



FoodPlan CNY

Dedication to Evan Weissman



Near the end of what was turning out to be a long Central New York winter and the beginning of an indeterminate global pandemic, Evan died unexpectedly. This sudden loss continues to be felt throughout the local community. At that moment Evan and I were planning to meet to start working on the final edits of this FoodPlanCNY report. We had worked closely on this project for over three years -- from brainstorming the initial aims and objectives to all the hours of team meetings, traveling all around the county interviewing with stakeholders, writing, revising, integrating the process into our teaching, deciding whether the page format should have two columns of text or three, and more revisions. Completed in his absence, the project is now a trace that evokes Evan's unique synthesis of deep ethics, rigorous scholarship, and community engagement.

This FoodPlanCNY project is dedicated to Evan and all that he was dedicated to. Evan's background and commitment to social justice and a collaborative, cross-disciplinary and community-based approach to food system planning guided every aspect of the project. What I will always remember and admire about him are certain moments, such as during a public meeting, when Evan would identify a difficult issue and help us to analyze and think about it in new ways. His strong critique of systemic inequalities reinforced his commitments to activism. He was also self-reflective and generous in his openness to different perspectives. We had many differences about the direction of the project, allocation of time and resources, or how to conduct meetings, yet I could always trust his collaborative spirit.

As the project was wrapping up, he coordinated with public health professionals and other groups to strategize the next steps in the process beyond the final report. His effort was instrumental in helping to launch the Syracuse Onondaga Food System Alliance (SOFA) a multi-sector food system organization with diverse community participation. The food system work that Evan helped to initiate continues, inspired by his fierce commitment and big smile.

-- Matt Potteiger.

Project Scope:

FoodPlanCNY is collaborative project to assess, coordinate, educate and make recommendations to improve the food system of Central New York. The purpose of FoodPlanCNY is to achieve the goals of

- *Improved public health -- every citizen has access to healthy affordable and culturally appropriate food.*
- *Inclusive economic development -- the food system contributes to the growth of the regional economy*
- *Resilient environment -- the food system is integrated with environmental systems.*

We offer specific recommendations to achieve these three goals by identifying opportunities to leverage existing assets.

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Acknowledgements:

Research, writing, report preparation, analysis, design, mapping, and data collection: Briana Alfaro, Monica Blaisdell, Karen Cordano, Mallory Ennist, Chad Grevelding, Hanna Goldberg, Elena Juodisius, Remington Lynch, Katherine Mott, Jordan Mueller, Vincent Ryan, Lauren Salas-Schumann, Cheyenne Schoen, Mikala Sherman, Adrienne Traub, Collin Townsend, and students in FST 402: Urban Food Systems (spring 2015) and LSA 496/696: Food System Planning, Policy, and Design (fall 2017 and 2018). Special thanks to Will Cecio who was part of this project from the very beginning research and then helped at the final stage to develop a framework plan of actions to implement the recommendations. Damian Vallelonga designed the project website: www.foodplancny.org

Members of many different organizations, agencies, and businesses have contributed valuable time to participate in FoodPlanCNY. We are grateful to everyone who participated in interviews and focus groups, attended meetings, provided feedback, and otherwise assisted in the production of this needed (and anticipated) report. Special thanks to the Onondaga County Agriculture Council for their generous support and input on this project and for the support provided by the State University of New York, College of Environmental Science and Forestry and Falk College, Syracuse University.

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The Onondaga County Agriculture Council is proud to support the FoodPlanCNY project with the goal of promoting the economic, public health and environmental benefits of a vibrant local food system. The Council works to support the agricultural community through education, promotion and advocacy programs with a vision of a strong agricultural economy, secure and healthy food supply, abundant farmland in agricultural production and stewardship of the environment.

We are fortunate to live in one of the most productive agricultural regions in the country where over six hundred farms in the county contribute more than \$300 million to the local economy. Syracuse, the "Salt City," stands at the crossroads of important transportation infrastructure that has made it a vital food distribution hub for the Northeast. Even though we are surrounded by productive farmland, many people cannot find healthy, affordable food in their own neighborhoods. Many farmers, who have worked the land for generations, cannot sustain their operations economically. The region has lost much of its food processing and distribution infrastructure in response to market pressures from the larger national food system.

FoodPlanCNY provides the area's first comprehensive approach to addressing these challenges and leveraging existing assets for effective food system change. This collaborative effort, led by Professor Evan Weissman from Syracuse University's Food Studies Program and Professor Matthew Potteiger from the Landscape Architecture Department at SUNY ESF, coordinated input from a diverse group of stakeholders from across all sectors of the food system. Regrettably, Professor Weissman passed away prior to completion of the plan. He will be sorely missed, but his efforts will greatly benefit the food system and community for years to come.

One of the greatest assets of our local food system is the commitment of all the people who work to bring food to our tables. This study is an important starting point for coordinating our efforts around policies, planning and everyday actions to build an equitable, sustainable, and economically viable food system. Having a healthy food system results in having healthier, happier people.

Sincerely,

Onondaga County Agriculture Council

A handwritten signature in dark ink, appearing to read "David M. Knapp".

Dave Knapp
Co-Chair

A handwritten signature in dark ink, appearing to read "Harvey Skeelee".

Harvey Skeelee
Co-Chair

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FoodPlanCNY: Executive Summary

Why Food Systems?

Food is fundamental to the lives of everyone in Central New York. Food connects us in the most fundamental ways – to the land where it is grown, as well as to all the places and people involved in storing, processing, distributing, marketing, cooking, and sharing food around the table. Everyone in Central New York has a stake in this food system. However, unlike other critical infrastructure such as water, transportation, or housing, there has not been a full understanding of how the food system works and its vital connection to almost every other facet of life in Central New York.

FoodPlanCNY brings together diverse sources of information along with interviews of over 50 stakeholders representing all the sectors of the food system as well as government agencies and non-profit organizations.

Values of the local food system:

\$178,409,000

Market value of agricultural products sold

\$4,965,162,000

Sales by distributors and wholesalers

\$438,000,000

Sales for food processing

\$1,332,487,000

Sales of food markets

\$787,000,000

Sales from restaurants, catering, cafeterias and other food service businesses

4,400,000

Pounds of food recovered and distributed by the Food Bank of Central New York in 2018 [1]

Food System Goals

The study focuses on Syracuse and Onondaga County in the context of the 5 county area of Central New York. In this area, FoodPlanCNY aims toward creating a stronger food system that:

- provides every citizen access to healthy, affordable and culturally appropriate food.
- is an important component and growth area of the regional economy
- helps to build more sustainable environmental systems.

FoodPlanCNY Objectives

The Onondaga County Agriculture Council recognized the need for a comprehensive food systems planning approach and provided the support for FoodPlanCNY. This study outlines a collaborative approach guided by four objectives:

Communicate the importance and the impact of the regional food system.

Assess the assets, challenges, and opportunities for developing a more secure, socially just, and economically viable regional food system.

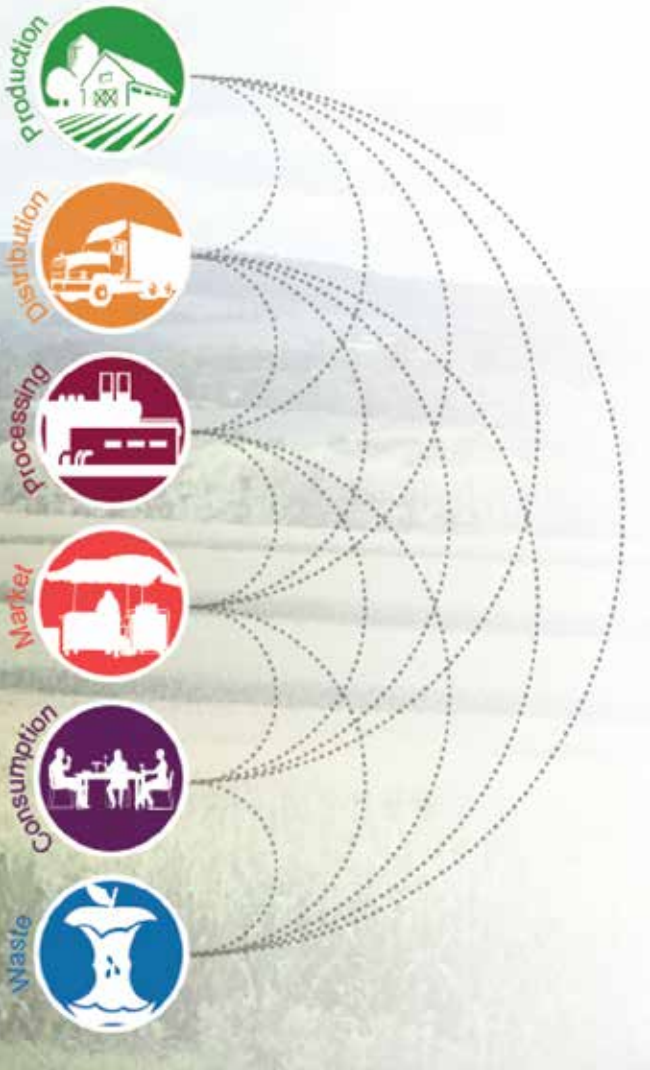
Coordinate diverse stakeholders who shape the Central New York food system

Recommend a set of strategies that will address current needs and provide direction to catalyze change.

These goals and objectives are addressed in two parts:

I. Baseline Assessment -- A sector by sector analysis of existing assets and challenges

II. Planning for Food – a summary of opportunities and recommendations.



The interrelated sectors of the food system

Part I: Baseline Assessment

The CNY food system has a number of important assets to build on, but there are also critical challenges that need to be assessed for each sector of the system.

PRODUCTION

Central New York is one of the most productive agricultural regions of the Northeast [2]. This is primarily a dairy landscape and Onondaga County is a major contributor to New York State's rank as the #3 dairy producer in the nation [3]. However, producers face challenges from urban and suburban development, increased costs of production coupled with fluctuating prices in global commodities markets, and reliance on immigrant labor. These pressures are reflected in decades of declining numbers of farms, loss of prime agricultural soils to development and barriers for new farm operations.

DISTRIBUTION

Syracuse is the largest food distribution hub in CNY. This puts CNY farmers and food manufacturers just hours away from major markets in the Northeast. A relatively small workforce moves billions of dollars worth in annual sales, shipments, and receipts through the county. However, the local food system only captures a small portion of this economic activity. An increasingly global food distribution system has had major impacts on the local distributors. Rebuilding the regional distribution infrastructure faces multiple challenges, yet, this is essential for expanding markets and competitiveness for local producers and processors.

PROCESSING

Food processing has been a primary driver of the development of Syracuse and CNY. The volume of sales of food processing is more than double than sale from the agricultural sector (\$178 million) [4]. Well over half of the economic impact of processing is concentrated in the dairy industry [5].

Multinational corporations have grown in scale, dominating retail space and impacting local processing. The region has lost much of its processing infrastructure. However, there is a resurgence of small-scale processors that help to diversify local production and provide new economic opportunities. Breweries, distilleries and other craft beverage producers serve as catalysts for the revival of hops and barley growing in the region.

MARKETS

Food markets account for over \$1 billion in sales annually and over a quarter of jobs within the local food system (27%) [6]. A diversity of market options and a growing demand for local produce is critical for sustaining local farms. In addition, Central New York is 250 miles or less from the major urban markets in the Northeast

However, food marketing has become increasingly concentrated in just a few large-scale retail chains that have abandoned the city and many rural communities. As a result, a significant number of people live in food environments without access to healthy, affordable and culturally appropriate food options. Significant disparities in food access negatively impact the health of communities.

CONSUMING

Food consumption is a primary driver of the local economy. Every day, people in Onondaga County spend over 1/3 of their food budgets purchasing and consuming food outside the home [7]. This supports over 16,000 jobs in the food service industry throughout the county, which is over half of all jobs in the food system [8]. Restaurants, cafeterias and other eating places are an important part of the social life of the community, and they can serve as economic catalysts for revitalizing neighborhoods. The rich food cultures of the area are also vital to community identity, the economy, and public health.

Yet, food insecurity and hunger are chronic public health challenges. Stakeholders cited the need for more effective coordination of food security efforts.

WASTE and RECYCLING

The Onondaga County Resource Recovery Agency (OCCRA) is the largest permitted composting facility in the state and it provides leadership in systemic change [9]. The emergency food network also plays a critical role in reducing waste. There are still challenges for "closing the loop" and integrating waste back into agricultural production. Because waste is generated in each sector of the food system it is important to address the issues of waste in order to achieve the larger goals of environmental sustainability and economic viability.



Part II: Planning for Food

OPPORTUNITIES

Analysis of the food system sectors and interviews and public meetings with key stakeholders reveal three main opportunities for leveraging assets to strengthen the economic, public health and environmental outcomes of the food system of Syracuse and Onondaga County.

Resilience

Everyone benefits from a resilient food system that is able to respond to changing economic, social and environmental challenges. The collective efforts and experience of farmers, business owners, organizations and agencies to meet challenges, adapt to change, and innovate is a core strength of the CNY food system.

Access

A strong food system also relies on equitable access to healthy, affordable, and culturally appropriate food. To achieve this requires access to critical resources (economic, natural, social, and political), as well as access to information for making decisions.

Coordination

The food system is complex and many people work hard to meet common needs and solve problems. Stakeholders look forward to the opportunity to coordinate efforts across different sectors, organizations, and government agencies to reduce the duplication of resources, and greatly expand the potential for change.

"I guess I think nothing will get resolved unless we get people to the table and working collaboratively."

-- Food Access Advocate

RECOMMENDATIONS

1. Strengthen the “middle” of the food system: re-build the infrastructure and capacity of regional food distribution and processing

Invest in infrastructure and capacity for aggregating food from local producers, and distributing it to processors and diverse market outlets. Improving the middle of the system can have major benefits for all the other sectors of the food system including increasing market share for producers and processors, diversifying regional production, and providing greater transparency and local control.

2. Grow community-based, healthy food environments

The food system needs to ensure equitable access to healthy, affordable, and culturally appropriate food in every community. Strategies to achieve this include developing neighborhood food plans, promoting a diversity of retail markets scaled to the needs of each neighborhood and supporting community food spaces such as community gardens and kitchens.

3. Create healthy, resilient environmental systems: Link the economic advantages of a regional food system to environmental sustainability

A regional food system approach can be an effective means of reducing energy consumption, increasing biodiversity, and promoting water and soil conservation, while at the same time creating economic opportunities. Promoting ecological services of agriculture, creating incentives for more sustainable and best practices, and diversifying production are steps toward a more resilient environment and food system. Because of the close connection between the City of Syracuse and the surrounding countryside, this is an area where CNY can play a leadership role and be a model for other regions.

4. Expand public space and participation in the food system.

Reclaiming public space in an increasingly privatized food system results in multiple benefits, including public health, a greater participation in the food economy, transparency, and social justice. Strategies include improving access to resources (land, capital, information), expanding access to markets, negotiating social justice issues in the workforce, and promoting business development, and economic participation.

5. Coordinate food system projects, planning, and policy: Support the newly formed Syracuse Onondaga Food System Alliance

The single most important factor for building a resilient and just food system will be the ability to effectively coordinate numerous stakeholders and groups. The creation of the Syracuse Onondaga Food System Alliance (SOFSA), is a major step toward this goal. SOFSA creates a framework for inclusive engagement by many groups with the potential for integrating food systems into City and County programs, policy and planning.



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7. Consumer Expenditure Survey, <https://www.bls.gov/cex/> for 2018
7. U.S. Census Bureau. (2018). 2018 Economic Census
8. Interview with Recycling Operations Manager, Onondaga County Resource Recovery Agency. Oct. 19, 2016

A scenic landscape photograph. In the foreground, there is a vibrant green field, possibly a vineyard or agricultural field, with some dark posts visible. Behind this field is a dense line of dark green trees. In the background, a body of water, likely a lake or a wide river, is visible, surrounded by rolling hills and mountains under a sky with soft, white clouds.

