to benefit Maryland's environment, economy, and citizens. After discussing the issues affecting the food system and establishing a role for planning, the report looks at the components of the food system and offers examples of how local governments, non-profit agencies, and other institutions have addressed shortcomings in their local food systems.

The Maryland-National Capital Park and Planning Commission. (2012). *Urban Agriculture: A Tool for Creating Economic Development and Healthy Communities in Prince George's County, MD*. Retrieved from http://www.mncppcapps.org/planning/publications/pdfs/259/Urban%20Agriculture%20Report%202012.pdf

Summary: This report introduces the concept of urban agriculture, presents its characteristics, and discusses its relationship to food system planning, sustainability, and public health. A sample of innovative community-based urban agriculture projects around the nation and in Prince George's County serves to show the hands-on implementation of the concept. Planning and public policy for urban agriculture are discussed along with possible actions that planners and policy makers may take to support it. This is supplemented by the nation's best local government practices for incorporating urban agriculture into urban and suburban areas. Guided by the experience of other jurisdictions, specific policy recommendations suited to Prince George's County are developed and presented along with strategies in the concluding chapter of the report.

Maryland Organic Food & Farming Association. (2015). Resources. Retrieved from http://marylandorganic.org/resources/.

Summary: List of resources for Maryland farmers.

Maryland State Department of Assessments and Taxation. *The Agricultural Use Assessment*. Retrieved from http://www.dat.state.md.us/sdatweb/aguse.html.

Summary: Maryland law provides that lands which are actively devoted to farm or agricultural use shall be assessed according to that use. In 1960 Maryland became the first state to adopt an agricultural use assessment law which has proved to be a key factor in helping to preserve the State's agricultural land.

McMillan, L. (2014). *Update: Montgomery County Food Council and Food Recovery*. Retrieved from http://www.montgomerycountymd.gov/council/Resources/Files/agenda/cm/2014/140410/20140410_HHS1.pdf.

Summary: Action plan to develop a local food system in Montgomery County which increases access to local produce for residents.

Meehan, S. (2015). Maryland food makers call for new legislation. *Baltimore Business Journal*. Retrieved from http://www.bizjournals.com/baltimore/print-edition/2015/04/17/maryland-food-makers-call-for-new-legislation.html.

Summary: On April 13, 2015, a group of Maryland watermen, farmers, winemakers, and developers met with federal lawmakers and the Maryland Agriculture Secretary to request law and regulation changes. The article includes a discussion of the deficits in current laws and regulation.

Meehan, S. (2016). Maryland food trucks look to streamline licensing process. *Baltimore Sun*. Retrieved from http://www.baltimoresun.com/entertainment/dining/baltimore-diner-blog/bs-fo-food-trucks-licensing-20160210-story.html.

Summary: Story of the call to establish one statewide license to operate a food truck in all of Maryland, and generally streamline their licensing and inspection.

Montgomery County Sustainable Community Food System Initiative; Summary of Stakeholder Meeting on December 20, 2010. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB4QFjAA&url=https%3A%2F%2Fwww.montgomerycountymd.gov%2Fpartnerships%2Fresources%2Ffiles

%2Fsummaryofstakeholdermtgplusvisionandkeyelements.doc&ei=5i-DVZyrLvLIsQSYjoKIBw&usg=AFQjCNH7n3gKZr05nhpQ65uqVPGUOCRMg&bvm=bv.96041959,d.cWc.

Summary: On December 20, 2010, eighty-six stakeholders held a three hour community conversation at Montgomery County's Agricultural History Farm Park. The discussion centered around next steps towards creating a food system in Montgomery County, Md. The Food Council's website is http://mocofoodcouncil.weebly.com/.

Myers, G. (2009). *Making On-Farm Processing a Viable Economic Option in Maryland*. University of Maryland Extension, Western Maryland Research and Education Center. Retrieved from https://www.extension.umd.edu/sites/default/files/_docs/Final%20White%20Paper%20Processing%20for%20Profits.pdf.

Summary: In September 2008, the Harry S. Hughes Agro-Ecology Center, with support from the USDA-CSREES, funded a project titled "Processing for Profits: Assessment and Comparison of Regional On-Farm Processing Regulations to Develop a State Food Policy that Accommodates Small- Scale Processing" that seeks to identify the barriers to the development of more on-farm, value-added processing in Maryland . This paper examines the results of project outcomes.

Press Release: Officials Kickoff Maryland Homegrown School Lunch Week in Washington Co. September 23, 2013. Retrieved from http://www.marylandpublicschools.org/press/09_23_2013.html.

Summary: Press release detailing activities related to this day devoted to promoting local food in school cafeterias and encouraging schools to teach children about local agriculture through farm field trips.

United States Department of Agriculture. (2015). *Maryland Agricultural Programs*. Retrieved from http://www.fsa.usda.gov/FSA/stateoffapp?mystate=md&area=home&subject=landing&topic=landing.

Summary: List of programs to support agriculture in Maryland.

Wakefield, M. (2014). *Maryland State Legislature Passes New Urban Agriculture Tax Credit Bill*. Retrieved from http://communitylaw.org/urbanagriculturelaw/propertytaxcredit.

Summary: On April 5, 2014, the Maryland General Assembly passed the "Property Tax Credit – Urban Agricultural Property" bill authorizing Maryland counties and the City of Baltimore to implement a property tax credit for urban land used for agricultural purposes.

Wyatt, K. (2008). *Maryland Joins Effort to Put Local Food in School Cafeterias*. *Associated Press*. Retrieved from http://www.commondreams.org/news/2008/04/21/maryland-joins-effort-put-local-food-school-cafeterias.

Summary: Article discussing legislation that passed establishing a "Maryland Homegrown" week promoting local food in school cafeterias and encouraging schools to teach children about local agriculture through farm field trips.

22. New York State

Albany, NY Press Office. (2014). *Governor Cuomo Launches New Farmers Grant Fund to Support Agribusiness in New York*. Retrieved from http://www.governor.ny.gov/news/governor-cuomo-launches-new-farmers-grant-fund-support-agribusiness-new-york.

Summary: Press release regarding Governor Andrew M. Cuomo announcing several initiatives to assist new and early stage farmers, and encourage the continued growth of agribusiness across New York. The New York State New Farmers Grant Fund, which will support beginning farmers and encourage farming as a career, launched today and is now taking applications. The $614,000 Fund, enacted in the 2014-2015 New York State Budget and signed into law by Governor Cuomo, will be used to provide grants for beginning farmers who will substantially participate in the production of an agriculture product, and employ the use of innovative agricultural techniques at commercial farm operations throughout the State.