INTRODUCTION



INTRODUCTION

"Every generation is farther removed from their food source and the education is just not happening."
Beef Farmer

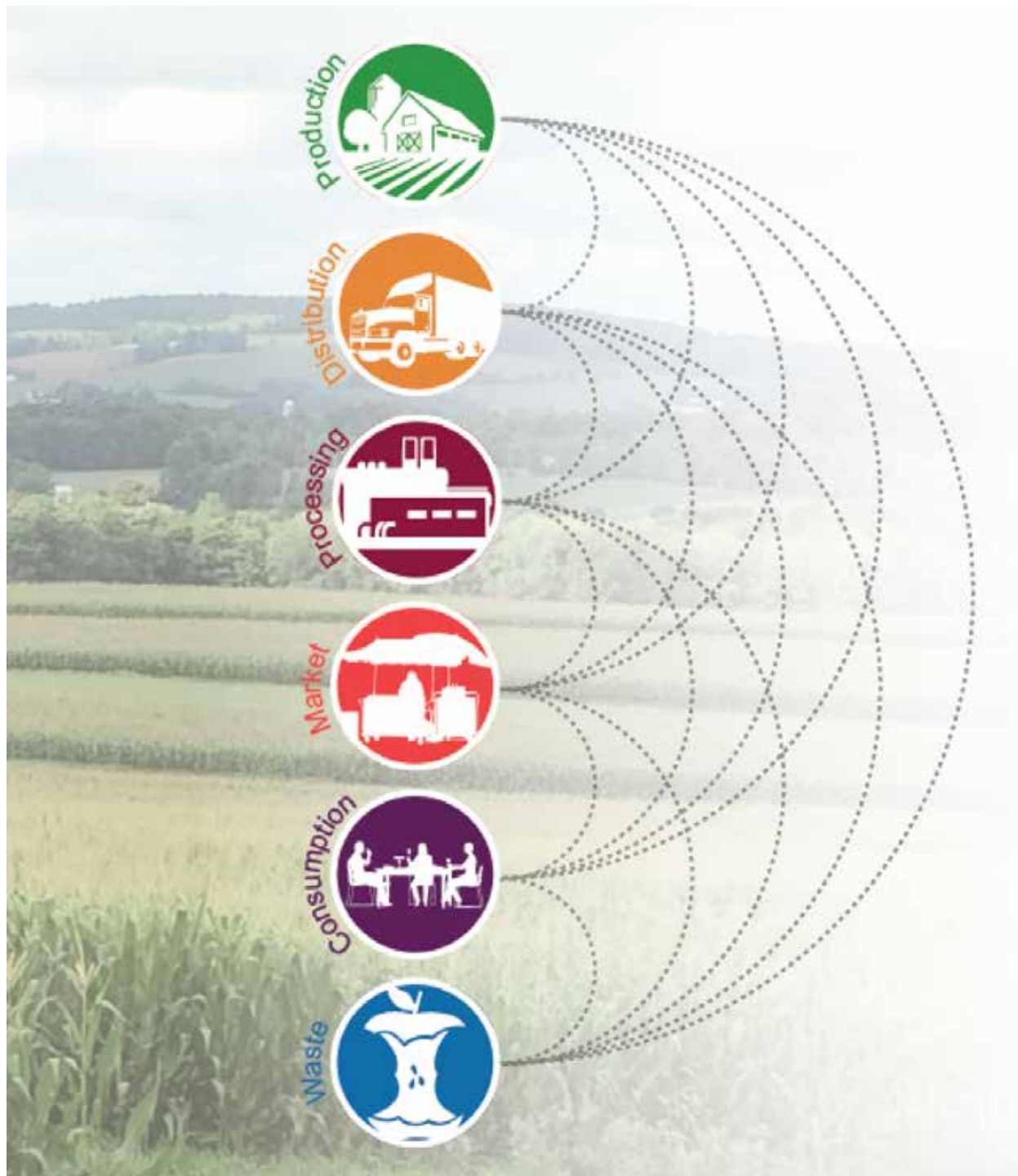
"We live in a country where we take so much for granted when it comes to food . . . we built amazing civilizations on food. Everything we celebrate is done with food. It is so important. But in this country, we take all this for granted. Go through a drive through and there's food. Order a pizza and it shows up. But if it [food] brought us together it can tear us apart too."
Grocery Store Owner

The food we eat not only sustains our health but it connects us to the soil, land, water, and labor that grows it. It also connects us to all the other places and people necessary to store, process, and move food; the markets that sell it, the restaurants, food pantries, kitchens, tables, and other places where food is prepared and eaten; and the treatment plants and compost heaps that handle the processes that follow.

Syracuse and Onondaga County have benefited in many ways from these connections. Known as the "Salt City," Syracuse's history is linked to the processing and distribution of an essential food ingredient. Today, although Central New York is one of the most productive farming areas of the Northeast, one in eight residents do not know where their next meal will come from [1]. And, despite our region's rich agriculture, the food we eat comes from increasingly distant lands and passes through complex global distribution systems.

Why Develop a Food Plan?

Communities across the country are recognizing the the value of food system planning as a way to connect larger goals of *public health, jobs and the economy, environmental quality, and cultural vitality of communities* with food. Through inclusive, coordinated planning efforts communities can gain more control of the local food system [2]. FoodPlan CNY assesses the needs of the current system and identifies ways to leverage assets and opportunities to ensure the food system works for our benefit.



What is a food system?

A food system is made up of all the connected places, people, and processes that produce, store, distribute, process, market, and consume food, and manage the associated waste. In other words, a food system is the set of parts and processes that shape what, how, and why we eat.

Producing -- involves all the activities that take place on farms, ranches, orchards, and other spaces. Production is influenced by critical factors such as soil and climate, as well as labor, capital, and scale.

Distributing -- the transporting and storage of food and ingredients is supported by a complex infrastructure network.

Processing -- changes food in order to make it more edible by enhancing flavors, making it last longer, or creating new products.

Markets -- places of exchange where farmers or retailers sell food to consumers.

Consuming -- everyone who eats plays a key role in food systems. In turn the food system influences these choices, which impact consumers' health and budgets.

Waste -- is created in all sectors of the food system as garbage, compost, and recycling.

Part I of FoodPlanCNY, Baseline Assessment, analyzes the assets and challenges of each of these sectors of the food system.

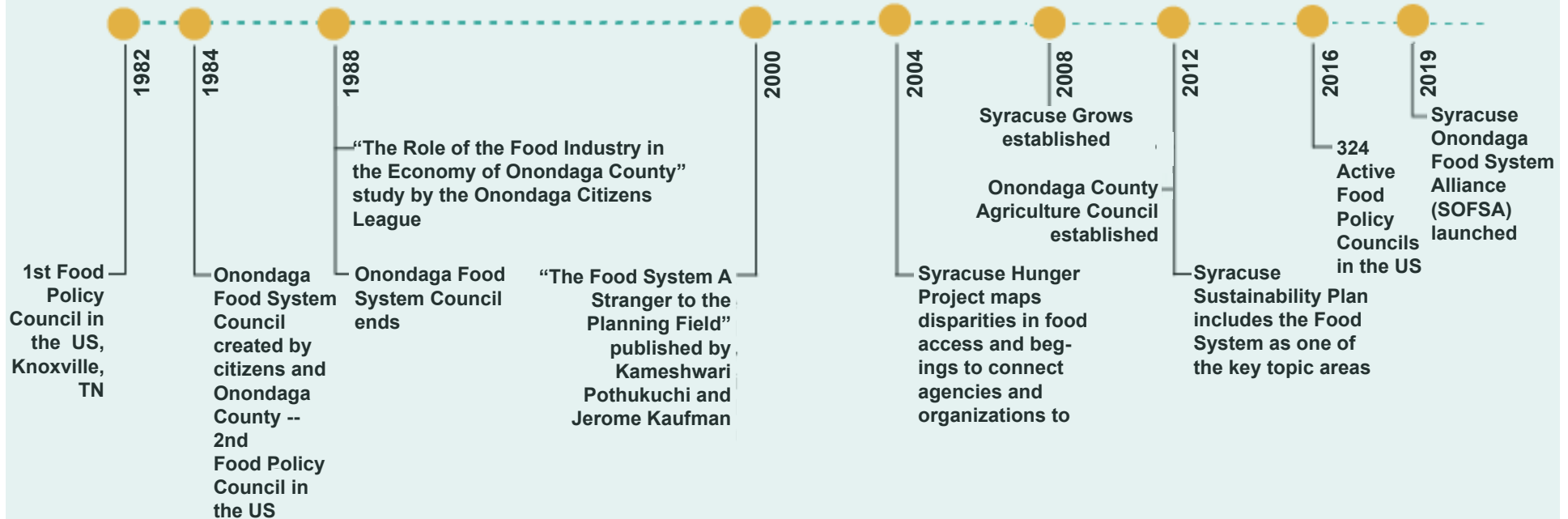
FoodPlanCNY Objectives

FoodPlanCNY is a community-based project guided by four main objectives:

- 1. Communicating** -- Raise public awareness about the importance and the impact of the regional food system.
- 2. Assessing** -- Develop a food system assessment of the needs, assets, challenges and opportunities for developing a more secure, socially just, and economically viable regional food system.

- 3. Coordinating** -- Develop a framework for a coordinated, systemic approach to addressing critical social, economic and environmental issues of the Central New York food system and leveraging the system as an asset to benefit the region.
- 4. Recommending** -- Develop specific recommendations that will address current needs and provide direction to catalyze change.

Onondaga County: an early leader in food system planning



Timeline: Onondaga County was second in the nation to initiate a food system planning effort through establishment of a food policy council [3]. However, since this initial work in the 1980's, there has not been coordination across the many organizations, businesses, government agencies, and individuals who are working for a better regional food system. Starting in 2016, FoodPlanCNY brought together diverse voices from across Onondaga County to tell the story of our food. FoodPlanCNY is collaboratively developed to assess how we grow, distribute, consume, and dispose of food. The plan captures the strengths and aspirations of the region's food system, and identifies policies, programs, and individual actions to improve our food, from farm to plate (and beyond).

Planning Process - FoodPlanCNY



How this plan was developed:

FoodPlanCNY is a community-based project designed to provide baseline understanding of the Central New York food system and engage stakeholders in identifying assets to leverage for food system change.

The project gathered a wide variety of data including:

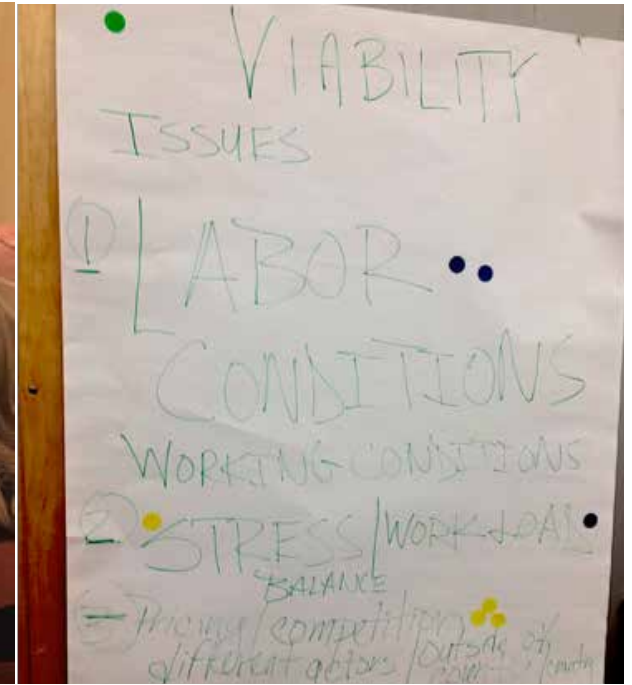
- Quantitative data from USDA Census of Agriculture, U.S. Department of Labor, and U.S. Census Bureau.
- Regional sources such as community surveys and reports from regional economic development officials, and agencies such as the Onondaga County Department of Health and Cornell Cooperative Extension of Onondaga County.
- Maps of land use, food access, and other spatial patterns.
- Archival data, historic photographs and Onondaga County Legislature minutes.

Important information and understandings came from interviews with key stakeholders representing all sectors of the food system as well as public officials, agencies, and not-for-profit organizations.

The baseline assessment analyzed this information to identify assets as well as challenges.

With input from 2 stakeholder meetings the plan identifies three broad opportunities that apply to all the sectors of the food systems.

Within this framework of assets, challenges, and opportunities the plan outlines a set of recommendations for further action.



Public Engagement

Everyone has a stake in the food system of Central New York; one of the primary goals of FoodPlanCNY is to encourage greater public engagement in food system planning and policy development. The plan has been informed and guided by the perspectives of a diversity of stakeholders from different parts of the food system. Over 50 interviews gathered the experiences and knowledge of farmers, food processors, brokers, hunger relief providers, chefs, directors of school lunch programs, nutritionists, educators, activists, grocery store managers, and political leaders. These interviews were also conducted on-site – on the farms and in the distribution centers, kitchens and other places that comprise Central New York's community and food system.

To foster conversation and coordination across these sectors, two community stakeholder meetings were held. At these meetings over 40 participants identified the opportunities for food system change. Additionally, the project was presented at numerous public events throughout Onondaga County, including public health symposiums, a planning conference, and a food systems symposium. Finally, the recommendations in this report have also been reviewed by a diverse group of stakeholders.

The process of developing FoodPlanCNY and the website establishes the procedures and platform for on-going public engagement in the regional food system. We invite participation at: www.foodplancny.org.

We don't believe that top down is the best method for building something, and grass-roots isn't the sole solution as well. There's a space to find where the top-down meets the bottom-up... The systems we've created didn't happen overnight. So, the work is going to take time.

-- Local Foundation

Assets-based Approach

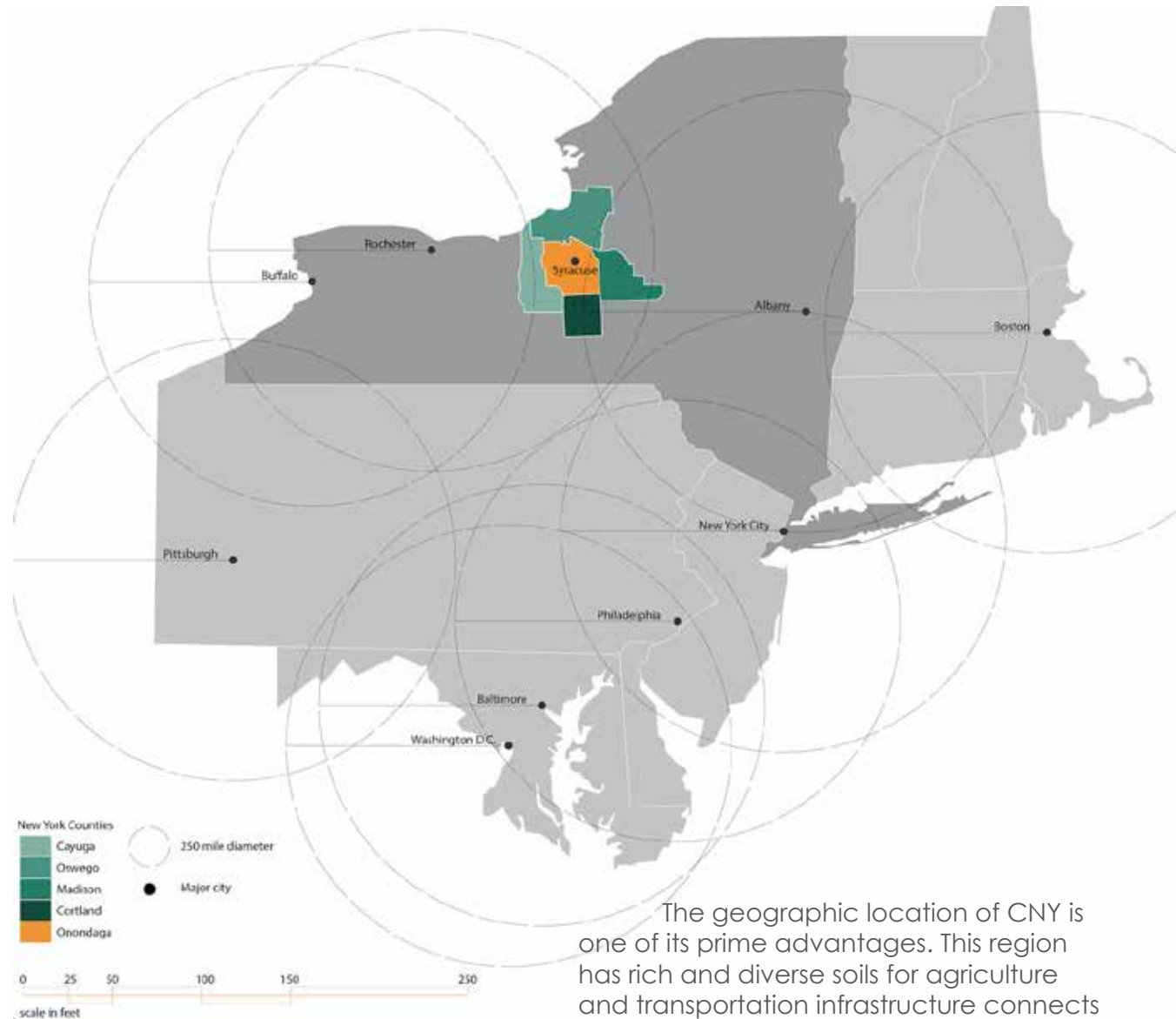
Foodplan CNY is an assets-based approach that identifies and leverages the existing assets of the community. Central New York and the City of Syracuse in particular, are often defined by problems and deficits. While there are many significant problems such as the highest concentrated poverty among communities of color in the entire United States [4] the city, county, and region also have valuable resources, individuals and organizations with experience and commitment, and other assets that can be better understood and utilized, especially with regard to food and agriculture.

Place-based Assets

Many of the assets of the CNY food system come from the particulars of place – the qualities of the soil, the generations of experience, the transportation infrastructure or its location in relation to regional markets. A place-based approach analyzes these relationships across multiple scales from the immediately local to the regional, national, and global food systems.

Project Scope

FoodPlanCNY examines the food system of Central New York, with a focus on the City of Syracuse and Onondaga County. This area with great cultural diversity, natural resources, and deep agricultural roots, also boasts a great breadth of food products, distributors and markets. Located in the heart of New York State, the City of Syracuse is the center of Onondaga County -- home to nearly half a million residents and over 150,000 acres of prime agricultural land.



The geographic location of CNY is one of its prime advantages. This region has rich and diverse soils for agriculture and transportation infrastructure connects CNY to major cities and consumers in the Northeastern United States.

There are many interrelationships between the City and the County as well as important differences in the assets and challenges that need to be recognized.

While the focus is on the City of Syracuse and Onondaga County in the context of Central New York, many of the food system stakeholders in this area also rely on relationships beyond the region.

The Benefits of a Strong Food System

How well the food system works has direct impacts on the public health, economy, and environment of a community. The components of the food system are integral to other important community systems of transportation, housing, open space, and infrastructure.

Economic

The food system is an economic driver generating new businesses and creating living wage jobs.

"Growth in Central New York's agricultural sectors offers one of the best opportunities to drive new jobs and growth to almost every city, town, and village throughout the region" – Central New York Regional Economic Development Council [5].



The food system generates **30,479 jobs** in Onondaga County. The bar graph illustrates the proportion of jobs in each sector of the food system [6]

Public Health

Consumption patterns shape overall community and individual health and are directly impacted by the food system. In a strong food system every community has a food environment that provides access to healthy, affordable and culturally significant food.



Environment

The food system helps achieve sustainability goals including reducing carbon emissions and energy consumption, and recycling nutrients.

Agriculture as a major land use plays a key role in environmental stewardship of ecological, scenic, and recreational values.





PART I: BASELINE ASSESSMENT



producing

"Dairy is so tricky because it's a perishable product that has to be processed . . . It doesn't matter what size dairy, you need a niche, something to make more money,"

-- Dairy Farmer

"I see the industry in general diverging like a lot of industries do. You're either the guy in the pick-up truck on the tailgate at the farmers market and you have a niche that you fill or you're . . . going with the wholesale markets, shipping big places,"

-- Diversified Produce Farmer



PRODUCING

"I have been working in food production for 18 years. I have devoted my life to it since college. I am not as optimistic or cheerful as some younger people getting into it. I've been working really hard for a long time. I am a bit jaded about it. It's damn hard work," Small Dairy Farmer

Introduction

Producing food has shaped land and the way of life in Central New York. Over hundreds of years the Haudenosaunee/Onondagas developed nutritionally rich and abundant agricultural, hunting, fishing, and foraging practices in tune with the ecological processes of the region in Central New York [1]. European settlement introduced a new agroecology that dramatically altered the landscape by clearing forested land to grow wheat, graze livestock, and build roads to move these products to markets.

Today, the quality and extent of the land, soil, and water resources of Central New York make it one of the most productive agricultural regions of the Northeast. Geographically, farms in CNY enjoy proximity to large urban markets throughout the Northeast [2]. Beyond providing sustenance, food production continues to shape the environment, economy, and land use patterns in CNY.



Assets of Agricultural Production:

Central New York is one of the most important agricultural regions of the Northeast

USDA Cropscape mapping shows Central New York as an important agricultural region in the Northeast United States. Within the 50-mile radius around Syracuse there is a great diversity of

landscapes that have influenced agriculture, including the Finger Lakes, southern shore of Lake Ontario, Appalachian Plateau, and flatter lands north of the Niagara Escarpment

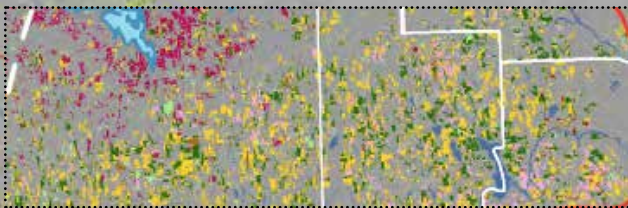
USDA Cropscape Mapping

Red lines show major highways and a 50-mile radius is drawn around major cities (bight red) in New York State.

In the enlargement below colored pixels represent different crops: orange indicates corn, red for apple orchards, green for pasture and forage.

For an interactive map with more detailed Cropscape data visit:

<https://nassgeodata.gmu.edu/CropScape/>



N

0 25 50 100 150 Miles

producing

18

The Numbers

Onondaga County

623

Number of farms

\$74,816

Average net income per farm

\$1,260,327

Average value of farm buildings,
land, and equipment

\$142,226,000

Total farm production expenses

\$178,409,000

Market value of products sold

\$158,780,000

Additional economic impact from
the “multiplier effect” of farming

From USDA: https://www.nass.usda.gov/Publications/Ag-Census/2017/Online_Resources/County_Profiles/New_York/cp36067.pdf

Agriculture is one of the primary industries of the regional economy

Farms in Central New York produce over \$670 million in sales annually, and Onondaga County farms contribute over \$178 million to this economic activity [3]. In order to grow food, farmers purchase equipment, resource inputs, and services that also contribute to the local economy. In addition to these ripple effects, the wages paid to employees add to the economic importance of farming.

The total “multiplier effect” for agriculture in New York State is significant. Every dollar generated by agriculture results in an additional \$0.89 in non-agricultural contributions to the economy [4]. In Onondaga County this means agriculture is responsible for generating an additional \$158.8 million of economic activity annually. The value of Onondaga County's agricultural land, buildings, and equipment alone is over \$700 million [5].

Syracuse is a medium-sized city situated in a diverse and productive agricultural region. This urban/rural connection increases the value of farmland. Without the transportation gridlock common in larger metropolitan areas, regional production is immediately accessible to both city markets and local distribution hubs.

The environmental assets of CNY support a strong agricultural sector

Soils -- Approximately half of the land in Onondaga County (47%) is classified by the USDA as Prime Farmland with soil structure, fertility, topography, drainage, and moisture conditions that are favorable for a wide variety of vegetables [6]. In addition these soils cover large connected areas rather than being fragmented and scattered.

Water -- Farms benefit from abundant water resources available through precipitation, surface water (lakes, ponds, streams, etc.) and subsurface conditions (ground water).

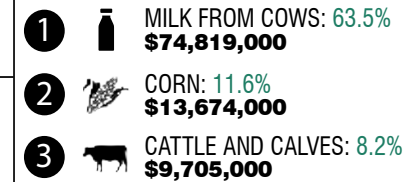
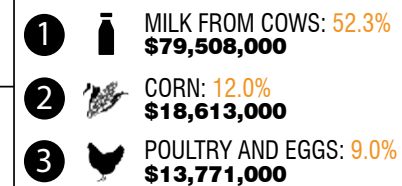
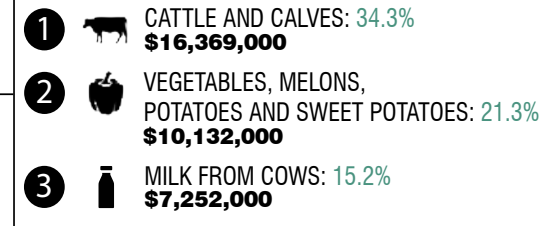
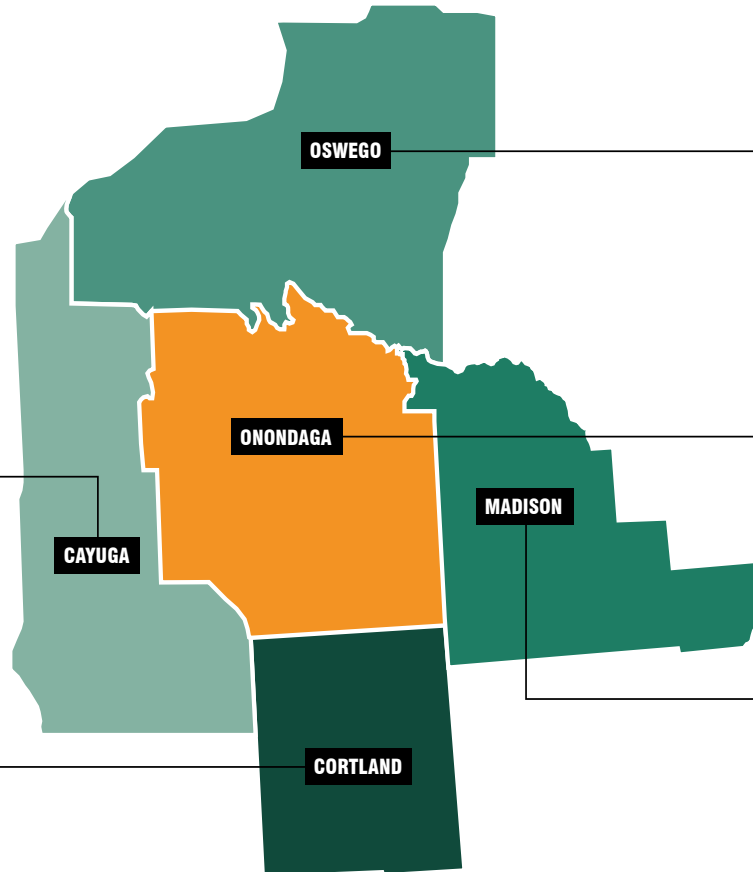
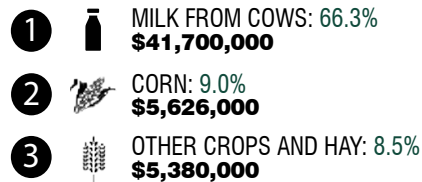
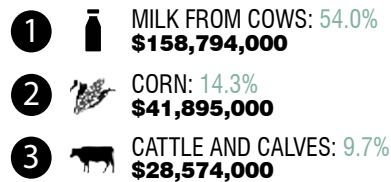
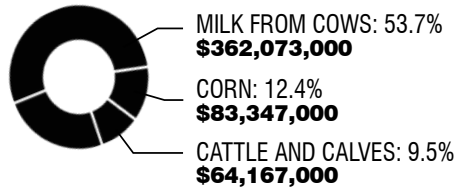
Climate -- Lake Ontario and the Finger Lakes help to moderate temperature extremes and extend the growing season. The uplands of the Appalachian Plateau and the valleys provide additional variety of microclimates for different types of agriculture.

These environmental systems are valuable assets. Farmers and surrounding communities have a stake in sustaining the health of soils, water, and larger ecological systems. In turn these systems are vital to sustaining the health and economy of the region. According to a recent study by crop scientists, the land within a twenty-mile radius of Syracuse would be able to produce enough food to feed the entire population of the metropolitan area [7].

Top Three Agricultural Products per County in CNY

CAYUGA/ CORTLAND/ MADISON/
OSWEGO/ ONONDAGA

5 COUNTY TOTAL



Note: This chart was produced using figures from the 2012 USDA Census of Agriculture. The 2017 census for Onondaga County shows an increase in the percentage of milk from cows to 60% of total value, an increase in poultry and eggs to 12%, and a decrease in the value of sales of corn to 6.8%.

CNY is a leading dairy producer in the State and Nation

Milk is the major agricultural product in CNY and related production of corn, hay, and cattle and calf operations combine to make CNY a landscape shaped by dairy. New York State ranks 3rd in milk production in the nation [8] and Onondaga County

ranks 9th (out of 62 counties) in dairy production in New York[9]. Nationally, Onondaga County is in the top 5% of counties for milk production [10].

Crop Diversity

CAYUGA/ CORTLAND/ MADISON/
OSWEGO/ ONONDAGA

5 COUNTY TOTAL



VEGETABLES, MELONS,
POTATOES AND SWEET POTATOES: 5.18%
\$15,359,000

FRUITS AND TREE NUTS: 0.69%
\$796,000

BERRIES: 0.24%
\$423,000

1 VEGETABLES, MELONS,
POTATOES AND SWEET POTATOES: 5.2%
\$15,359,000

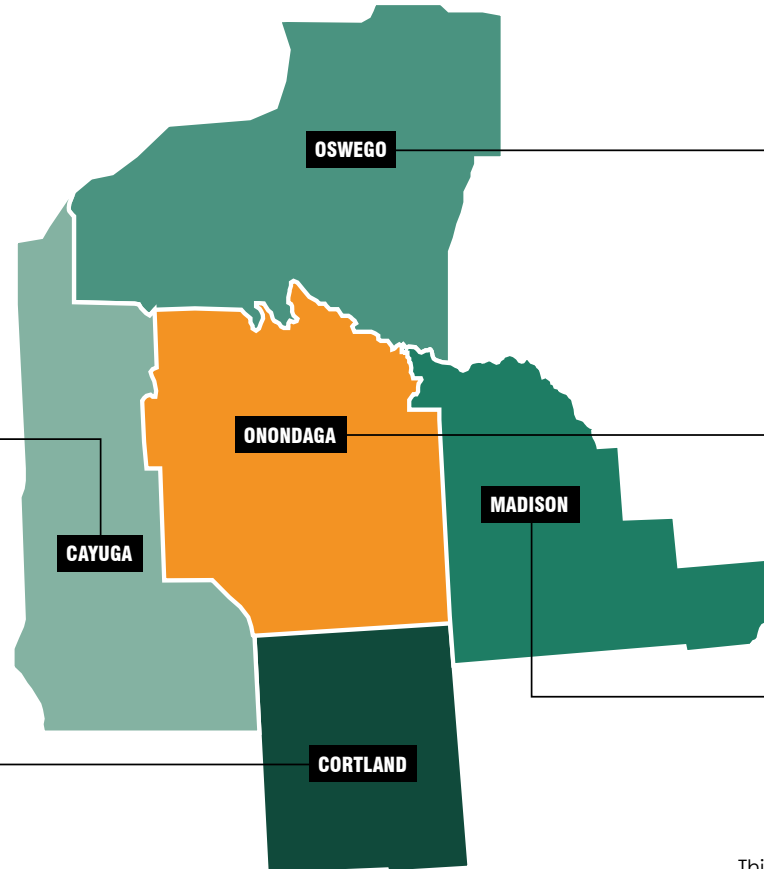
2 FRUITS AND TREE NUTS: 0.3%
\$796,000

3 BERRIES: 0.1%
\$423,000

1 VEGETABLES, MELONS,
POTATOES AND SWEET POTATOES: 1.1%
\$697,000

2 BERRIES: 0.2%
\$135,000

3 FRUITS AND TREE NUTS: 0.1%
\$31,000



1 VEGETABLES, MELONS,
POTATOES AND SWEET POTATOES: 21.3%
\$10,132,000

2 FRUITS AND TREE NUTS: 3.9%
\$1,876,000

1 VEGETABLES, MELONS,
POTATOES AND SWEET POTATOES: 4.4%
\$6,767,000

2 FRUITS AND TREE NUTS: 1.3%
\$1,934,000

3 BERRIES: 0.01%
\$863,000

1 VEGETABLES, MELONS,
POTATOES AND SWEET POTATOES: 1.6%
\$1,946,000

2 BERRIES: 1.5%
\$171,000

3 FRUITS AND TREE NUTS: 0.5%
\$53,000

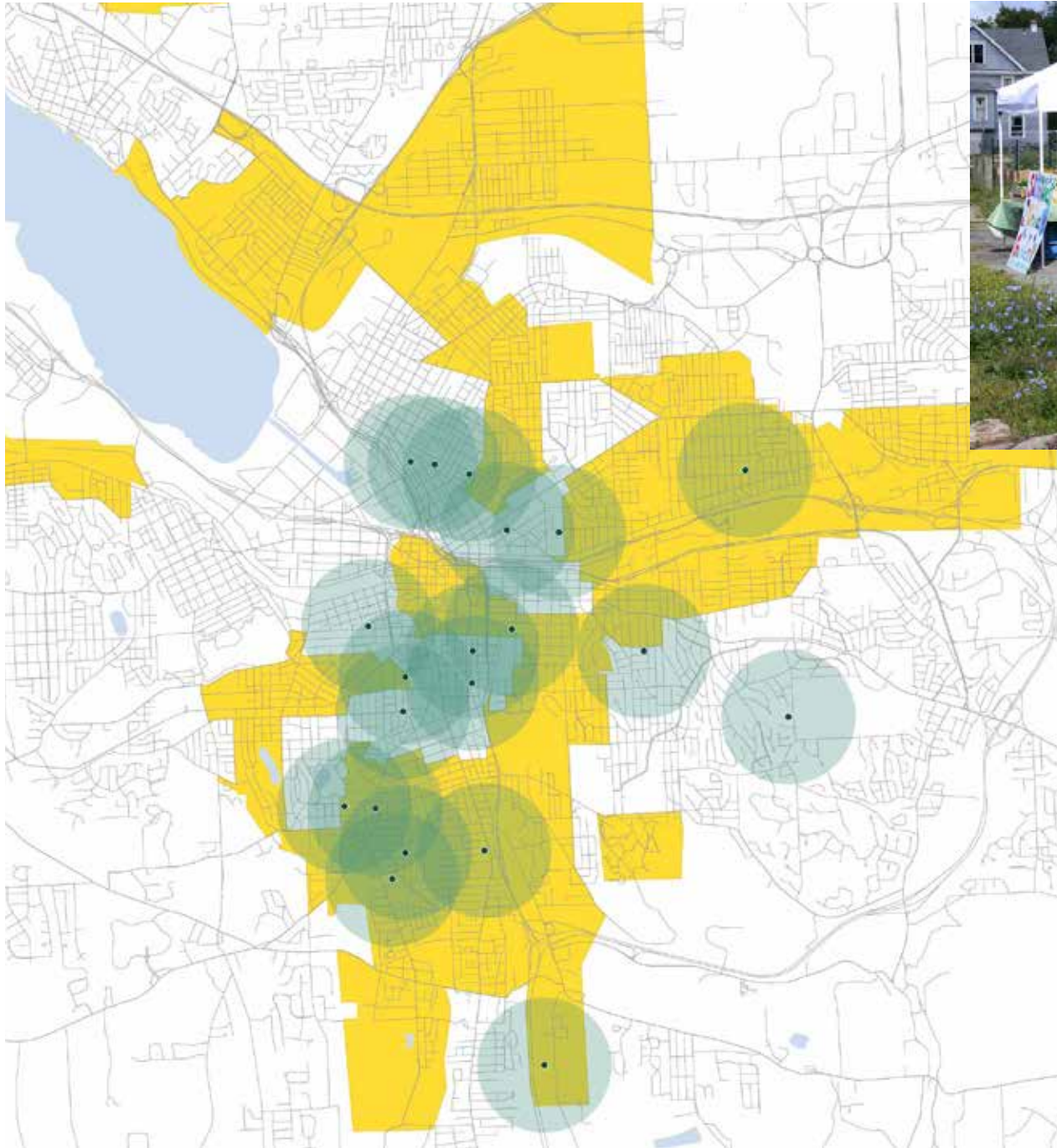
This chart was produced using data from the 2012 USDA Census of Agriculture.

The natural diversity of the landscape and proximity to markets offer the potential for greater variety of agricultural products.

The production and sales of vegetables, fruits, and tree nuts in CNY is very small, just 6% of total production, compared to the production of milk, corn and cattle which is over 75% of the region's total production [11]. To promote more diverse production requires change throughout the food system.

There are market opportunities and economic, environmental, and public health incentives for diversifying local agricultural production. Creating new markets and distribution channels provide incentives for new types of products and diverse practices such as organic farming. Value added processing also promotes diversification.

The growth of farmstead breweries and other locally based beverage production have led the way toward diversifying agriculture. Since 2012 the number of craft beverage manufacturers in CNY has grown from 25 to 68, creating new opportunities for farmers in the process [12].



Urban agriculture provides multiple benefits

The number of community gardens and urban agriculture projects in Syracuse has grown significantly in the last ten years. Syracuse Grows, in partnership with other non-profit organizations, has led an effort to provide funding, volunteers, programming and other resources to build the capacity of this growing movement. Over two dozen community gardens provide multiple benefits including access to fresh produce, transformation of vacant lots into productive green spaces, building community social networks, and reducing storm water runoff [13]. Syracuse is also home to two urban farms that sell food, create jobs, provide educational opportunities, and incubate entrepreneurs.