Barclay, W. (2015). Agriculture Receipts Steadily Increasing; New State Laws, Policies Assisting

Industry. *Oswego County Today*. Retrieved from http://oswegocountytoday.com/agriculture-receipts-steadily-increasing-new-state-laws-policies-assisting-industry/.

Summary: Editorial by Assemblyman Barclay summarizing recent laws supporting agriculture in New York and their impact.

Buttino, N. (2012). An Empirical Analysis of Agricultural Preservation Statutes in New York, Nebraska, and Minnesota. *Boston College Environmental Affairs Law Review*. 39(1), 99-129. Retrieved from http://lawdigitalcommons.bc.edu/ealr/vol39/iss1/4/.

Summary: The agricultural preservation statutes of New York, Nebraska, and Minnesota show three different strategies toward agricultural preservation, all of which take different stances on the protections extended to small and large farms. Despite the structural differences among the states' statutory approach to agricultural preservation, all three experienced similar agricultural demographic shifts since the 1980s—the number of large and small farms has increased while the number of medium-sized farms has decreased. The similarity in demographic trends suggests that none of the statutes are effective. Legislatures may be able to redirect their agricultural preservation statutes by empowering agricultural advisory boards to consider not only the soundness of farming practices but also the cultural and environmental value of individual farms.

Coon, J. (2013). *Local Laws and Agricultural Districts: How Do They Relate?*. Prepared by the New York State Department of Agriculture and Markets and Division of Local Government. Retrieved from http://www.dos.ny.gov/lg/publications/Local_Laws_and_Agricultural_Districts.pdf.

Summary: This guidance document has been prepared by the New York State Department of Agriculture and Markets to assist municipalities in drafting local laws and ordinances which may affect farming in an agricultural district.

DeFrancisco, J. (2015). *Senate Passes Legislation to Improve New York's Agriculture Industry*. Majority Press. Retrieved from http://www.nysenate.gov/press-release/state-senate-passes-legislation-improve-new-york-states-agriculture-industry.

Summary: Summary of two pieces of legislation passed in 2015 to support NYS agriculture. The first will provide new and beginning farmers with enhanced access to viable agricultural land and direct the state Commissioner of the Office of General Services to work with the Commissioner of Agriculture and Markets to develop an inventory of state owned real property that may be viable for farming and that could be of interest to farmers. The second will establish a beginning farmer revolving loan fund to attract young people to farming and encourage them to consider a career in the agricultural industry.

Guardino, A. (2015). Balancing N.Y.'s Agricultural Law With Local Zoning Rights. *New York Law Journal*. 253(100). Retrieved from http://www.farrellfritz.com/wp-content/uploads/ASF-Balancing-N.Y.s-Agricultural-Law-With-Local-Zoning-Rights.pdf.

Summary: This column explores the relationship between the AML's objective of promoting farming and a local government's right to control land uses through zoning.

Haight, D., Cosgrove, J., & Ferguson, K. (2011). *Guide to Local Planning for Agriculture in New York*. American Farmland Trust. Retrieved from http://www.townofaurora.com/files/7213/6199/1911/Guide_to_Local_Planning_for_Agriculture_NY.pdf.

Summary: This resource guide is intended for local officials, planners, extension agents, farmers and other New York residents interested in grappling with these tough issues by planning for agriculture at the municipal level.

Morea, M. (1997). *New York State Statutes That Provide for the Protection of Agricultural Lands*. Pace University School of Law. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0CCQQFjAB&url=http%3A%2F%2Flanduse.law.pace.edu%2Flanduse%2Fdocuments%2FStudentArticle%2FReg2%2FAgLandPres.doc&ei=KmSDVZagOYXzsAXbpo_4DQ&usg=AFQjCNGSfCIOqJh2qtUikTcVGVz60h7q-w&bvm=bv.96042044,d.b2w.

Summary: Morea's article reviews different New York State statutes and different methods that can be implemented to preserve farmland and still allow development. The author concludes that New York State is trying to carry out its Constitutional policy of preserving farmland, but that the statutes are largely separated and it is difficult for the municipality to create a effective policy. Some of the statutes that the author discovered provide tax breaks and financial incentives for the creation of easements restricting the land to agricultural use and the creation of comprehensive zoning plans with agricultural areas and the adoption of cluster development to allow development but to preserve the maximum amount of open land.

National Association of State Departments of Agriculture Research Foundation. (2009). *State Environmental Laws Affecting New York Agriculture*. Retrieved from http://law.pace.edu/sites/default/files/CLE/3-13-13_Survey-of-local-food-law_5.pdf.

Summary: Guide on related laws and their impact.

New York State Council on Food Policy. (2010). *Panel: NYS Food System 'Supply, Demand and Delivery'*. Retrieved from http://www.nyscfp.org/docs/activities/NYSCFP_PanelMins_6_28_10.pdf.

Summary: A brief overview from presentations at their summer meeting::

- David Haight: Threat from development to New York State's irreplaceable farm land
- John Magnarelli: Farm to School initiatives as part of the USDA "Know Your Farmer, Know Your Food" strategy
- Annemarie Garceau: Department of Defense food program and the NYS items purchased using these funds
- Christina Grace: NYS Farm to School Program and School Food Service Director Survey results
- Dennis Derryck: Innovative Community Shareholder Farm (CSF) Model for South Bronx

New York State Department of Agriculture & Permits. *Sanitary Regulations for Direct Marketing*. Retrieved from http://www.agriculture.ny.gov/FS/industry/sanitary.html.

Summary: The Department of Agriculture and Markets regulates retail food establishments in New York State including direct marketing businesses like roadside farm markets, on farm outlets and community farmers markets with respect to compliance with New York State food sanitation requirements contained in Article 17 of the Agriculture and Markets Law. This is a list of those regulations and who they effect.

New York State Department of Agriculture and Markets. (2003). *Agriculture and Farmland Protection Programs: Local Stakeholder Views*. Retrieved from http://www.agriculture.ny.gov/ACARoundTableReport.pdf.

Summary: The New York State Department of Agriculture and Markets conducted a series of six regional round tables on Agriculture and Farmland Protection between May and September, 2003. The purpose of these round tables was to obtain informed stakeholder views on the current portfolio of State programs designed to promote the agricultural industry and maintain the agricultural land base, and to obtain suggestions for other measures that might be undertaken to accomplish these objectives.