Map of community garden locations with areas of low income and low access to full service grocery stores according to the USDA Food Environment Atlas

Challenges for Agricultural Production

The number of farms continues to decline as a result of a complex set of factors

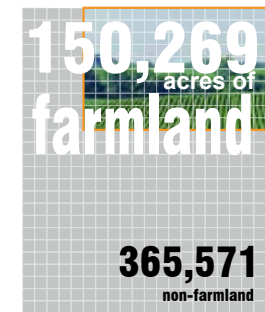
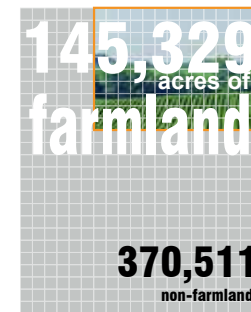
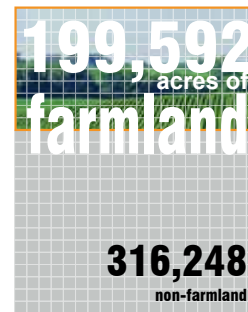
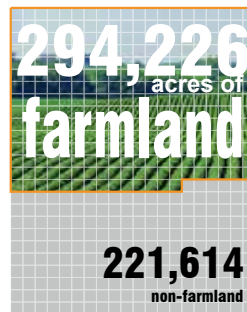
Urban and suburban development, changes in technologies and increased costs of production coupled with fluctuating prices in global commodities markets all present significant challenges to the viability of farming in CNY. For decades the number of farms, farmers, and farmland has declined. These regional trends mirror

the restructuring of agriculture at the national and global scale. The amount of farmland in Onondaga County fell dramatically from 79% of the County's total landuse in 1935 to just 29% in 2012 [14]. The pace of this trend may be slowing. The 2017 Census of Agriculture recorded a 7% increase in farm acreage. However,

at the same time, there has also been a 9% loss in the number of farms. [15] Yet, despite these trends, agriculture continues to be one of the county's most extensive land uses. In 2002 farmland comprised 29% of total land in Onondaga County, and 43% of the open, undeveloped land [16].

TOTAL ACRES OF
**FARMLAND IN
ONONDAGA...**

■ = 1000 ACRES
(OUT OF 500,000 ACRES)



1935

1954

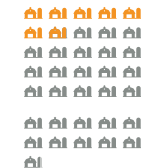
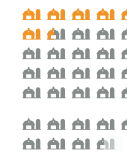
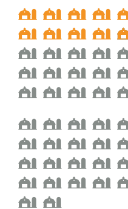
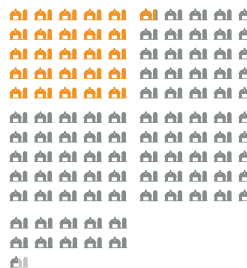
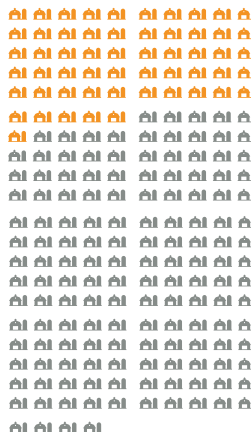
1974

1992

2012

NUMBER OF
**FARMS (ONONDAGA vs.
5 COUNTY AREA)...**

🏠 = 100 FARMS



Medium-sized farms play an important role in building strong regional food systems, however, they face increasing pressures to compete with larger commodity production operations. From 2002 to 2012 there has been a 50% loss in farm sales for middle size farms [17].

The most recent
Ag Census:

2017

160,717 acres in farmland, a 6.6% increase. However, there are 58 fewer farms than five years earlier.



Liverpool NY, 1938



1951



2016

From farms to suburbs -- Liverpool, NY

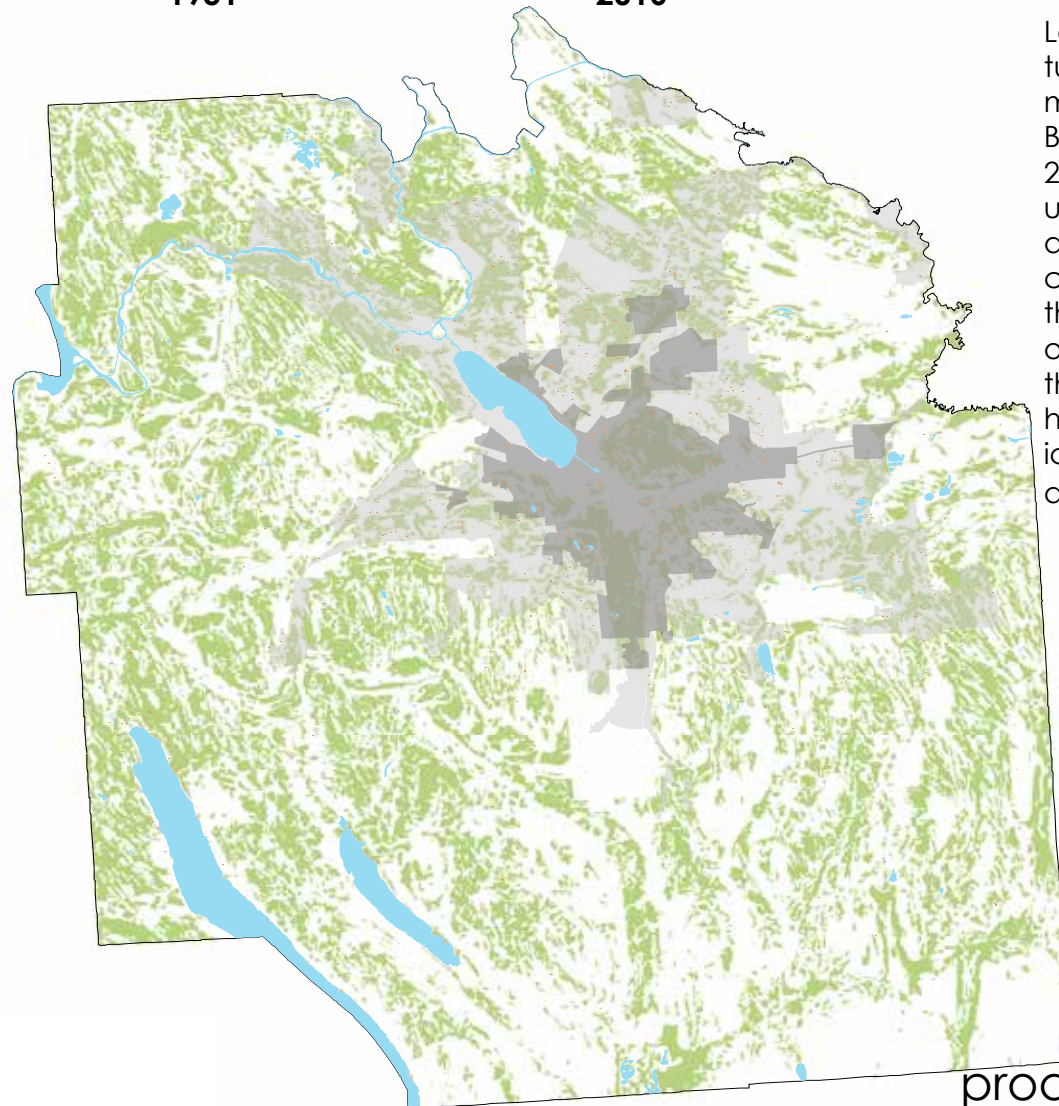
The area west of the village of Liverpool just outside Syracuse was prime agricultural land and farms surrounded the village until the 1950's. The NY State Thruway, sewer lines and other infrastructure helped pave the way for development [20].

Agriculture
 Parks, Forested

Farmers face pressures from land development

In addition to the economic challenges the conventional food system poses for farmers, it is hard for them to compete against local land development. The urban center of Syracuse and surrounding highway infrastructure create significant pressures for expanding suburban and low density rural development. The same characteristics that make land ideal for farming – cleared, well drained soils – are also attractive for development. In addition to rising land values and taxes, increased traffic and negative views of farming impact the daily operations of farmers.

A stronger local agricultural economy, incentives for farmland protection, and public policy are necessary. Towns such as LaFayette have produced Agricultural and Farmland Protection Plans [18]. However, zoning and other land use policies vary by town and municipality throughout the County. The County in partnership with other organizations and State agencies has helped to protect close to 10,000 acres of farmland and is in the process of developing a new Farmland Protection Plan [19].



Loss of prime agricultural soils to development. Between 1950 and 2012 the developed urban and suburban areas of Onondaga county have more than doubled. The overlay map illustrates that this development has consumed a significant amount of prime agricultural soils [21].

Legend

- Buildings
- Urban Area 1950
- Urban Area 2010
- Prime Farmland

A Changing Dairy Landscape

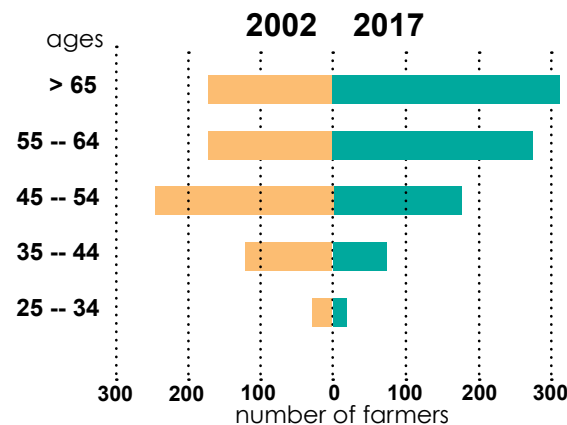
Dairy dominates the landscape of CNY and Onondaga County. Yet, over the years the numerous small to medium size farms have gradually consolidated into fewer, larger operations. The long-term decline in milk prices along with consumer trends away from traditional milk products impacts the economic viability of dairy farms across the country, forcing many multi-generation farms out of business[22]. As a response, consolidating and expanding -- "grow big or go home" --- means farms must produce more for less per-unit cost in order to compete in the international commodity market [23].

However, consolidation also poses economic and environmental risks to farmers and agriculture as a whole. The benefits of large scale efficiency diminish as the price paid for milk are the same or less than the costs of production. Larger operations are less able to adapt to the changing markets and consumer trends [24]. While farmers are keenly interested in maintaining soil and water quality, financial stresses limit their ability to implement conservation management practices. The loss of diverse sizes and types of farms also reduces biological diversity [25].

Addressing these challenges requires change at the food system level such as new processing infrastructure and marketing strategies, and policy incentives to promote diverse types of operations [26]. These systemic changes ultimately provide a broader range of options to individual farmers than they currently have.

The farm population is aging and it is harder to start new farm operations

Following national trends, the average age of farmers continues to increase as few younger people enter the occupation. In addition, farming provides a very small share of total employment in the area. According to the 2017 USDA Census of Agriculture, fewer than 2,000 people are employed in agricultural production in Onondaga County, less than one percent of total jobs in the county [27].



Ages of farmers in Onondaga County
Source: USDA Agricultural Census

"Because we live in dairy country land is tough to get," Small Rancher

"Land access hinders folks who want to start [farming] . . . It's very hard to access even a 20-acre field around here," Small Dairy Farmer

Farms increasingly rely on temporary, immigrant labor

Agriculture in the US relies heavily on immigrant labor, frequently provided by undocumented workers. In CNY undocumented labor is a major risk due to proximity to the northern border [28], creating a competitive disadvantage for regional farmers. Additionally, dairy, CNY's chief agricultural product, does not benefit from the guest worker programs available in field crop production. Tensions are created by the economic challenges of farming and workers' need for adequate pay and safe working conditions.

"The imbalance of power is huge. They are unprotected farm workers and are immigrants . . . The workers are fearful of going out, going to the store to get food. They are fearful of local enforcement, they are fearful of the police . . . And the working conditions are creating a lot of stress," Farmworker Activist

"I now participate in the H2A program. You used to just have guys show up to work. So I had to go into the H2A program. It was the worst decision I ever made, but I had no choice," Diversified Produce Farmer

"But it's also a problem in agriculture in general about finding enough skilled workers," Diversified Produce Farmer

Global competition and climate change impact sustainability

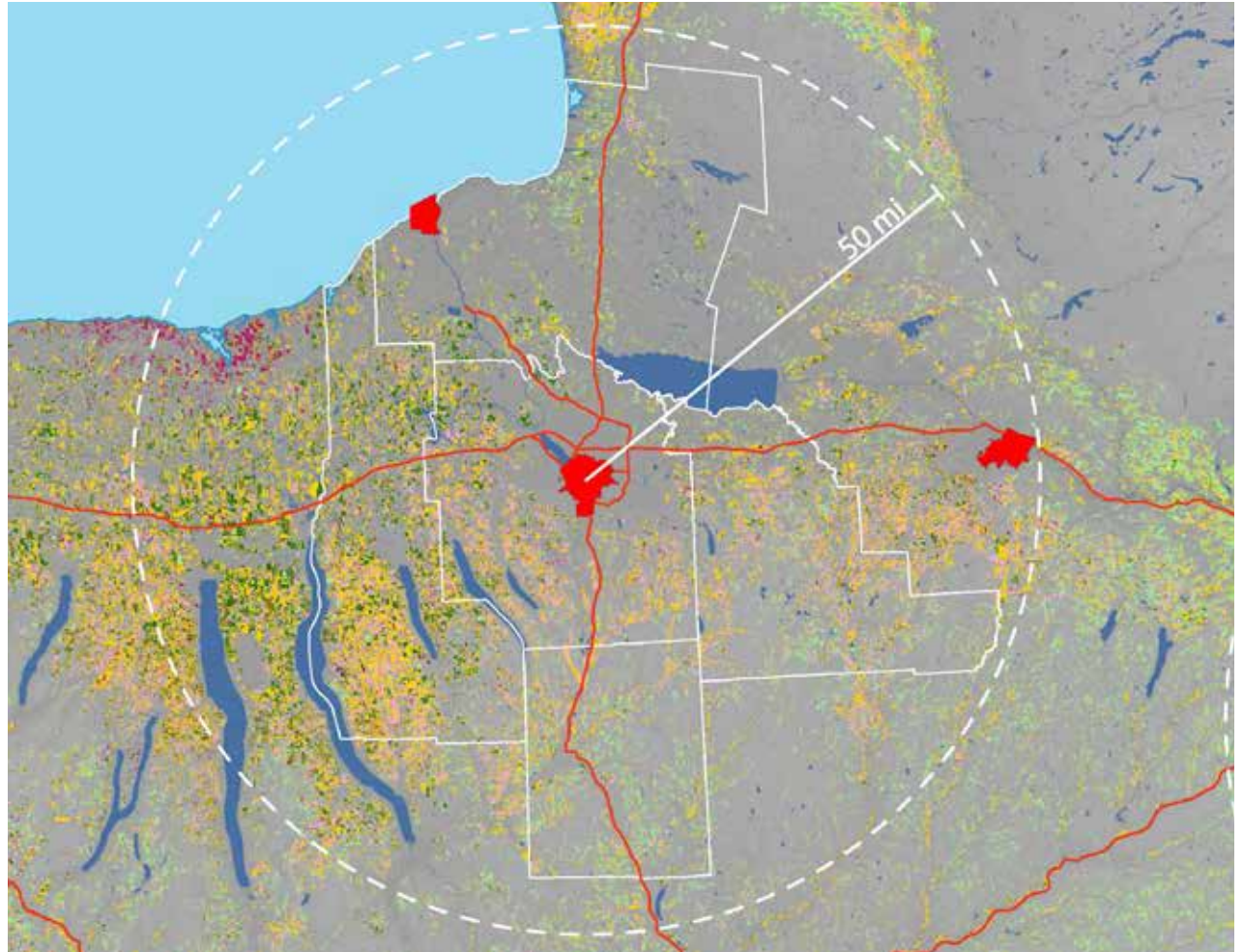
Environmental Sustainability

Competition from global commodity markets creates pressures for local dairy operations to expand production that increases environmental impacts. Mitigating these impacts and building of infrastructure for managing higher volumes of manure increases costs for farmers. Environmental sustainability is both a challenge and an opportunity for local agriculture and the larger community.

Climate Change

Climate change presents both an opportunity and challenge for agriculture in CNY. Growing seasons are likely to expand as the region enjoys favorable environmental resources such as high-quality soils and abundant precipitation [29]. The agriculture sector of CNY is already experiencing impacts of more extreme climate events. Fruit crops are particularly vulnerable to a changing climate. The increasing incidents of harmful algal blooms point to the complexity of the challenges and the need for comprehensive planning efforts [30].

"[Manure] is just a cost of doing business. And it drives land acquisition. So, it's a challenge but we don't have a lot of control . . . something we just need to deal with," -- Large Dairy Farmer



The productive rural landscape is disconnected from local consumers.

Central New York is an important agricultural region and farms appear to dominate the landscape. Yet in the midst of this productive region, large portions of the population do not have adequate access to food.

The majority of local producers focus on commodity crops for export as opposed to growing for local markets and consumers. This is less a choice than an economic necessity to respond to prices and markets of global commodities. As a result, there has been little incentive for maintaining or rebuilding the infrastructure for local distribution and markets that would connect producers with local consumers and respond to serious gaps in food access.

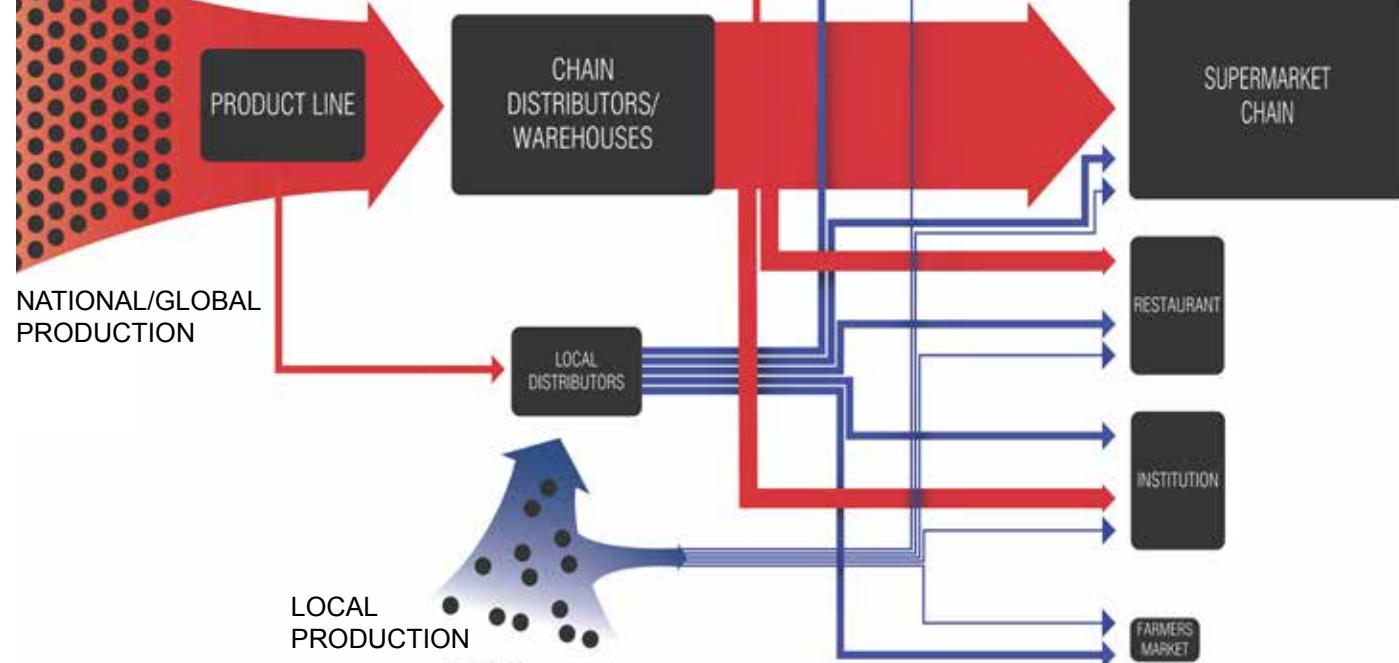
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distributing

"When I was a kid . . . Grocery stores didn't have their own supply chains. They relied on the regional market . . . In some instances, we would deliver directly to the store. Now they all have their own distribution centers,"
-- Food Distributor

"We are tracking everything every day. We are dealing with perishable product. From the time it's harvested it's dying. It's all time sensitive. If my lettuce doesn't arrive on time my agreement is done,"
-- Food Broker



DISTRIBUTING

Introduction

Moving food from field to market requires coordinated efforts to store, transport, and distribute it to processors, restaurants, institutions, markets, and other destinations. The pathways that food travels require extensive infrastructure, including highways, warehouses, and rail lines that shape the basic structure of our cities and regions. Distribution technologies of railroads, air-freight, refrigeration, climate-controlled packaging, and just-in-time tracking systems have expanded the boundaries of distribution from local regions to source food from a global foodshed. As this global system delivers an abundance of foods for many, it can also reduce the viability of local producers and increase “food miles” that consume greater amounts of energy [1].

Global Food distribution systems directly impact:

- **Year-round availability:** demand for fresh produce outside of local growing seasons.
- **Food safety and security:** ensuring food is safe from contamination or food-borne illness.
- **Energy consumption:** the infrastructure to support food movement consumes vast amounts of energy.
- **Scale and viability of regional farms:** producers are expected to provide food of consistent quality and quantity to ever larger distribution networks.
- **Transparency of the food system:** as food systems expand geographically, consumer awareness of where food comes often decreases.
- **Access and participation in the system:** expansive food systems with fewer distribution channels narrow who controls decision-making within food systems.

Distribution is the number one thing on everyone's list. We are all small business owners, the farmers and the restaurants. How do we actually make distribution work?

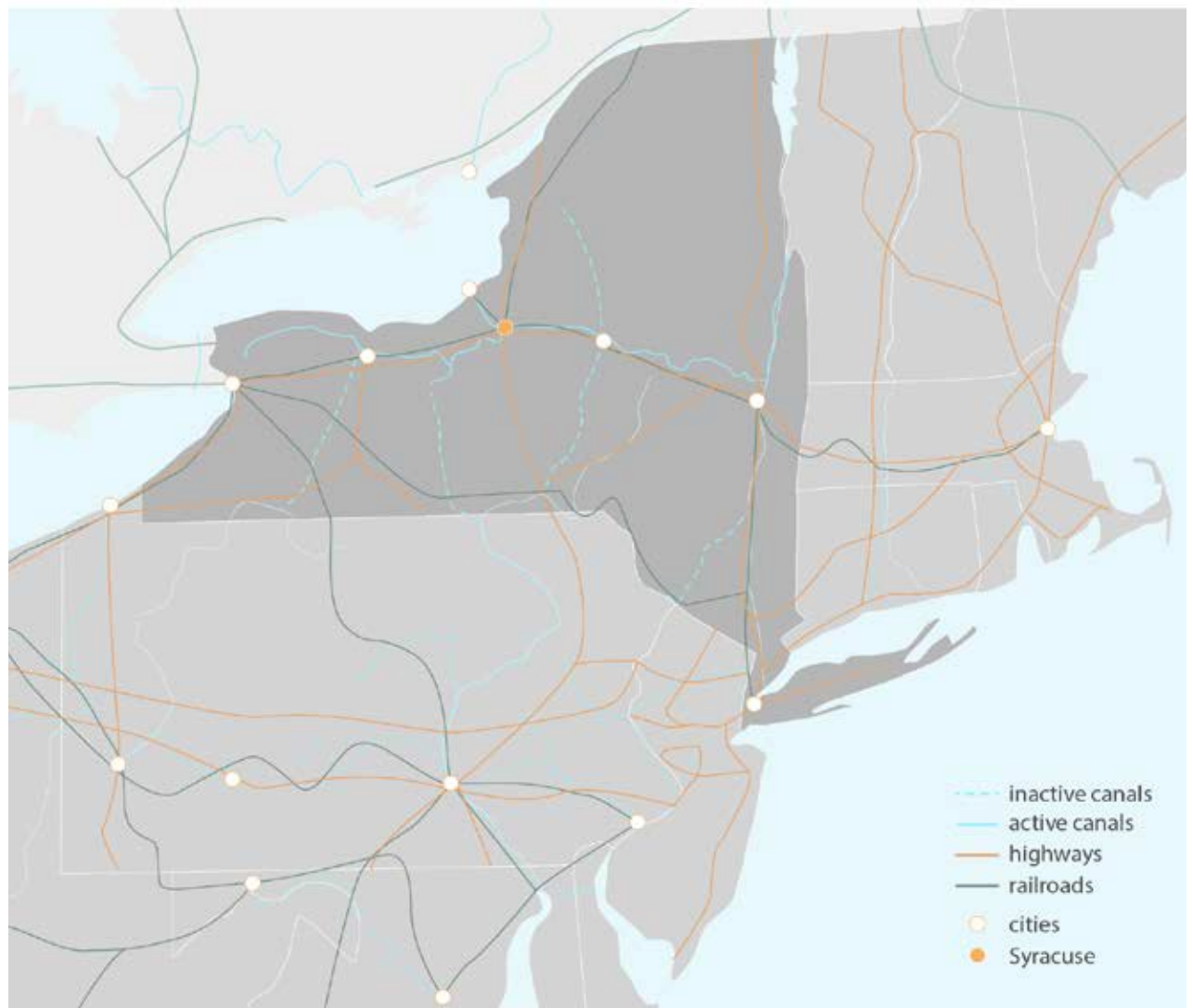
-- Local Food Advocate

Distribution Assets

Syracuse is an important distribution hub for CNY and the Northeast

Syracuse, the largest distribution hub in CNY, is located at a crossroads of historic transportation infrastructure that continues to be critical today. In the 19th century, the Erie Canal linked CNY's salt industry and farms with the nation and global markets, and brought in agricultural commodities from the Midwest. Syracuse was a primary distribution hub.

Today the New York State Thruway runs through CNY, echoing the east-west connection of the historic Erie Canal. Interstate 81 connects Syracuse with markets to the north and south. This positions CNY farms and food manufacturers just hours away from major markets – New York, Philadelphia, Boston, Toronto, and Montreal – and the more than 56 million residents in the Northeast, a significant asset for regional producers, processors, and distributors [2].



The Central New York Regional Market was a 1930's WPA project.

"Originally in the 1930s this was a main reason to start the market. To create a hub to bring foods into CNY. And not just local foods. That's why all the train tracks. At one point 50% of all food in CNY came through this facility. But times have changed. It's still a way for local foods to get into the market. That's our strength."

-- Regional Market Manager

The numbers:

Onondaga County[3]

39

Wholesale distribution establishments

1,851

Number of employees

\$147,348,000

Annual payroll in food distribution

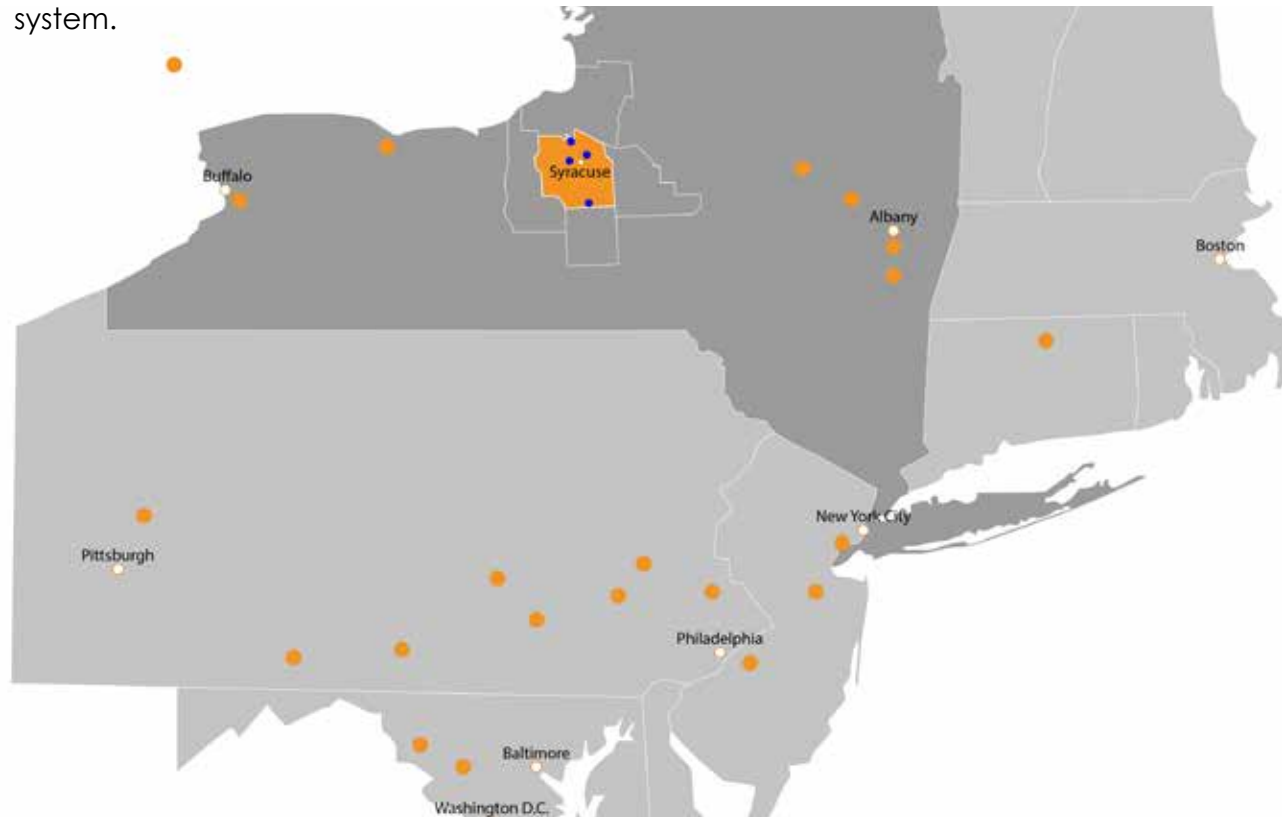
\$4,965,162,000

Sales by distributors and wholesalers

Distribution has the potential to make a significant contribution to the regional economy

Syracuse's unique geographic situation and the layers of infrastructure developed over time facilitate a large volume of economic activity in the food distribution sector. Yet, the distribution sector employs less than 3% of all the people who work in the food system in Onondaga County [4]. This relatively small workforce moves billions of dollars worth in annual sales, shipments, and receipts through the county, while capturing only a small portion of this economic activity as profit in the local food system.

In addition to numerous regional distributors, several national and one international corporation have located food distribution centers (DCs) in Onondaga County that serve retail outlets beyond Central New York [5]. The only nationwide distributor for convenience stores has located one of its 22 distribution centers in Onondaga County [6].



Regional Distribution Centers (DC) for private grocery chains and food service corporations.

I started to see it as a supply chain issue. We have local foods, but getting it from A to B is a challenge,
Not-For-Profit Feeding Program Director



A diversity of distribution networks serve the needs of producers, markets and communities

Beyond the large-scale privatized food supply chains, Central New York also has a set of other food distribution networks that operate at the regional or local scale to serve distinct communities and needs:

- **Public Space and regional distribution:** Syracuse and the region have benefitted from the Central New York Regional Market Authority (CNYRMA). Established in 1938 the CNYRMA warehouses are home to distribution businesses, many of which have operated for generations. Additionally, an enormous twice-weekly onsite retail market provides space for producers, distributors, and the public, maintaining important knowledge and social capital [7].
- **Emergency food distribution:** The Food Bank of CNY has developed an extensive emergency food distribution system that serves an 11-county area, moving 14 million pounds of food annually [8].
- **Institutional food distribution:** CNY is home to many large institutions – hospitals, universities, businesses, and agencies – all consuming extensive quantities of food, and working towards more integration into the regional food system.
- **Independent businesses:** a number of local businesses have figured out how to remain viable in the global supply system by serving niche markets, filling gaps within existing distribution networks, and taking advantage of regional marketing opportunities. Additionally, regional farmers participate in wide variety of distribution channels.

Apples to Apples: National v. Local Supply Chains

A USDA study compared how food moves from farms to consumers in mainstream versus direct market food supply chains. One of the case studies looked at the supply chains for apples in Syracuse: comparing apples of a regional supermarket with those sold at the CNY Regional Market. The size, structure, and performance of the two systems differed in key ways:

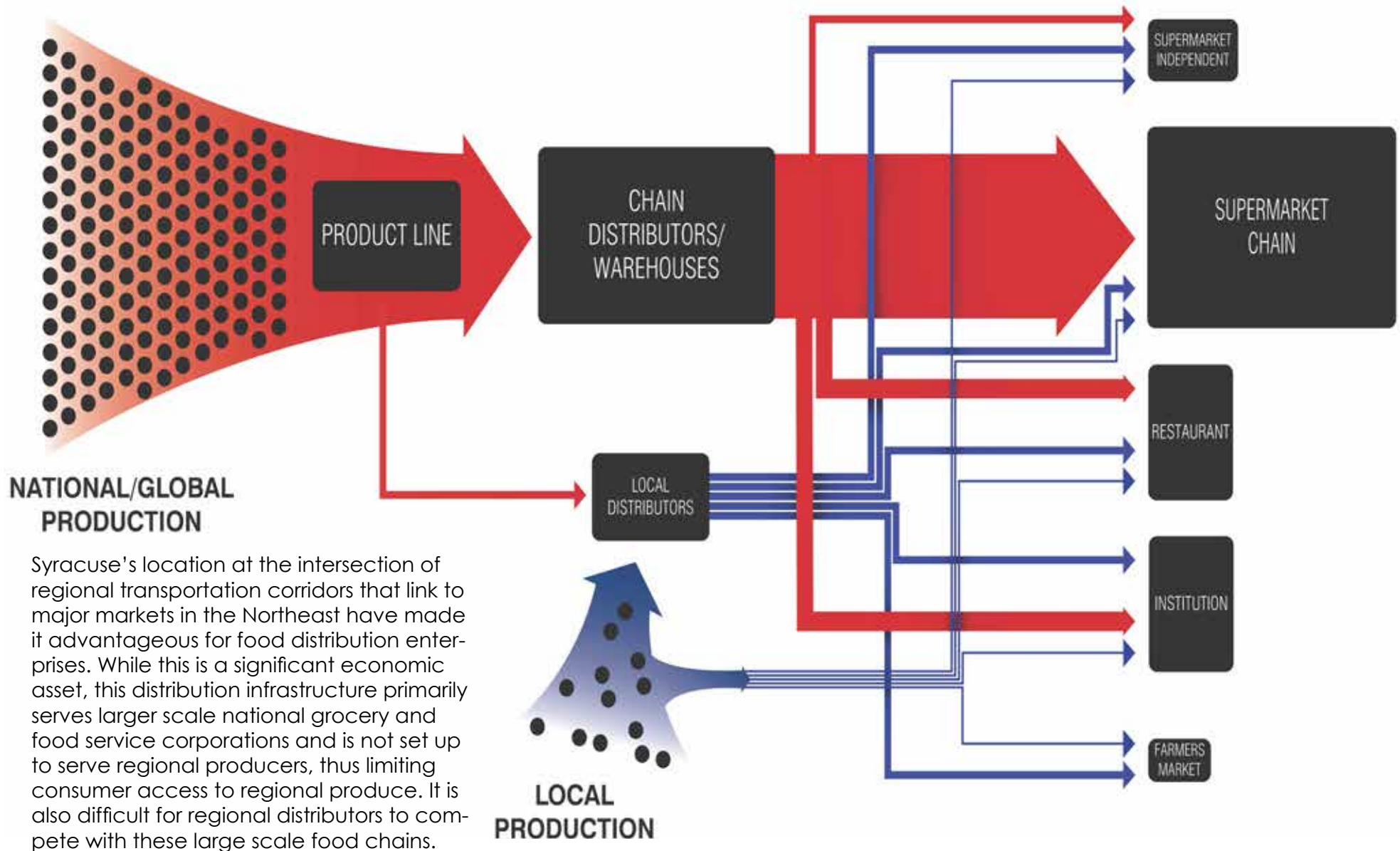
- The supermarket relied on a vertically integrated grower/packer/shipper distribution system. 3 of the 5 apple suppliers were from Washington State.
- Producer share of the retail dollar decreased with distance to market.
- Transparency – the direct market local supply chain provided the most information to consumers about who produced the apples and where.
- Energy efficiency -- Apples supplied by mainstream channel required more fuel consumption than did direct marketing.