New York State Department of Agriculture & Markets. *Programs*. Retrieved from http://www.agriculture.ny.gov/Programs.html.

Summary: List of state and federal programs supporting agriculture in New York State.

New York State Department of Taxation and Finance. (2012*). Agricultural assessment program – overview*. Retrieved from http://www.tax.ny.gov/research/property/assess/valuation/ag_overview.htm.

Summary: The State Legislature enacted the New York Agricultural Districts Law in 1971 to protect and promote the availability of land for farming purposes. The law provides a locally-initiated mechanism for creating agricultural districts, which are intended to counteract the impact that nonfarm development can have upon the continuation of farm businesses.

NOLO Human Resources Law Center. (2013). *Starting a Home Based Food Business in New York; Before you start a home based food business in New York state, learn about New York's cottage laws*. Retrieved from http://www.nolo.com/legal-encyclopedia/starting-home-based-food-business-new-york.html.

Summary: Article intended to give an individual starting a home-based food business in New York an overview of related laws.

Nolson, S. (1997). Preserving Our Heritage: Tools to Cultivate Agricultural Preservation in New York State. *Pace Law Review*. 17(2), 591-652. Retrieved from http://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1330&context=plr.

Summary: This paper offers various techniques that can be used to help preserve farmland. The authors stress that it is important to preserve farms as productive operations with responsible farming methods, and not just as undeveloped land. There is value in preserving open space for habitat and quality of life. However, the purpose of the techniques presented in this Comment is to preserve farms for the values they add to the economy, the environment, the sustainability of resources, and the quality of life in New York as productive farms.

Stirpe, A. (2013). *Agriculture in New York State*. Retrieved from http://assembly.state.ny.us/member_files/127/20130225/index.pdf.

Summary: This brochure outlines several initiatives the New York State Assembly has enacted to support the state's largest industry.

Peters, C., et al. (2008). Mapping potential foodsheds in New York State: A spatial model for evaluating the capacity to localize food production. *Renewable Agriculture and Food Systems*: 24(1), 72–84. Retrieved from http://faculty.bennington.edu/~kwoods/classes/readings_11/Peters%20et%20al.%20-%202009%20-%20Mapping%20potential%20foodsheds%20in%20New%20York%20State%20A%20s.pdf.

Summary: This research presents a method for mapping potential foodsheds, land areas that could theoretically feed urban centers. The model was applied to New York State (NYS). Geographic information systems were used to estimate the spatial distribution of food production capacity relative to the food needs of NYS population centers. Optimization tools were then applied to allocate production potential to meet food needs in the minimum distance possible. Overall, the model showed that NYS could provide 34% of its total food needs within an average distance of just 49 km. However, the model did not allocate production potential evenly. Most NYS population centers could have the majority of their food needs sourced in-state, except for the greater New York City (NYC) area. Thus, the study presents a mixed review of the potential for local food systems to reduce the distance food travels.

Rural Resources Commission. (2006). *Digest of New York's Agriculture and Forest Related Tax Abatement Laws*. Retrieved from http://www.nysenate.gov/files/pdfs/agforestdigestupdatejan07.pdf.

Summary: This document is meant to serve primarily as a resource for those involved with the agricultural sector in New York, provide a guide to both agriculture and forest-related tax abatement laws.

The Stable Door is Open: New York's Statutes to Protect Farmland. New York Commentary, EPA Region 2. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAAahUKEwidzOn52I3GAhURDpIKHYBOAL8&url=http%3A%2F%2Flanduse.law.pace.edu%2Flanduse%2Fdocuments%2Fcommentary%2FReg2%2FDisappearingFarmland.DOC&ei=dat8Vd29AZGcyASAnYH4Cw&usg=AFQjCNFLFpXMjILhur8OoWW4aq-vGnvYgw&bvm=bv.95515949,d.aWw.

Summary: New York's farmland protection programs are not addressing the root causes of agricultural land conversion, namely, "urban influence" and the land use approval process. The incentives New York gives to farmers fail to balance the financial pressures on farmers to sell their land. Coordinated, less complex programs, consisting of "directed growth strategies", and agricultural zoning, would be more effective.

United States Department of Agriculture. (2015). *New York Agricultural Programs*. Retrieved from http://www.fsa.usda.gov/FSA/stateoffapp?mystate=ny&area=home&subject=landing&topic=landing.

Summary: List of programs to support agriculture in Maryland.

23. Pennsylvania

Associated Press. (2014). *Seed Libraries Struggle with State Laws Limiting Exchanges*. Retrieved from http://www.agweb.com/article/seed-libraries-struggle-with-state-laws-limiting-exchanges-associated-press/.

Summary: Seed exchanges have sprouted up in about 300 locations around the country, most often in libraries, where gardeners can exchange self-pollinating seeds rather than buy standard, hybrid seeds. Intended to protect farmers, the laws ensure seeds are viable, will grow the intended plant and aren't mixed with unwanted seeds for weeds or plants. Even though most of the laws refer to "sales" of seeds, that term is defined to include exchanges — where no money changes hands. This article describes the conflict that state laws in Pennsylvania have caused with seed exchanges.

Buy Fresh Buy Local, York County, Pennsylvania. Available at http://buyfreshbuylocalyork.com/.

Summary: A website providing a guide for locating farm fresh foods throughout York County.

Citizens for Pennsylvania's Future. (2011). *Agriculture and the Law; A Guide to Pennsylvania's Agricultural Laws and Regulations for Farmers and Their Neighbors*. Retrieved from http://www.pennfuture.org/userfiles/file/water/respfarm/guide_palawsregs_201112.pdf.

Summary: This handbook is intended to provide general education about the laws and regulations governing farming operations in Pennsylvania. The handbook provides an overview of the relevant federal, state, and local programs that regulate and seek to limit pollution from farming operations. It contains 11 sections, each of which identifies a program by name and is followed by four subsections: What the program addresses; How it tackles the issue; Water-quality problems; and Opportunities for community involvement and public participation. Where needed, it provides tables or charts with more detailed information.

Daniels, T. (1997). *The Purchase of Development Rights, Agricultural Preservation and Other Land Use Policy Tools: The Pennsylvania Experience*. State University of New York at Albany. Retrieved from http://ageconsearch.umn.edu/bitstream/17934/1/ar980034.pdf.

Summary: Overview of land preservation policy tools in the united states, with a case study of the Pennsylvania experience.

Durrenberger, E. (2008). Community Supported Agriculture in Central Pennsylvania. *Culture & Agriculture* 24(2), 42-51.

Summary: Analysis of the status of CSAs in Pennsylvania, issues and benefits.

Henning, W. (2007). *An Examination of Pennsylvania's Meat and Poultry Processing Industry*. The Center for Rural Pennsylvania. Retrieved from http://www.rural.palegislature.us/meat_packing.pdf.

Summary: This research project examined the industry's strengths and weaknesses to better understand any role that state government can play in supporting this industry sector. Data were collected through a mail survey of processing plants, and roundtable discussions and phone conversations with processors, livestock producers, and industry representatives and organizations. The results show that the major obstacles to the success of meat and poultry processors are labor costs, including wages, workman's compensation and taxes; finding and retaining qualified employees; regulatory compliance; and the cost of equipment, supplies, packaging, and ingredients. To address these obstacles, the researchers suggest the several policy considerations.

Hinrichs, C. & Schafft, K. (2008). *Farm to School Programs in Pennsylvania.* The Center for Rural Pennsylvania. Retrieved from http://www.rural.palegislature.us/farm_school_report08.pdf.

Summary: This report summarizes research conducted in 2007, including a survey of food service directors at the 501 public school districts in Pennsylvania, and a follow-up set of mini case studies conducted in seven school districts in rural and urban regions of the state. Findings indicate that many food service directors engage in local food purchasing and support educational efforts focused on health and nutrition, agriculture and the food system. However, many were not aware that these activities are considered components of a farm to school program. Furthermore, there is evidence that food service directors are interested in expanding local food procurement and educational efforts. Case study data further show how school districts' FTS efforts reflect local needs, resources and constraints. This suggests that FTS may be better thought of, not as a relatively coherent and prescriptive set of activities, but as a broad and flexible portfolio of possible efforts from which school district and community stakeholders may draw to best meet local needs.

Hinrichs, C., Schafft, K., Bloom, D., & McHenry-Sorber, E. (2008). *Growing the Links Between Farms an Schools: A How-To Guidebook for Pennsylvania Farmers, Schools and Communities.* The Center for Rural Pennsylvania. Retrieved from http://www.rural.palegislature.us/Farm_School_Guide08.pdf.

Summary: This guidebook describes various farm to school efforts and activities and shows how they work best when they connect to the needs and capacities of schools and communities. Real-life case studies demonstrate how schools and producers are working together in Pennsylvania to build effective farm to school programs. This guidebook also offers suggestions to both schools and farmers to help avoid common pitfalls.

Kellett, C. (1999). *Understanding "Right to Farm" Laws.* Pennsylvania State Law Agricultural Law Resource and Reference Center. Retrieved from https://pennstatelaw.psu.edu/_file/aglaw/Understanding_Right_to_Farm_Laws.pdf.

Summary: In September of 1998, the Iowa Supreme Court in Bormann v. Board of Supervisors declared one of Iowa's Right to Farm statutes unconstitutional. Early this year the United States Supreme Court declined to review that decision. This memo addresses the Iowa case and its implications for Pennsylvania's "Right to Farm" law.

Kremer, P. & Deliberty, T. (2011). Local food practices and growing potential: Mapping the case of Philadelphia. *Applied Geography*. 31, 1252-1261. Retrieved from http://www.sciencedirect.com/science/article/pii/S0143622811000087.

Summary: Despite the centrality of geography of place in the study and practice of local food systems, methods of geographical analysis examining local food systems are just beginning to develop. In this paper they argue that spatial research methods are central to the understanding and evaluation of different components of local food systems. They use the city of Philadelphia as an example to explore the socio-spatial structure of the current local food system, and the integration of remote sensing and GIS techniques to estimate land potential for urban food production.

Kremer, P. & Schreuder, Y. (2011). The feasibility of regional food systems in metropolitan areas: An investigation of Philadelphia's foodshed. *Journal of Agriculture, Food Systems, and Community Development*. Retrieved from http://www.agdevjournal.com/volume-2-issue-2/233-feasibility-of-regional-food-systems-philadelphias.html?catid=95%3Afood-systems-planning-papers.

Summary: This paper quantifies the ability of the Philadelphia region to support the dietary requirements of that city's population. Food production data for three foodshed scenarios in the Philadelphia region is analyzed and compared to the dietary requirements of the population based on federal dietary guidelines and current consumption patterns in the metropolitan region.

Madsen, T., Davis, B., Masur, D. (2013). *Healthy Farms, Healthy Environment; State and Local Policies to Improve Pennsylvania's Food System and Protect Our Land and Water*. PennEnvironment Research & Policy Center. Retrieved from http://www.pennenvironment.org/sites/environment/files/reports/PA%20Healthy%20Farms,%20Healthy%20Environment-2.pdf.

Summary: This white paper profiles leading policy ideas that can encourage sustainable agricultural production, beginning at the farm and ending in kitchens across the state. These ideas, if put into action, can ensure that Pennsylvania's great agriculture tradition will continue to be a central part of the Commonwealth's economy and identity.

Meter, K. (2010). *Promising Community-Based Food System Initiatives*. Crossroads Resource Center. Retrieved from http://www.crcworks.org/promising.pdf.

Summary: The paper outlines several of the most promising community foods initiatives the author has had contact with, including initiatives in Iowa, Michigan, New York City, Wisconsin, Colorado, New Mexico, Oklahoma, California, Minnesota, and, notably for our report, Philadelphia.

Meter, K. (2014). *The Economic Opportunity of Local Foods in Pennsylvania*. Presentation, PASA Western Region Potluck, December 15, 2014. Retrieved from http://www.pasafarming.org/files/KenMetersPresentationSlides.compressed.pdf.

Summary: Presentation providing an overview of the current situation and potential in the State.
Penn State Dickinson Agricultural Law Resource and Reference Center. *Pennsylvania Right to Farm Law*. Retrieved from http://www.pafarmland.org/files/3313/7968/4974/Fact_Sheet_Pennsylvania_Right_To_Farm_Law_Outline.pdf.

Summary: Fact sheet of Pennsylvania's Right to Farm Law.

Pennsylvania Department of Agriculture, Bureau of Food Safety and Laboratory Services, Division of Food Safety. (2005). *Guidance and Requirements for Home Food Processors*. Retrieved from http://www.lehighvalleybeekeepers.org/documents/home_processing_rev_11-05.pdf.

Summary: Overview of the rules in Pennsylvania for home food processers.