The study concluded that the local system is more fuel efficient, transparent, and is more profitable for local producers. However, it also found that the mainstream supply chain and the direct market chain were mutually supportive. The NY apple sector offers a wide variety of products to consumers regionally and nationally. As a result, it has developed the postharvest infrastructure (e.g., packing, shipping, short- and long-term storage) and marketing expertise to support distribution of apples from local farms to diverse local markets and areas outside the region. [9]



Distribution Challenges

Global and national scale food chains have impacted the regional distribution infrastructure.



Large-scale privatization and consolidation across food chains diminishes public space in the distribution system

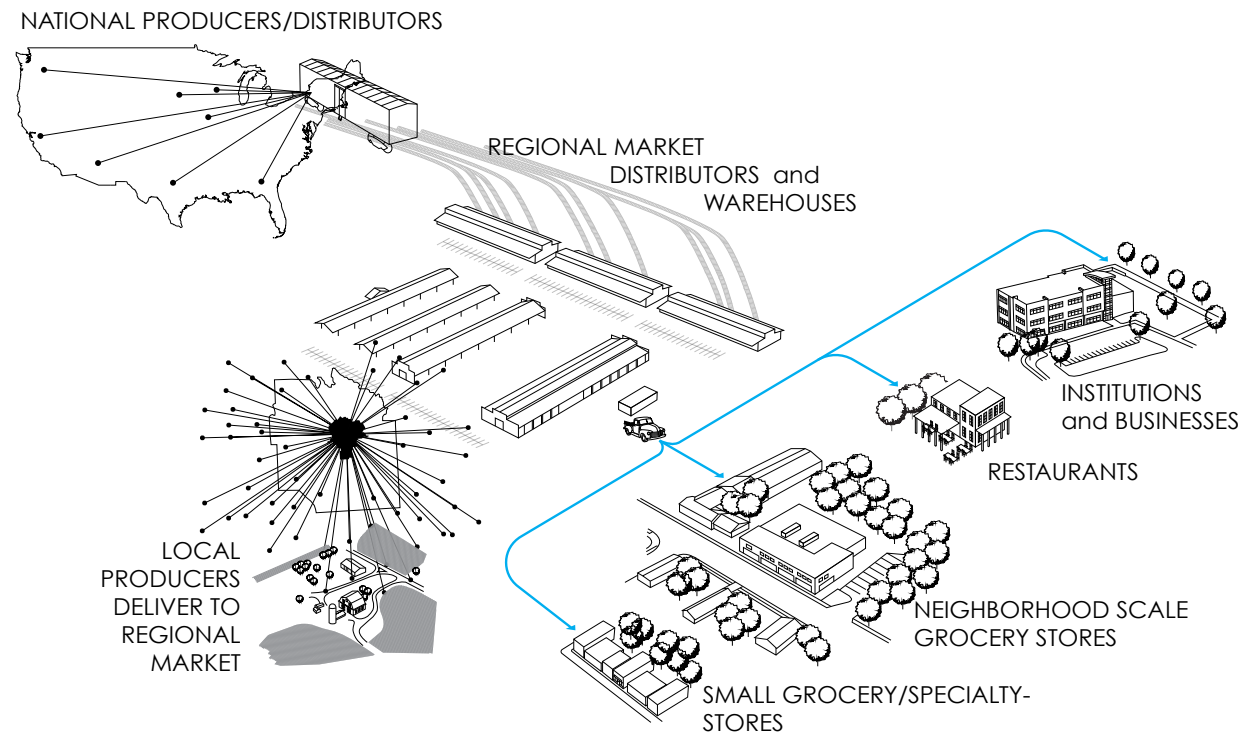
Before the 1960's the public space of the CNY Regional Market Authority (CNYRMA) was the hub for food distribution and it provided infrastructure for many independent regional distributors serving diverse markets [10]. Today the majority of food distribution goes through private channels. Supermarket chains and food service corporations now manage their own distribution centers. This has reduced the numbers of independent distributors and brokers and makes it more difficult for local producers to access distribution channels.

Long-distance networks reduce transparency and impact environmental sustainability and social justice

Complex, long-distance food chains obscure the environmental and human costs of food production. Consumers in CNY are disconnected from the environmental impacts and social justice issues of workers in the Salinas Valley, where the majority of lettuce and other greens are produced. There is the potential for local distribution networks to increase the transparency of information about where and how food is produced.

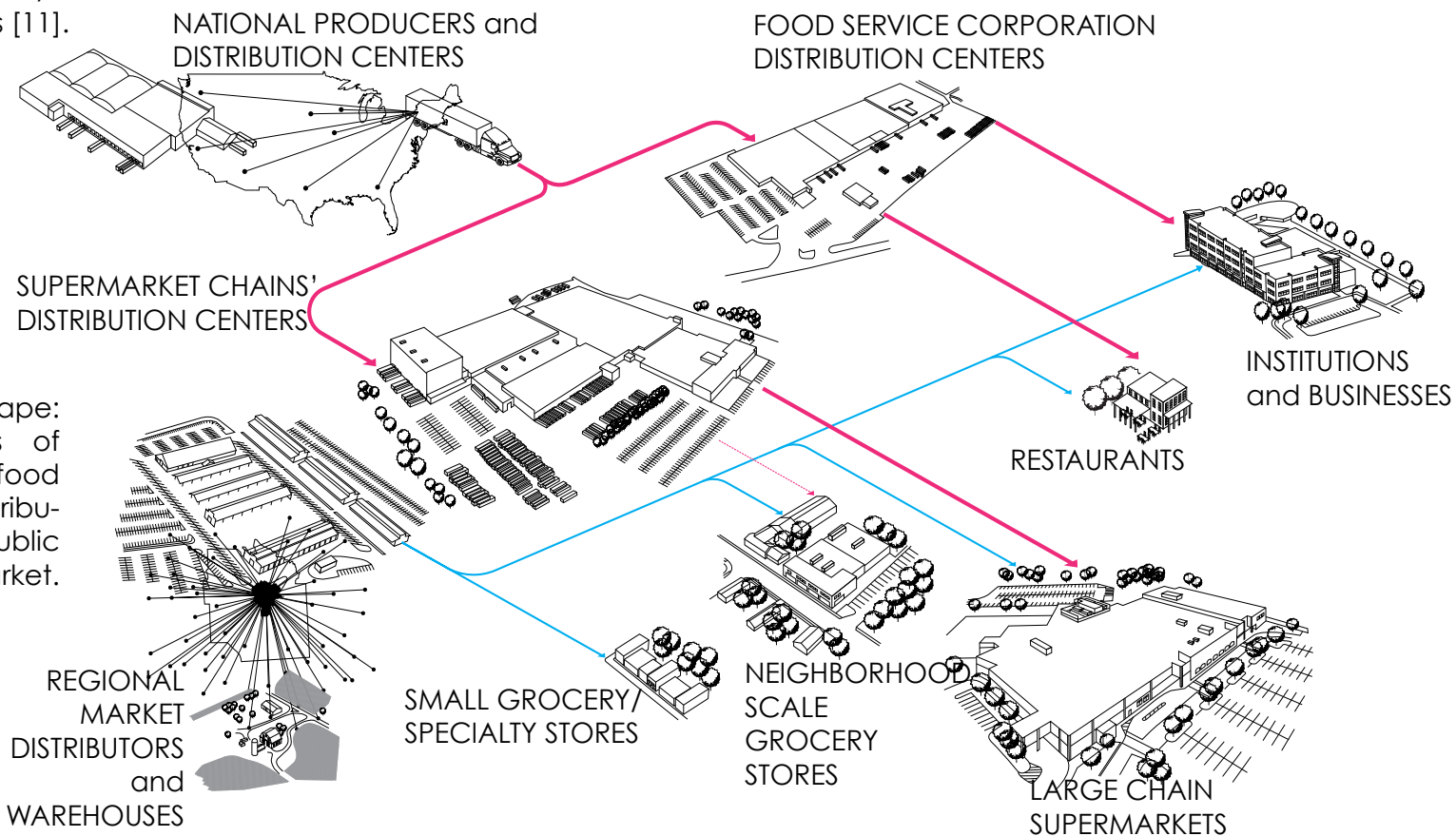
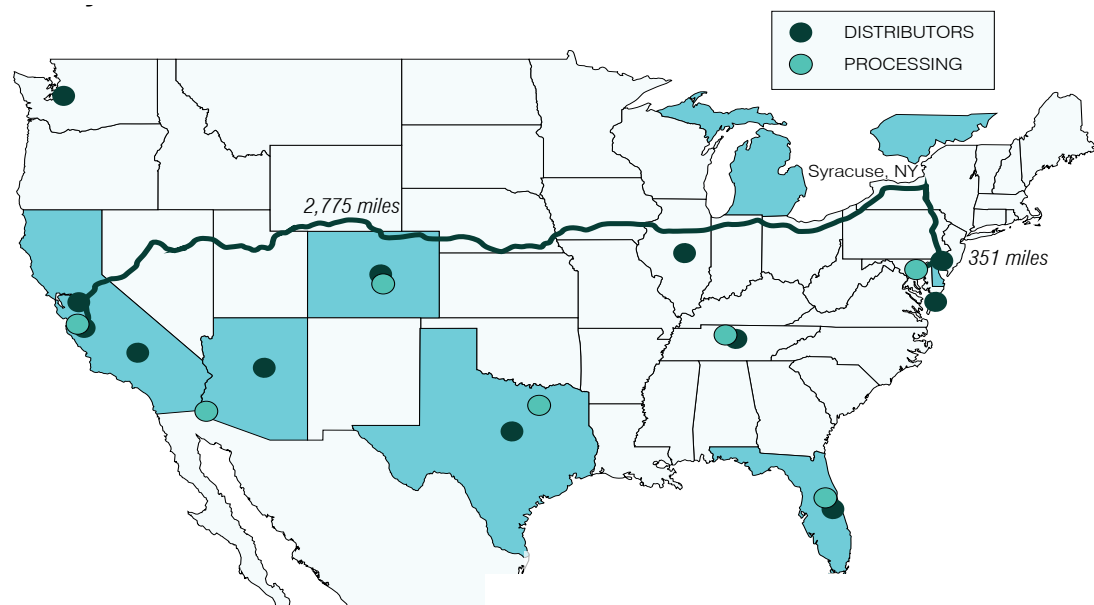


Many small-scale distributors sourced produce at the Central New York Regional Market, c. 1940's.
Photo Courtesy of CNYRMA



Historic Distribution Landscape: The CNY Regional Market Authority is a critical public space in the food system. This map of the pre-1970s distribution through the CNY Regional Market shows that the majority of food came through the public space of the Regional Market Authority.

Map of production and distribution of greens from Taylor Farms. The majority of food distributed in Central New York comes through vertically integrated food chains such as Taylor Farms based out of California. This corporation is the world's largest aggregator, processor, and distributor of fresh cut vegetables and salad mixes that appear in numerous groceries and restaurants throughout CNY. They contract with over 100 producers in the Salinas Valley of California as well as producers in other regions of the US and Mexico in order to deliver produce year-round. Such national scale distribution chains have impacted the viability of local producers as well as distributors [11].



Current distribution landscape: Private distribution channels of supermarket chains and food service corporations own distribution centers, bypassing the public space of the CNY Regional Market.



"The distribution network is really tough, especially for smaller farmers . . . I see smaller stores trying to get local product and having a tough time doing it and friends who are farmers who are frustrated they cannot get into the stores,"

-- Small Town Mayor

On-farm warehouse. Some farmers have developed their own distribution infrastructure adding warehouse storage, fleets of trucks, and staff time to distribute their produce. With the loss of regional infrastructure, farmers, restaurants, independent grocers, and others have resorted to creating their own distribution networks.

Rebuilding regional distribution infrastructure faces multiple challenges

As demand for local produce increases, there are incentives for rebuilding and scaling up the infrastructure of local food aggregation and distribution. Producers also receive a greater share of revenue in local food supply chains than from mainstream chains [12]. While many individual farms have developed their own direct market channels, they often cannot meet the volumes and consistency required for institutions or larger markets. Current aggregators of local produce only have the capacity to serve niche or specialty markets. Stakeholders identified the need for aggregation at a larger scale and capacity that would help expand markets and competitiveness for individual farmers. A strong regional distribution will benefit regional producers by increasing market access.

- *Market competition*

While CNY is close enough to distribute to millions of potential consumers in the Northeast, the competition is significant and results in lower prices. As one local food distributor describes it: *"It's a market that absorbs product only if prices are low."*

- *Institutional barriers*

Many institutions would like to serve more fresh local food. However, contract structures, consistency, and the lack of local aggregating infrastructure limit this potential. Variability and diversity of locally sourced products requires different institutional practices including new types of contracts and managing multiple accounts, as well as a different scale of physical infrastructure.

- *Food safety*

Access to markets is in part dependent upon food distributors following best food safety practices. Increasingly, retailers expect food distributors to follow Good Agricultural Practices (GAP) and/or Good Handling Practices (GHP). Independent distributors must be GAP certified and source only from producers with GAP certification. Distributors (and producers) need to be able to more easily achieve certification.

- *Workforce development*

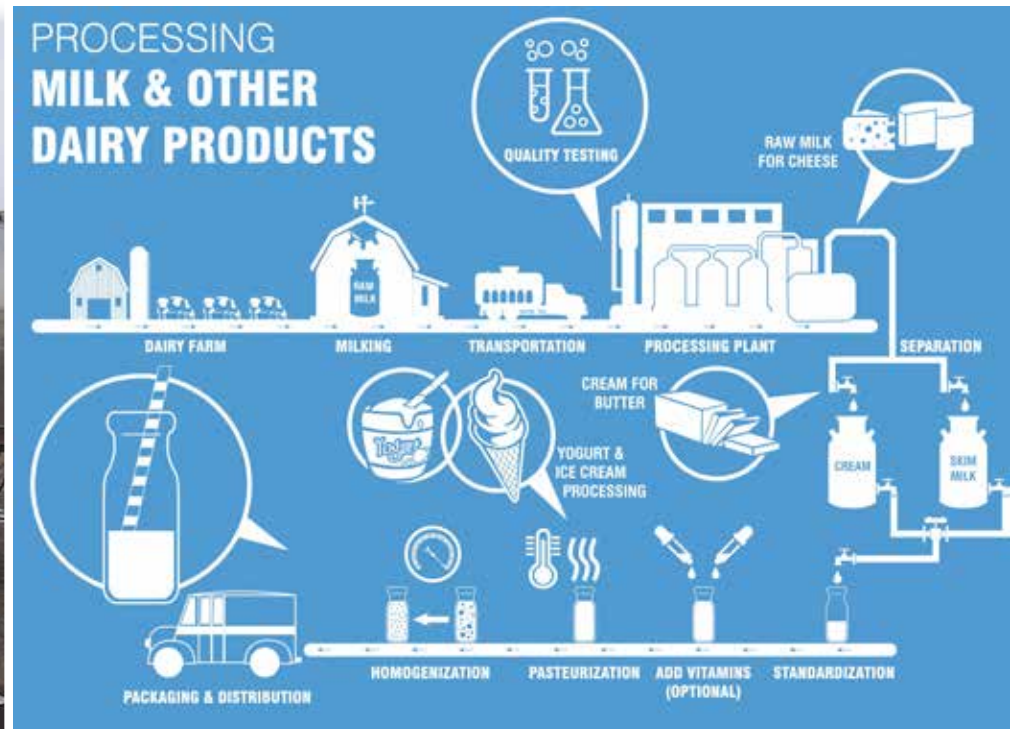
Stakeholders interviewed for this project expressed a need for employees at all levels of food distribution enterprises. Handling the logistics of fresh produce requires specific knowledge and skills including a work schedule that often begins in the early morning hours.



A large industrial food processing facility with stainless steel tanks and pipes. The scene is dimly lit, with light coming from large windows in the background. An American flag is visible hanging from the ceiling. The word "processing" is overlaid in the center.

processing

*This is where the county could
really strengthen local agriculture
... we need more processing,"
Food Market Manager*



In CNY the agricultural landscape of dairy farms would not exist without the support of processing facilities for raw milk. Because milk is perishable, dairy processing needs to be close to the farms and is less susceptible to relocating out of the region.

PROCESSING

Introduction

Pickling, drying, fermenting, milling, baking, rendering, pasteurizing, and the many other methods of processing food all transform raw ingredients into new products. It is one of the most important but least visible sectors of the food system. Processing is critical infrastructure that producers depend on.

Food processing infrastructure plays an important role in the larger food system:

- *Preserving and packaging* to extend the shelf-life and distribution range of foods
- *Adding Value* to raw agricultural products
- *Creating market opportunities* for producers

Assets of Processing



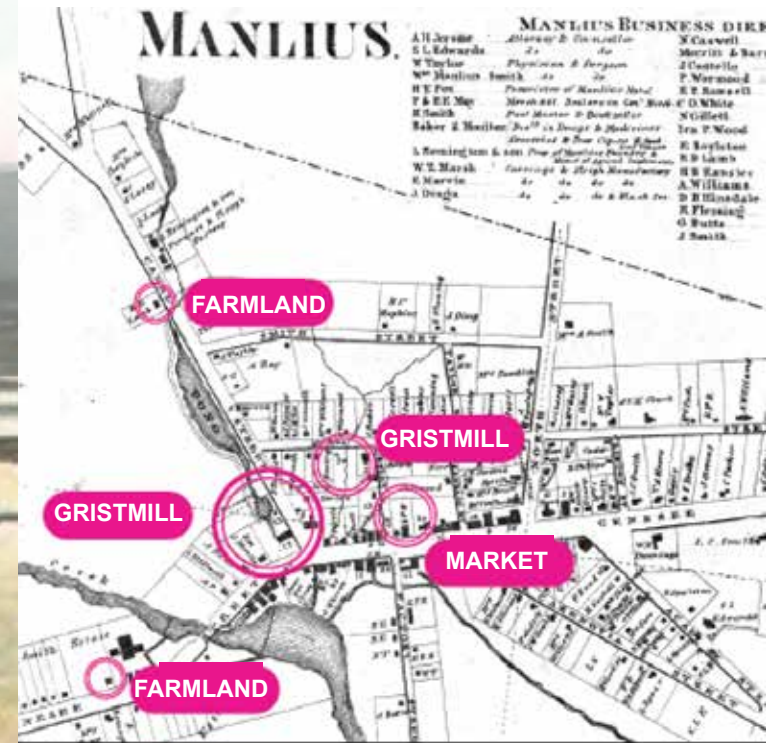
Salt evaporation process near Onondaga Lake
(Postcard, early 1900's. Hugh G. Leighton Co., Portland, ME., no date)

Food processing has been a primary driver of the development of Syracuse and CNY.

Syracuse, the "Salt City," grew around the value of its salt resources at a time when salt itself was one the primary means of preserving food. Gristmills for grinding grains were necessary infrastructure for any farming settlement and breweries once lined the Erie Canal [1].

CNY has the environmental resources necessary for food processing

Food processing often requires a significant amount of water, which is one of the prime assets of CNY. This also requires infrastructure improvements to ensure adequate capacity and treatment of wastewater from food processing.



Early European settlement depended on food processing such as milling grain for flour. The map above shows the grist mills that helped establish the Town of Manlius in Onondaga County.
(annotated map by Gena Morgis)

The Numbers: Onondaga County [2]

150

Number of food processors

1,500

jobs in food processing

\$438,000,000

Annual sales

Food processing and manufacturing is a key part of the local economy.

There are over 150 food processors/manufacturers employing 1,500 people with annual sales over \$438 million in Onondaga County, which is more than double the volume of sales in the agricultural sector (\$178 million) [3]. Well over half of the economic impact of processing is concentrated in the dairy industry [4]. Greek yogurt, which has major processing facilities in CNY, requires three times the amount of milk used in traditional yogurt production, sharply increasing the market for locally produced milk and creating jobs. Excluding dairy, the majority of processors are small operations such as bakeries or ice cream stands, with fewer than five employees [5].

A resurgence of small-scale processors diversifies local production and provides economic opportunities.

Much of this value-added processing occurs on farms, so that production and processing are integrated. With this connection entrepreneurs can capture more value. Growing consumer demand is creating opportunity for small processors making products such as maple syrup, ice cream, and baked goods. This increases demand for more diverse agricultural products. Breweries, distilleries and other craft beverage producers are emerging as an important industry and a catalyst for the revival of hops and barley growing in the region.



Policy that Works: Farm Brewery Law: economic development and agritourism

In 2012, New York State passed legislation that created a Farm Brewery License, which decreases or eliminates many of the costs associated with beer production when using New York State grown ingredients. The policy supports economic development in NYS through growth of the craft beer industry and related tourism, which in turn increases the demand for New York agricultural products.

Some of the benefits to Farm Brewery License holders include lower license and label fees, the ability to sell other New York State beer, wine and liquor, as well as the ability to sell the brewery's own beer by the glass – which generally produces the greatest sales returns for breweries.

The legislation was modeled after the 1976 Farm Winery Act which spurred growth of the state's wine industry. The law has changed the landscape of the region by increasing the number of breweries, malt houses, hops processing facilities, and acres of hops and barley planted. The policy provides opportunities for both urban and rural communities and illustrates the positive impact of effective food system policy[6].

Left: 3 Brothers Hops
Below: Heritage Hill Farmstead Brewery



Challenges for Processing

The potential for growth in this category is strong and any expansion of processing increases the diversity and viability of local agricultural production. However, there are critical barriers to rebuilding infrastructure and growth in this sector of the food system.



Chipscape: Supermarket shelfspace is dominated by multinational corporations, making it difficult for local manufacturers to compete. FritoLay corporation controls 59% of the savory snack food market and, based on a survey of a local supermarket aisles, these products occupy 62% of the physical shelfspace compared to only 5% of area occupied by a local processor.

Multinational corporations have grown in scale, dominating retail space.

This has the following consequences for regional food manufacturing:

- Loss of local small-scale food processing companies and infrastructure such as the disappearance of mills, vegetable processors, and meat packing.
- Multinational control over locations, hiring, and plant closures.

The impacts of global food processing chains are felt not only within the processing sector but have impacts on the producers that supply processing. Dairy farmers, for example, must compete with ever-larger farms. This impacts prices and in turn shapes production methods including farm size, animal welfare, and labor practices.

There are barriers to scaling-up local food manufacturing enterprises

Scaling-up new food manufacturing enterprises requires significant investments in equipment, market analysis, business management, and trained workers. Co-ordinated support from local government and nonprofit sectors is necessary to initiate and sustain these efforts.

The region has lost processing infrastructure.

Central New York has lost vegetable processing, grain milling operations and other processing infrastructure that serves local producers. This is most evident in meat processing, where the lack of slaughterhouses has limited the growth of local meat production just as the demand for local meats has increased [7].



I would love to do that project some-day . . . source locally, process locally, retail locally. On an industrial scale it's really difficult,"
--Food Processor

Local processing is disconnected from local production.

Manufacturing food products in a globalized market requires sourcing from large scale producers that can consistently deliver large volumes of uniform ingredients. Excluding dairy, the larger food processors in the region rely on imported agricultural products instead of sourcing from regional producers.

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markets

Farmers' markets are the face of direct market agriculture. If you want to get to know your farmers, that's the best place to go . . .
Farmers' Market Advocate



The public market at Clinton Square was a vital part of the economic and social life of Syracuse and Central New York. In 1899 the market was moved to the Northside of Syracuse. A public market returned to Clinton Square in 1973. (photo courtesy of the Onondaga County Historical Association)



MARKETS

Introduction

The importance of markets goes beyond selling food. They are the primary point of contact between consumers and all other sectors of the food system. As gathering places, markets bring together producers, distributors, processors and consumers for both economic and social exchange. Markets are a key part of community food environments that influence public health, economic participation, and the quality of life.

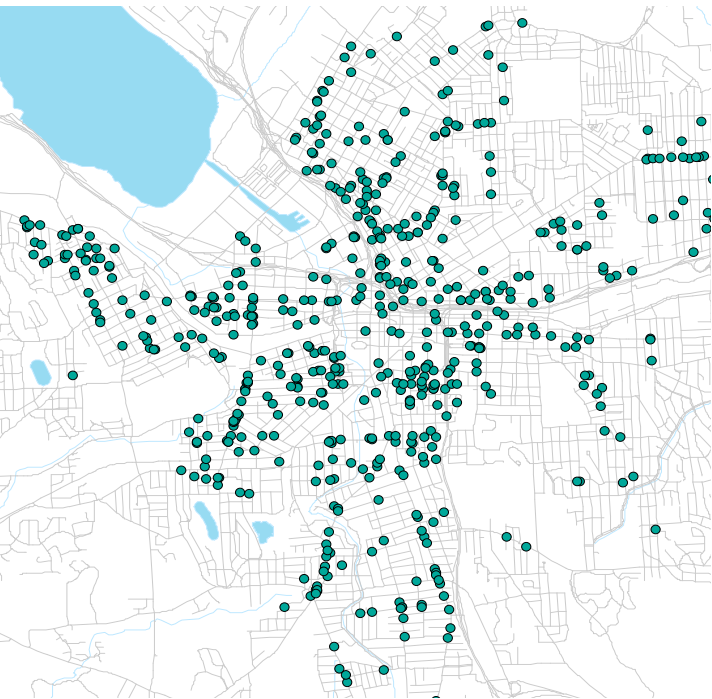
The different types of markets – corner stores, supermarkets and grocery stores, cooperatives, farmers' markets, roadside stands, mobile vendors or pick up locations for Community Supported Agriculture (CSA) – vary in size, location, supply chain structure, and costs of products. In addition to sales at physical locations, there are other forms of markets like CSAs and direct delivery to consumers. We can assess how well the different types of markets perform in relation to a set of key objectives:

- **Accessibility** – The geographic location in relation to consumers and their ability to travel to a market.
- **Affordability** – The relationship between prices and consumers' purchasing power.
- **Availability** – The presence of a variety of foods that meet nutritional requirements and cultural preferences.
- **Inclusive economic participation** – Economic equity depends on the degree to which producers, processors, distributors, and consumers have access to markets.
- **Environmental impacts** – The energy embedded in food miles (both in food supply chain and in consumer travel), market energy needs, and impacts of market on ecological systems (land use change, storm water runoff, waste production).
- **Transparency** – The availability of information about where and how food is produced and distributed and connections within the food supply system.

Assets of Markets

Food markets are an essential and integral part of community life and health

In the 1930s there was a central farmers' market in the City of Syracuse and a diverse array of food stores were embedded in every neighborhood and town throughout Central New York. Today food marketing has become increasingly privatized and concentrated in just a few large-scale retail supermarket chains.



Food Store locations, 1938. Syracuse

Today, Syracuse and Onondaga County are served by 370 food markets, approximately half of which are grocery stores and supermarkets [1]. An almost equal number are gas stations, convenience, and corner stores. This number represents significantly fewer stores than the 1970s, before the growth of large supermarket retail chains.

Food markets in Onondaga County account for over \$1 billion in sales annually. The markets sector includes over 8,000 jobs, or over a quarter of jobs within the food system (27%) [2].



Market on Oswego Ave. Syracuse, 1930's
(Photo courtesy of Onondaga Historical Association)

The numbers:

Onondaga County [3]

21

Percentage of farms that sell directly to consumers

370

Retail food markets

8,037

People employed in retail food markets

\$1,332,487,000

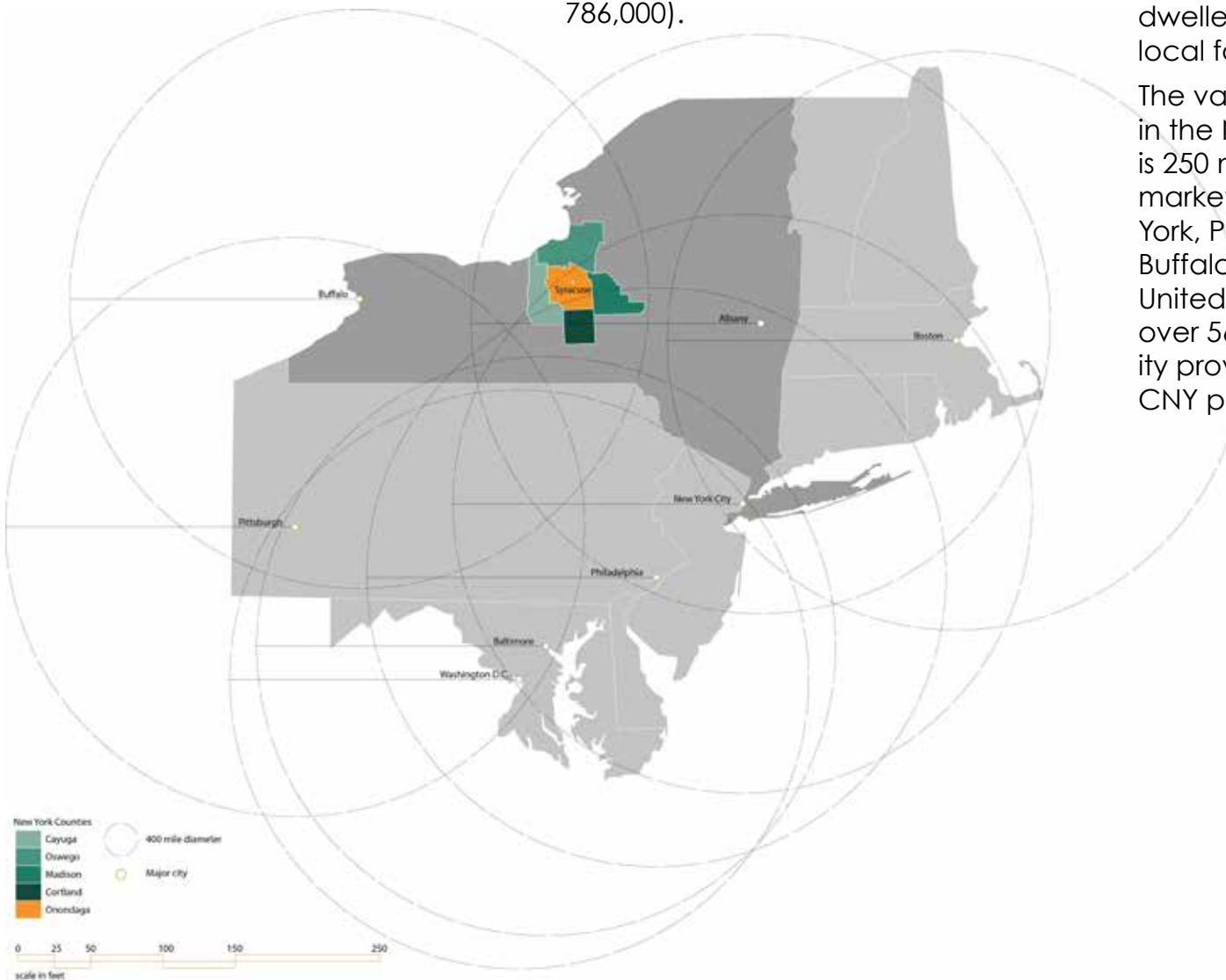
Total annual sales

The geographic location of the region provides excellent market opportunities for local farmers.

Syracuse (population approximately 145,000) is the largest urban center in the five CNY counties assessed by this report (total population approximately 786,000).

According to the USDA, the value of local food is highest in such metropolitan areas [4]. As an agricultural region, CNY has a built-in population of urban dwellers poised to increase demand for local food.

The value of local food is also highest in the Northeast [5]. Central New York is 250 miles or less from the major urban markets in the Northeast including New York, Philadelphia, Boston, Montreal, Buffalo, and Toronto. The northeastern United States alone has a population of over 56 million. For these cities, proximity provides marketing opportunities for CNY producers to market as “local.”



The Central New York Regional Market Authority (CNYRMA) is one of the most critical assets of the regional food system.

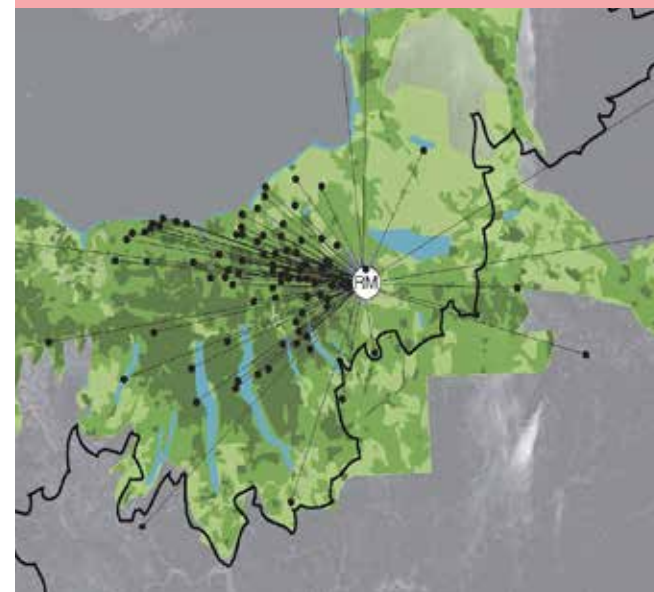
On Saturdays during the growing season this vibrant public space brings together regional farmers and distributors with a large volume of over 20,000 consumers and over 400 unique vendors. The flexible sheds provide protection from the weather and heat for year-round marketing.

The CNYRMA has gained national recognition as a hybrid market providing both direct marketing for farmers and warehousing for regional distributors; wholesale and retail are co-located at the Regional Market. Until relatively recently this diverse public facility has helped distribute and market the majority of food consumed in Syracuse and Onondaga County.



The Benefits of Public Markets:

- **Access to fresh healthy produce** – With relatively low startup costs, public markets address the failure of private retail markets to serve the need for healthy food access in all communities. Use of EBT cards at markets expands the value of farmers markets for both farmers and consumers.
- **Vibrant public space** – Diverse groups come together and build community.
- **Market access** – Direct market opportunity for small and medium-sized producers and processors
- **Incubators for enterprises** – Low overhead and contact with consumers provides an opening for new business ventures.
- **Added real estate value** – Public markets have a positive impact on the surrounding communities and businesses.