Pennsylvania General Assembly, Local Government Commission. (2006). *Pennsylvania Statutory and Regulatory Measures to Protect Agricultural Land and Open Space*. Retrieved from http://www.lgc.state.pa.us/deskbook06/Issues_Land_Use_02_Pa_Measures_Protect_Ag_Land.pdf.

Summary: List of a variety of laws and regulations to advance agricultural land and open space protection in Pennsylvania.

Pennsylvania Department of Agriculture Farmers Market Inspection and Licensing Guide. (2011). Retrieved from http://afdo.org/Resources/Documents/topical-index/2012/PA-A-Open%20Air%20Markets1.4-2012.pdf.

Summary: This guide is designed to help farmers, marketers and food processors prepare for and meet the regulatory requirements that come with participating in farmers markets and/or selling products through a retail farm market or farm stand.

Pennsylvania Land Trust Association. *Agricultural Conservation Easement Purchase Program*. Retrieved from http://conservationtools.org/guides/show/47-Agricultural-Conservation-Easement-Purchase-Program.

Summary: The Pennsylvania Agricultural Conservation Easement Purchase Program (ACEPP) enables state, county and local governments to pay farmers for agreeing to limit the use of their land to agricultural production, commercial equine activities and certain other uses.

Pifer, R. (2010). *The Agriculture, Communities and Rural Environment Act: Protecting Pennsylvania's Agricultural Operations from Unlawful Municipal Regulation*. Penn State Agricultural Law Resource and Reference Center. Retrieved from https://pennstatelaw.psu.edu/_file/aglaw/Agriculture_Communities_and_Rural_Environment_Act_Article.pdf.

Summary: The Pennsylvania General Assembly enacted the Agriculture, Communities and Rural Environment Act (ACRE) in 2005. The article provides a background of the issues leading to the passage of ACRE, describes the statute, discusses the administrative application and judicial interpretation of ACRE in its initial five years to ascertain the benefits that have been received by

agricultural producers and municipalities thus far, and looks to the future of ACRE by discussing areas within which the statute could be improved.

Reichart, L. *Keeping Pennsylvania Growing*. Pennsylvania Department of Agriculture. Retrieved from http://www.usda.gov/oce/forum/presentations/Reichart.pdf.

Summary: Presentation on the state of Pennsylvania agriculture, and programs to support agriculture.

The Reinvestment Fund. *The PA Fresh Food Financing Initative: Case Study of Rural Grocery Stores Findings from rural grocery store investments*. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/projects/FPN/how_to_guide/laws_policies/PA%20Case%20Study.pdf.

Summary: The Reinvestment Fund (TRF) created the Pennsylvania Fresh Food Financing Initiative (FFFI) in 2004 in partnership with The Food Trust, the Greater Philadelphia Urban Affairs Coalition, and with financial support from the Commonwealth of Pennsylvania. With the intent to bring fresh and healthy food to communities across Pennsylvania, FFFI committed over $85 million in grants and loans to create new grocery stores and to expand existing ones. TRF assessed the program's long-term impact on rural grocery stores in two parts of Pennsylvania: Susquehanna, Bradford and Tioga counties (Northern Tier), and Cambria, Huntingdon and Somerset counties (Southwest/Southcentral). This document summarizes their findings based on qualitative and quantitative data. TRF gathered information through store owner interviews on how FFFI financing had affected their ability to access credit, stay in business, carry new lines of products (including fresh foods and produce) and stimulate economic activity in their communities.

Rosenberg, N. & Leib, E. (2012). *Pennsylvania's Chapter 57 and Its Effects on Farmers Markets*. Harvard Food Law and Policy Clinic. Retrieved from http://www.chlpi.org/wp-content/uploads/2013/12/PA-FM-FINAL3.pdf.

Summary: In 2010, Pennsylvania enacted Act 106, under which many farmers market vendors in the state were classified as individual retail food facilities for the first time and thus subject to new requirements. This study analyzes the impact of the new law.

Tarr, M., Revels, S., Rumley, R. (2013). *Pennsylvania Direct Farm Business Guide*. Retrieved from http://nationalaglawcenter.org/wp-content/uploads/assets/articles/PA-DFB.pdf.

Summary: This guide is meant to help farmers understand the many issues that must be considered when establishing and operating a direct farm business.

United States Department of Agriculture. (2015). *Pennsylvania Agricultural Programs*. Retrieved from http://www.fsa.usda.gov/FSA/stateoffapp?mystate=pa&area=home&subject=landing&topic=landing.

Summary: List of programs to support agriculture in Pennsylvania.

24. *Virginia*

Beatly, T., Larson, A., Walker, G., & Herz, E. (2009). Local Food System Develops Resiliency in Charlottesville. *Urban Agriculture Magazine*. 22, 39-40. Retrieved from http://www.ruaf.org/sites/default/files/UAM22%20Charlottesville%2039-40.pdf.

Summary: Article discussion how institutions across the City of Charlottesville and surrounding Albemarle County, including the Jefferson Area Board for Aging (JABA), the University of Virginia (UVa), public schools, hospitals and restaurants are working to source a higher proportion of their food needs locally.

Buck, T. & Versen, S. (2015). *Starting a Farm Business in Virginia*. Virginia Department of Agriculture and Consumer Services. Retrieved from http://www.vdacs.virginia.gov/agribusiness/farm.shtml.

Summary: Guide for new farmers on resources available to them in Virginia.

Cahill, A. & Khaja, K. (2011). *Putting Food on the Table; Food Security and Access to Affordable and Nutritious Food in the Fairfax-Falls Church Area.* Prepared for the Department of Neighborhood and Community Services Economic, Demographic and Statistical Research. Retrieved from http://www.fairfaxcounty.gov/demogrph/pdf/putting_food_on_the_table.pdf.

Summary: This study provides a glimpse into food security and access issues in the Fairfax-Falls Church area. Two of the programs that help increase food security for low-income Fairfax-Falls Church households are examined in the first two sections of this study—the Supplemental Nutrition Assistance Program and the Free- and Reduced-Price Lunch Program. The third and fourth sections of the study examine two sources of local data on residents who experience low food security—Sixth, Eight, Tenth and Twelfth Grade Students Reporting Hunger; and Emergency Food Requests. The final section of the study examines the access that lowincome Fairfax-Falls Church residents have to nutritious and affordable food sources.

Corillo, T. (2013). *Virginia will pay you to take up beekeeping*. WTKR.com. Retrieved from http://wtkr.com/2013/01/10/virginia-will-pay-you-to-take-up-beekeeping/.

Summary: The Virginia General Assembly created the Beehive Grant Fund to promote the establishment of new beehives. Under the program, people can apply for a grant from the fund to cover the cost of purchasing a new hive or materials to construct a new hive. The grant will pay for the actual expenses incurred up to $200 per hive, not exceeding $2,400 per person, per year.

Crossroads Resource Center. (2010). *Shenandoah Valley (Virginia), Local Farm & Food Economy*. Retrieved from http://www.crcworks.org/crcdocs/vashensum10.pdf.

Summary: Straightforward fact sheet that presents information from the 2007 U.S Agriculture census regarding land, sales and production costs, cattle and dairy, other livestock and animal products, and various dried goods. Lists a country-by-county breakdown of census data for the region as well.

FamilyFarmed.org. (2010). *Local Food System Assessment for Northern Virginia*. Retrieved from http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5097195.

Summary: The Local Food System Assessment for Northern Virginia explores the infrastructure and product and service offerings that address the needs of stakeholders on both ends of the value chain.

Martha's Farm Press Release. (2014). *Landmark Agriculture Bill Now Law in Virginia*. Retrieved from http://www.farmtoconsumer.org/blog/2014/07/01/landmark-agriculture-bill-now-law-in-virginia/.

Summary: Press release regarding law passed in Virginia in 2014 protecting certain activities at agricultural operations from local regulation.

Matson, J. (2011). Virtual food hub helps Virginia producers tap into local food markets. *Rural Cooperatives*. Retrieved from http://www.rd.usda.gov/files/CoopMag-may11.pdf.

Summary: The article focuses on the help provided by Lulus Local Food founded by Molly Harris to connect producers directly with retail customers in Virginia. It says that the Lulus Local Food network website has emerged after the success of Fall Line Farms wherein other producers and cooperatives can use the same Internet platform. It states that the success of all the organizations occurred due to the partnerships between public and private sectors.

McGee, A. (2015). *A Food Access Assessment; Mapping Food Access in the City of Roanoke*. Virginia Polytechnic Institute and State University. Retrieved from http://rvarc.org/wp-content/uploads/2014/06/McGee-Practicum-Report.pdf.

Summary: Developed as part of the development of a Regional Food System Plan, this creates a series of maps, tables, and figures which explore issues of geographic, informational, economic, and social barriers to accessing fresh, healthy, and nutritious food in Roanoke, VA.

McKay, E. (2012). *SB 604 Has Passed! What This Means for Virginia Beer*. Hardywood Park Craft Brewery. Retrieved from http://www.hardywood.com/content/sb-604-has-passed-what-means-virginia-beer.

Summary: SB 604 gives brewery license holders permission to sell their beer for on-premise consumption where it is made. The bill has since been signed into law by the Governor.

Stott, R. (2015). *Food Truck Association Cooks Up Successful Legislation in Virginia*. Retrieved from http://associationsnow.com/2015/05/food-truck-association-cooks-successful-legislation-virginia/.

Summary: Members of the DC, Maryland, and Virginia Food Truck Association led the push in Richmond for food trucks to return to the commonwealth. Their bill was signed into law May 2015.

United States Department of Agriculture. (2014). *Agriculture Act of 2014, Shellfish Aquaculture Environmental Quality Incentives Program; Virginia Overview*. Retrieved from http://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=stelprdb1263579&ext=pdf.

Summary: The successful growth and harvesting of shellfish contributes to and depends on clean water. The Virginia Aquaculture Program is designed to enhance the sustainability of aquaculture while reducing adverse impacts on water quality for shellfish producers. Through a special partnership with the Virginia Marine Resources Commission and the Virginia Institute of Marine Science, the Natural Resources Conservation Service (NRCS) is offering funding to help shellfish aquaculture growers improve water quality and increase oyster habitat in the Chesapeake Bay.

United States Department of Agriculture. (2015). *Virginia Agricultural Programs*. Retrieved from http://www.fsa.usda.gov/FSA/stateoffapp?mystate=va&area=home&subject=landing&topic=landing.
Summary: List of programs to support agriculture in Pennsylvania.

Urban Agriculture Task Force. (2013). *Arlington County; Recommendations for a Food Action Plan*. Retrieved from http://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/21/2014/05/UATF_Recommendations_for_a_Food_Action_-Plan-2.pdf.

Summary: In January 2012, the Arlington County Board developed a citizen task force to examine Arlington food systems and devise a Food Action Plan specifically tailored to the needs of our semi-urban community. The Urban Agriculture Task Force has identified nine recommendations, included in this report.

The Virginia Chapter of the American Planning Association. (2010). *Managing Growth and Development in Virginia: A Review of the Tools Available to Localities*. Retrieved from http://www.farmlandinfo.org/documents/38513/APA_Virginia_Growth_Tools_2010_Edition1.pdf.

Summary: Identifies the importance of a comprehensive plan and articulates outlets for zoning tools, tools for mapping the form and location of growth, tools for managing the financial impacts of growth, tools for revitalization, tools for rural and natural areas preservation and regional tools in Virginia.

Virginia Cooperative Extension. (2012). *Virginia Farm to Table; Healthy Farms and Healthy Food for the Common Wealth and Common Good; A Strategic Plan for Strengthening Virginia's Food System and Economic Future*. Retrieved from http://virginiafoodsystemcouncil.org/wp-content/uploads/2012/03/VA_Farm_to_Table.pdf.

Summary: The Virginia Farm to Table Plan's objective is to identify issues facing farmers, innovators in the food system, and communities across the state, and to suggest how those can be addressed to strengthen Virginia's overall food system. The Virginia Farm to Table Plan Team drew on the expertise and experience of more than 1,920 individuals across the Commonwealth who work in agriculture, aquaculture, fishing, education, finance, philanthropy, nutrition, community planning and economic development, land and natural resources conservation, public policy, local and state government, academics, and youth development. The 38 farm to table recommendations were developed and distilled from research and information gathered from farm-to-table summits, forums, listening sessions, an online survey, and focus group meetings conducted

over a 15-month period by the Virginia Farm to Table Team and the Virginia Food System Council.

Virginia Cooperative Extension. (2014). *Food Deserts in Virginia; Recommendations from the Food Desert Task Force.* Retrieved from http://virginiafoodsystemcouncil.org/wp-content/uploads/2014/02/Food-DesertvSa.pdf.

Summary: The purpose of the Virginia Food Desert Study Report is to determine the current status of food deserts in the Commonwealth of Virginia. The report identifies challenges, consequences, strategies, and resources to address food deserts and offers recommendations for the Virginia General Assembly's consideration and action.

Virginia Tech. (2012). *Direct Market Food Sales in Virginia.* Retrieved from https://pubs.ext.vt.edu/FST/FST-72/FST-72-PDF.pdf.

Summary: Overview of direct market food sales in Virginia, including regulations and guidance for individuals.

Westfall-Rudd, D. & Niewolny, K. *Virginia Whole Farm Planning: An Educational Program for Farm Start-up & Development*. Virginia Beginning Farmer and Rancher Coalition Project. Retrieved from http://www.vabeginningfarmer.alce.vt.edu/planning/IntroWFPModule.pdf.

Summary: Guide from educational program for new farmers in Virginia.

25. West Virginia

Brown, C. et al. (2006). The importance of farmers' markets for West Virginia direct marketers. *Renewable Agriculture and Food Systems* 22(1), 20-29.

Summary: In the winter of 2004–2005, over 300 of West Virginia's farmers' market vendors were surveyed with regard to sales levels, promotional techniques and operational characteristics such as hours worked, types of products produced and length of season. Econometric analysis [ordinary least squares (OLS)] was performed to identify the impact of explanatory variables on total farmers' market sales, percentage of household income from farmers' market sales and amount of household income from farmers' market sales. Independent variables such as bargaining, cost-plus pricing, selling at markets outside West Virginia and providing print materials were found to have a positive impact on annual sales. The number of products produced, distance traveled to market and number of weeks at market were also positively related to the percentage of income obtained from farmers' market sales. Identifying the characteristics associated with greater farmers' market sales and a higher reliance on such sales for household income will help in the sustained success of markets as engines of economic development and small farm viability.

Brown, C. et al. (2006). West Virginia Direct Marketing; A County Level Analysis. *Journal of Agricultural and Applied Economics, 38, 3.* Retrieved from https://ideas.repec.org/a/ags/joaaec/43778.html.

Summary: This article uses a linear regression model to test the relationships between county-level direct market sales and socio-economic, agricultural production, and location characteristics in West Viriginia.

Crossroads Resource Center. (2011). *West Virginia, Farm & Food Economy*. Retrieved from http://www.crcworks.org/crcdocs/wvsum11.pdf.

Summary: Fact sheet that presents information from the 2007 U.S Agriculture census regarding land, sales, production and expenses, cattle and dairy, other livestock and animal products, and various dried goods. Identifies top commodities and the consumer market for food.

Darby, A.. (2008). *Local Motive; A plan to strengthen the local food system of the Richmond, Virginia metropolitan area.* Master of Urbana and Regional Planning Candidate, Virginia Commonwealth University. Retrieved from http://murp.vcu.edu/projects762/S08/S08_ADarby_Richmond_Food_System_Plan.pdf.

Summary: The aim of this plan is twofold. First this is an exploration into methods which will strengthen a local food system, and bring local food to the forefront of agency and consumer priorities. Secondly, and perhaps most significantly, it sets out to create a mode by which a regional planning

body and a group of community stakeholders can have a functioning, symbiotic relationship which will provide the resources and energy needed to strengthen the food system. This relationship will transcend the specific goals of this plan, and streamline disparate efforts already in place to strengthen the food system.

Mistich, D. (2015). *West Virginia's New Craft Beer Laws Aim to Boost Sales, Tourism*. WV Public Broadcasting. Retrieved from http://wvpublic.org/post/west-virginias-new-craft-beer-laws-aim-boost-sales-tourism.

Summary: Article describing a new law which reduces regulatory pressures limiting the growth of craft breweries in West Virginia.

Oldham, R. (2013). *Meeting the Demand for Local Food in West Virginia: An analysis of factors influencing producers' market participation and expansion decisions*. Thesis submitted to the Davis College of Agriculture, Natural Resources and Design in partial fulfillment of the requirements for the degree of Master of Science in Agricultural and Natural Resource Economics. Retrieved from http://pqdtopen.proquest.com/doc/1491381222.html?FMT=ABS.

Summary: This study seeks to identify the factors that impact producers' supply behavior and intentions regarding market entry and sales volume to enhance understanding of WV producers' current and potential supply response in local food markets.

Peters, C., Hansen, E., Clingerman, J., Hereford, A., & Askins, N. (2012). *West Virginia Food System; Opportunities and constraints in local food supply chains*. West Virginia Food & Farm Coalition. Retrieved from http://www.downstreamstrategies.com/documents/reports_publication/DS_wv_food_system_opportuities_and_constraints_in_local_food_supply_chains.pdf .

Summary: The purpose of this report is to help readers understand the opportunities and constraints of meeting the growing demand for local food products in West Virginia, particularly at levels that extend beyond farm stands or farmers markets. The report uses numerous real-life examples to show what kinds of supply chain strategies are already working in the state. The directory in the appendix provides contact information for all of the aggregators, processors, and distributors that are profiled, as well as other businesses interested in working with local food.

Todd, R. (2014). *These Groups are Reforming West Virginia's Food Economy*. WV Public Broadcasting. Retrieved from http://wvpublic.org/post/these-groups-are-reforming-west-virginias-food-economy.

Summary: Even in rural West Virginia, where small farms still dot the roadside, fresh food isn't available to all people. In some places it can take over an hour just to reach the next grocery store. Reawakening some of the old, small farm traditions-- and bringing a new local food movement to West Virginia-- is the work of five nonprofits: West Virginia Food & Farm Coalition, the Collaborative for the 21st Century Appalachia, the West Virginia University Small Farm Center, The Wild Ramp market in Huntington, and the Southern Exposure Seed Exchange.

United States Department of Agriculture. (2015). *West Virginia Agricultural Programs*. Retrieved from http://www.fsa.usda.gov/FSA/stateoffapp?mystate=wv&area=home&subject=landing&topic=landing.

Summary: List of programs to support agriculture in West Virginia.

Wallace Center at Winrock International. (2009). *Community Food Enterprise: Local Success in a Global Marketplace, Appalachian Harvest Network*. Retrieved from http://www.communityfoodenterprise.org/book-pdfs/CFE%20-%20appalachian-harvest-network_view.pdf.

Summary: Presents the Appalachian Harvest Network as the vital means through which tobacco farmers, after transforming their land into fruit and vegetable fields, were able to continue farming while also improving the quality and sales of regional buyers as well as the economic well-being of the region. Details the business model as well as the social and environmental tenants of the program.

West Virginia Extension Service (2009). *Farmers Market Vendor Guide*. Retrieved from

http://smallfarmcenter.ext.wvu.edu/r/download/36641.
Summary: This guide provides consistent information for farmers, food vendors, and sanitarians who work together to provide fresh, safe, and quality food for the consumer. This document is to be used for guidance to determine what food items may be sold and the conditions that must be met at the point of sale.

West Virginia Food & Farm Coalition. Available at http://wvfoodandfarm.org/.

Summary: Contains information on related news and initiatives. Since 2010, the mission of the West Virginia Food and Farm Coalition has been to build, support and strengthen a statewide network of those involved in West Virginia's local food economies, with the interconnected goals of improving access to healthy, locally-produced food for all West Virginians and helping viable food and farm businesses to grow.

West Virginia Food & Farm Coalition. (2013). *Road Map for the Food Economy*. Retrieved from http://www.thegreenhorns.net/wp-content/files_mf/1353102322RoadMapfortheFoodEconomy.pdf.

Summary: The Road Map is offered as a tool for understanding key opportunities in West Virginia's food and farm economy, and how these opportunities can be seized through both policy and practice. Local government, citizens groups, policy makers, farmer groups, foundations, agencies, economic developers and other concerned groups are invited to adopt or adapt the Road Map as a guide to form an action plan for their own efforts.

West Virginia Food System. (2012). *Seasonal Production Expansion and its Impacts*. Retrieved from http://www.downstreamstrategies.com/documents/reports_publication/ds_food_system_report_final.pdf
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Summary: First in a series of three documents, this study utilizes publicly available data, geospatial analysis, and economic analysis to evaluate the current state of West Virginia's food system and future impacts if seasonal vegetable and fruit production (specifically) were increased. Identifies the presence of a market demand as well as sufficient suitable agricultural land and market potential for expansion of the fruit and vegetable industries.

Appendix 2. Survey of Chesapeake Bay Foodshed Stakeholders

The online survey consisted of 14 questions, presented (adapted to this format) here.

About You and Your Community

There are a total of 14 questions. The first two are about you and your community.

1. Which of the following best describe the roles in which you are responding to this survey? Please Check All That Apply!

Farmer/ agricultural production
Processing/ adding value to locally/ regionally produced farm products
Consolidating, distributing, marketing, financing, preparing food from, or selling local/ regional farm products and businesses
Regulating production, processing, marketing or serving of food
Regulation of land use (zoning, structures, facilities, activities)
Education/ Training
Federal government
State government
Local government
Non-profit organization
Other:

2. Which of the choices below are the places you know best when it comes to programs and other factors that support or hinder farm-to-table agriculture? (Check All That Apply):

Maryland Virginia Pennsylvania The District of Columbia West Virginia
New York Delaware More than one state Only local areas within a state or states
Other:

Obstacles to Farm-to-Table

The next six questions (questions 3-9) are about programs, policies, laws, regulations, or other practices that you think create significant OBSTACLES to one or more aspects of local food systems.

3. Based on your experience, tell us which general types of programs/regulations (left column in the following table) create unnecessary OBSTACLES for which aspects of a local food systems listed across the top row. Mark ONLY ONE box in each row.

Which Types of Government Programs…	***…Create Obstacles for Which Aspects of Local Food Systems?***				
	Produce Food	Process Food	Access Markets	More than One Aspect	NA
Federal Regulatory Programs					
State/DC Regulatory Programs					
Education/Training Programs					
Gov't Certification Programs					
State/DC Licensing Programs					
Local Land Use					

Which Types of Government Programs…	***…Create Obstacles for Which Aspects of Local Food Systems?***				
	Produce Food	Process Food	Access Markets	More than One Aspect	NA
Rules					
Local Licensing Programs					
Environmental Requirements					
Labor Laws/ Practices					
Marketing Programs					
Grant and Loan Programs					
Procurement Laws and Policies					
Tax Law					
Low Income/ Senior Programs					

The obstacles listed in question 3 are GENERAL TYPES of programs. In questions 4 and 6, please provide the NAMES of one or two SPECIFIC programs that present major obstacles to local food systems (give it your best shot if unsure of exact names). You can elaborate on them if you wish in Question 8.

4. First program/ obstacle:

5. This obstacle is primarily associated with (mark only one):
   A state or District of Columbia program
   A federal program
   A local government program
   Private sector/ market practices
   Some other program or practice
   Other:

6. Second program/ obstacle:

7. This obstacle is primarily associated with (mark only one):
   A state or District of Columbia program
   A federal program
   A local government program
   Private sector/ market practices
   Some other program or practice
   Other:

8. Is there anything else you would like to share relating to obstacles to local food systems in your community?

Supports for Farm-to-Table

This section (six questions) is about programs, policies, laws, regulations, or other practices that you believe SUPPORT one or more aspects of local food systems.

9. Based on your experience, tell us which types of general programs/regulations (left column) SUPPORT which aspects of a local food system listed across the top. Mark ONLY ONE box in each row.

Types of Government Programs…	***…Provide Support for Which Aspects of Local Food Systems?***				
	Produce Food	Process Food	Access Markets	More than One Aspect	NA
Federal Regulatory Programs					
State/DC Regulatory Programs					
Education/Training Programs					
Gov't Certification Programs					
State/DC Licensing Programs					
Local Land Use Rules					
Local Licensing Programs					
Environmental Requirements					
Labor Laws/ Practices					
Marketing Programs					
Grant and Loan Programs					
Procurement Laws and Policies					
Tax Law					
Low Income/ Senior Programs					

The supportive programs identified above in question 9 are GENERAL TYPES of programs. In questions 10 and 12, please provide the NAMES of one or two SPECIFIC programs that significantly support local food systems (give it your best shot if unsure of exact names). You can elaborate on them if you wish in Question 14.

10. First SUPPORTIVE program:

11. This supportive program is primarily associated with:
    A state/DC program
    A federal program
    A local government program
    A private sector/ market practice

Some other program or practice
Other:

12. Second SUPPORTIVE program:

13. This supportive program is primarily associated with:
A state/DC program
A federal program
A local government program
A private sector/ market practice
Some other program or practice
Other:

14. Is there anything else you would like to share with us about programs that support local food systems in your community?

<u>Others We Should Hear From</u>?

If you know one or more others we should hear from, and if comfortable doing so, please forward our email invitation and ask them to consider completing the survey. The more responses we get from stakeholders, the better.

<u>Anything Else</u>?

Is there anything else you would like to share with us about local food system issues in your community or experience?