Map of locations of producers who sell at the CNYRMA

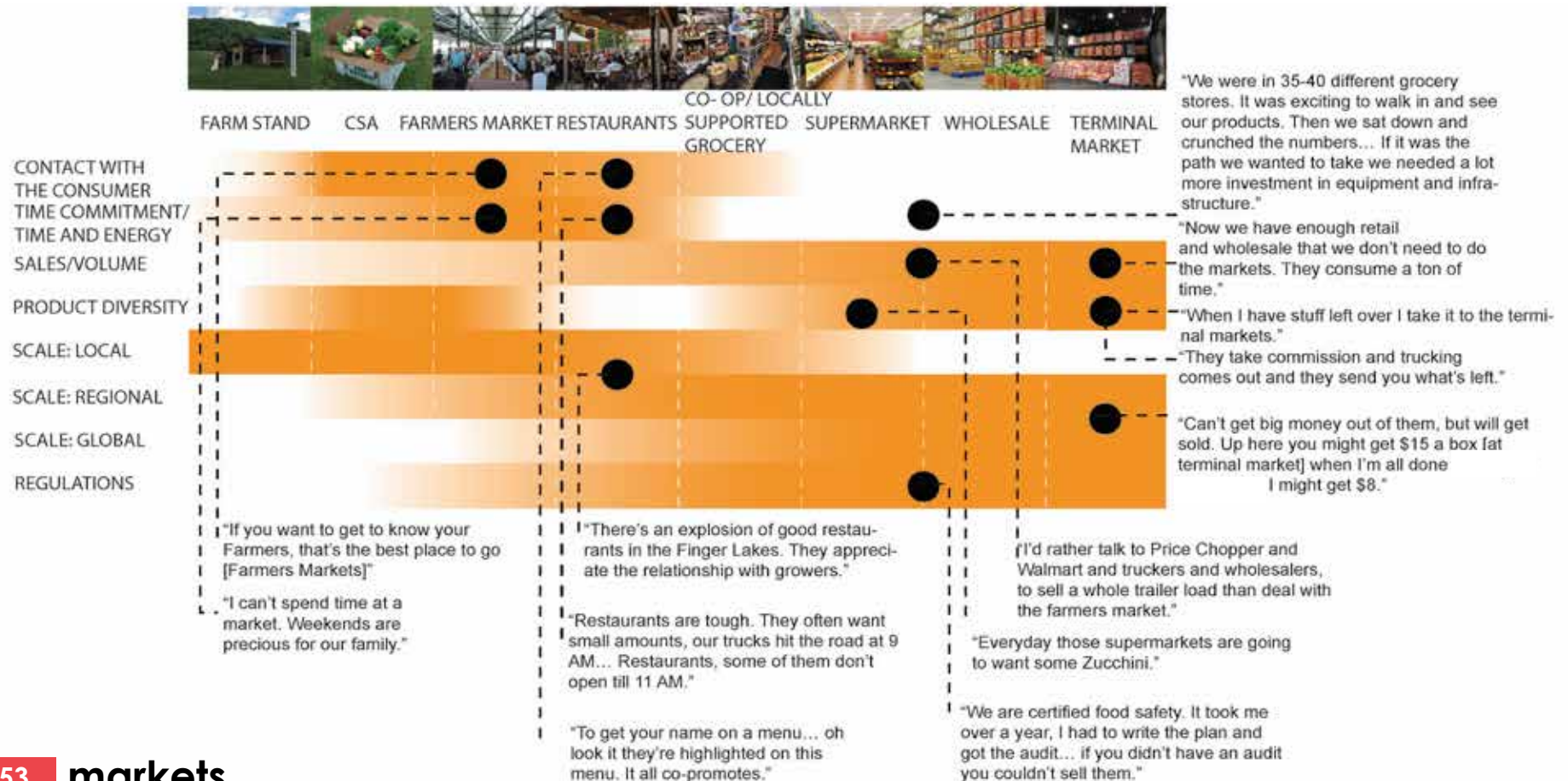
A diversity of market options supports a diversity of farm operations

For farmers, markets are a basic economic necessity. The type of market influences what farmers grow, at what scale they produce, and when. Farmers are innovators in exploring market options and changing

production methods to respond to shifting market opportunities. Some farmers have switched from commodity production to growing organically or for direct local markets. As CSAs have grown in popularity, they provide an additional avenue for direct sales. Other farmers have invested in infrastructure such as warehouses and trucks to scale up capacity to sell to larger supermarkets and retail outlets throughout the Northeast.

Decision Matrix

This matrix summarizes interviews with farmers about the factors that influence their decisions on where to market their produce. The intensity of orange indicates stronger values favoring different types of market spaces.



Direct sales and demand for local produce continue to grow

Increasingly, farmers are taking advantage of growing consumer interest in local foods and growing opportunities for direct market sales. Selling directly to consumers ensures more of the food dollar goes to the farmers [6]. In addition to farmers' markets, direct sales are growing through Community Supported Agriculture (CSA), restaurants, and institutions, such as Farm to School.



Store for direct marketing of local agricultural products at Heritage Hill Brewhouse.

The diversity of food cultures creates new market opportunities

Syracuse has historically benefitted from immigrant groups who brought their food cultures with them. As new American and refugee communities grow within the city there has been a rise in culture-specific grocers. These create new market opportunities for local producers.



Lombardi's Imports and Specialties Market on the Northside has been an important part of the food culture of Syracuse.



New American refugees learning direct marketing skills at the CNY Regional Market.



Challenges for Markets

A significant number of people live in food environments without access to healthy, affordable and culturally appropriate food options.

Access to a range of choice of affordable healthy food is a necessary component of every neighborhood. The reliance on the private market to serve this basic need has failed. Syracuse has significant disparities in food access because of the locations, number and types of food markets. Large areas of the city have been without a full-service grocery store since the 1970s, negatively impacting the health of generations of families [8]. Communities throughout the county have also lost full service grocery stores.

Full-Service Grocery Stores

Half mile buffer shown in green. Orange areas indicate low income, low access neighborhoods as defined by USDA Food Access Research Atlas.

(Based on Dec 18, 2020 updated USDA map [7])

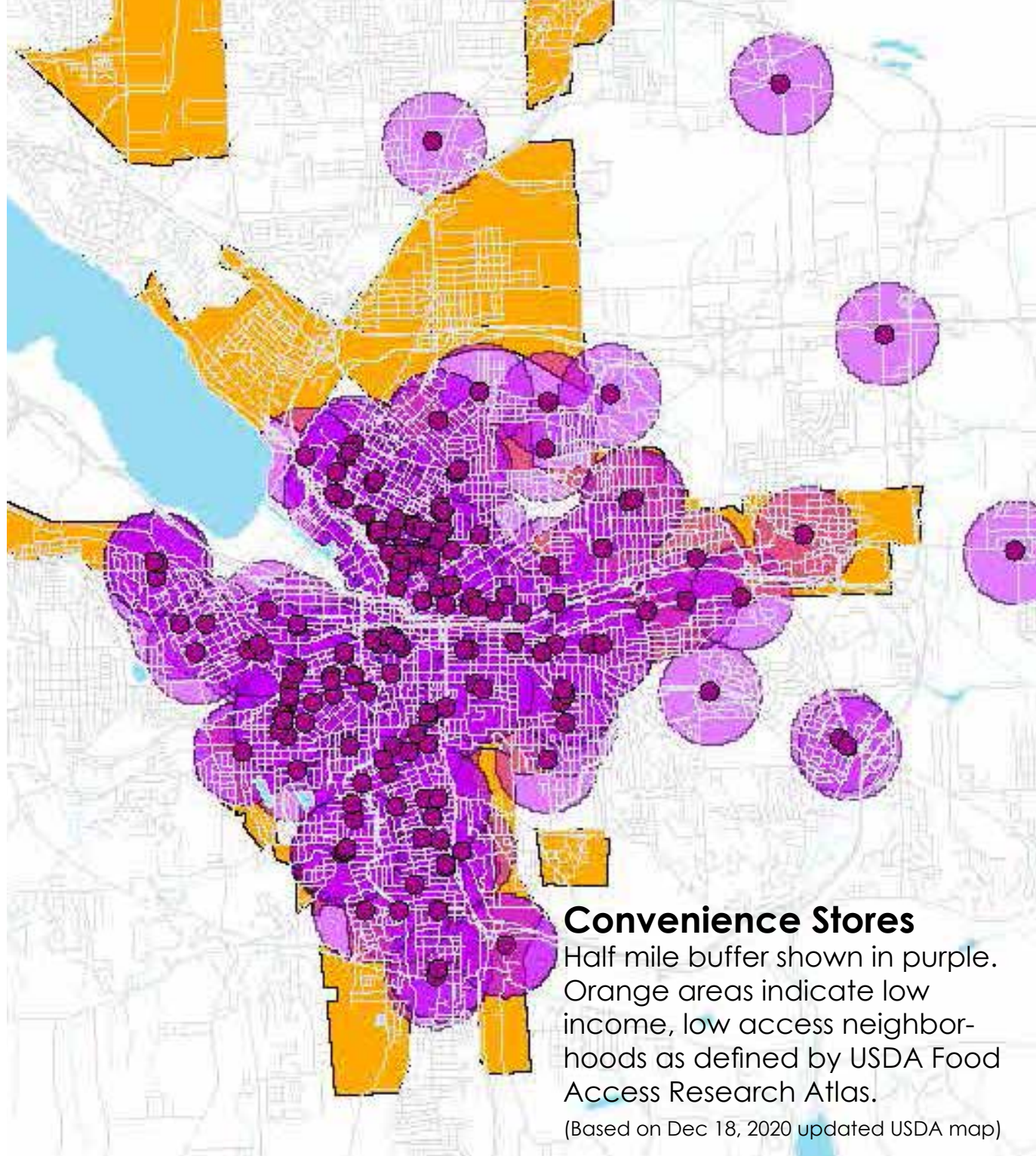


A new small grocery store in the village of Tully, NY.

The access issues and resulting health problems are well documented by local as well as national agencies including the Onondaga County Health Department and the U.S. Centers for Disease Control and Prevention. One public health study found a correlation between the lack of full-service grocery stores in Syracuse neighborhoods and low birth weight [9].

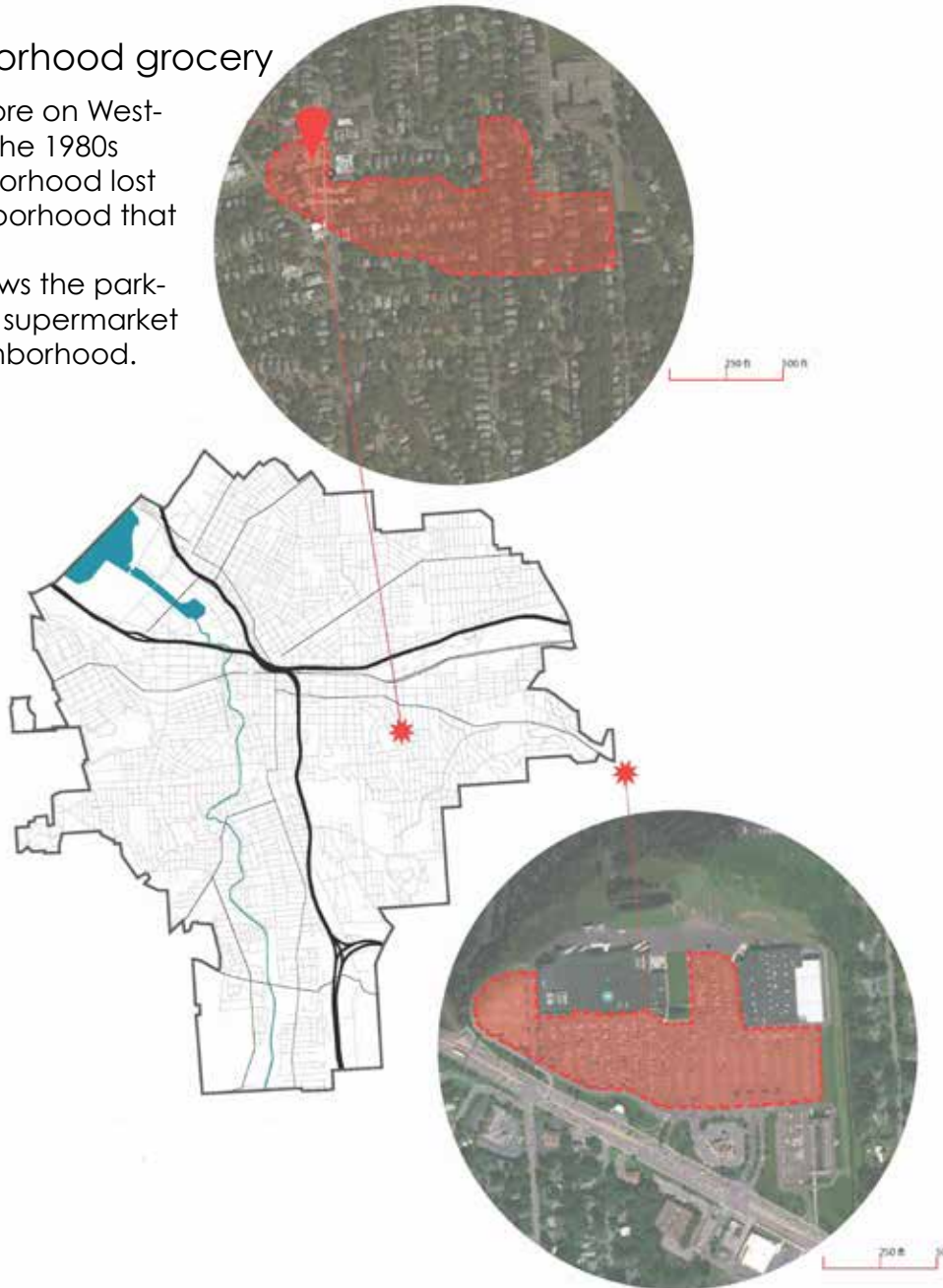
Living in Low Access food environments:

- Thousands of people in Syracuse and Onondaga County live in what the USDA defines as low access and low-income communities [10].
- What fills the gap? – When full-service grocery stores leave a community, convenience stores often fill in. These stores tend to be more expensive with more processed, high caloric foods and less fresh produce.
- Health impacts – Low access environments have higher incidents of chronic health problems including high blood pressure, high cholesterol, and heart disease.
- Adapting and coping strategies – In order to access fresh healthy food people in these environments have developed various strategies to get fresh healthy food, including long bus rides with multiple transfers, paying for special ride services, or sharing transportation with friends and family.



Loss of a neighborhood grocery

When the grocery store on Westcott street closed in the 1980s people in this neighborhood lost a store in their neighborhood that they could walk to. The aerial image shows the parking lot of a suburban supermarket overlaid on the neighborhood.



This suburban supermarket was built in 1969. It was expanded to over 150,000 square feet in the 1990s and the parking area, next to a wetland, tripled in size.

The scale and location of grocery stores are not integrated with neighborhoods

Grocery stores are essential community places. In the absence of public policy, retail corporations chose to abandon smaller scale neighborhood locations. Instead, big box supermarkets surrounded by parking lots are accessible almost exclusively by automobile. As a result, many rural communities and urban neighborhoods are without immediate access to affordable nutritious foods.

The loss of neighborhood markets is not only a problem for low-income communities.

- Since the 1970s, the size of supermarkets has increased, causing private retailers to abandon older and smaller locations that were integrated into the fabric of urban communities.
- New suburban retail locations are only accessible by automobile.
- Large parking lots increase storm water runoff.
- Food is further removed from the public landscape, increasing environmental impacts of storm water runoff and fossil fuel consumption.

"Market forces in the industry are deeming right size stores as not feasible . . . So that takes from not just that community, but from all neighboring communities. So . . . you're taking away from the other communities,"

-- Grocery Store Owner



Farmers face many barriers in getting their produce to local markets.

- Scaling up production – Going beyond the scale of farmers' markets, producers have to increase the volume and consistency of their produce to meet the requirements of grocery stores, institutions and other buyers.
- Lack of intermediate infrastructure/aggregating for farmers to access markets – The problems of volume and consistency could be solved with an aggregating facility, an intermediary that would serve the marketing needs of multiple producers. This would also provide necessary storage and packaging infrastructure.
- Food safety requirements – Farmers need training and infrastructure to meet new food safety requirements.
- Retail consolidation and distancing – Chain supermarket headquarters are often located outside the region, making direct communication difficult. Local producers are not competitive with national and global supply chains, which rely on scale of economy to set low prices.
- Competitive urban markets – While the region is close to the large urban markets of the Northeast, there is significant competition, which often keeps prices low.

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consuming

*Tell me what you eat and I
will tell you what you are,"
Jean Anthelme Brillat-Savarin*



CONSUMING



Introduction:

Eating connects us in the most personal way to all the relationships in the food system – the farms, environment, transportation infrastructure, processing facilities, markets and eating places. While eating seems like a matter of individual choice, the choices people have are influenced by the larger system, affecting where and what foods are available, at what price, and their nutritional quality. In Syracuse and Onondaga County significant disparities limit the choices that people have. This raises important issues of equity and social justice in the food system.

As eating is repeated over the course of the day, every day, and multiplied by each household in Central New York, it has cumulative economic, environmental, and public health impacts. Changes in consuming can influence production, processing, distribution, and marketing. The surge in popularity of Greek style yogurt, for instance, has significant impacts throughout the food system of Central New York,

increasing dairy production, providing jobs in processing plants, and influencing environmental regulations for confined feeding operations. This power of consuming is an effective means of making change.

To understand the role of consuming in food system planning it is important to assess:

- **Amount:** the basic volume and economic impact of food consumed each day in the city and county.
- **Health:** the types of food, nutritional qualities, and their impacts on public health.
- **Food Security:** the organizations, agencies, programs, and places that address the nutritional needs and degree of access in the community.
- **Food Cultures:** the knowledge and practices of different foodways that nourish diverse communities.
- **Eating Places:** where people eat together, the institutions, community kitchens, and commercial restaurants contribute to the economic and social life of communities.

Assets of Consuming

Food consumption is a primary driver of the local economy

It is hard to see the collective scale of consuming, which drives the whole food system. Every day, people in Onondaga County spend over 1/3 of their food budgets purchasing and consuming food outside the home [1]. This supports over 16,000 jobs in the county, which is over 57% of all jobs in the food system [2], the largest employment figures of any of the food system sectors.

Consumer demand for local food is increasing

Eating food sourced from local producers and processors is one of the most recent and significant consumer trends that can have a sizable impact on the regional food system. It is estimated that direct marketing of local food to restaurants, farmers markets, and institutions increased by 58% between 1992 and 2007 throughout the United States and it continues to increase [3]. In Onondaga County the percentage of farms selling directly to consumers increased from just over 8% in 2012 to 21% in 2017 [4]. Direct marketing is important as it allows farmers and other producers to keep a larger share of the food dollar.



The Onondaga Grown campaign developed by the Onondaga County Agriculture Council encourages people to choose local foods at markets, restaurants, and other venues.

The numbers:

Onondaga County

\$6,240

Average amount that individuals spend each year on food in Syracuse and Onondaga County [5]

16,000

Jobs created by the food service industry in Onondaga County [6]

24,000

Number of breakfasts and lunches served daily in the Syracuse School System [7]

2,198,775

Pounds of food consumed in Onondaga County each day [8]

\$787,000,000

Annual sales from restaurants, catering, cafeterias and other food service businesses in Onondaga County [9]

Eating places are an important part of the social life of the community.

The value of consuming food in public – be it at a sit-down restaurant, a coffee shop, a church dinner, or from take-out – extends beyond the economic to the social well-being of a community. Additionally, restaurants and cafeterias located within schools, workplaces, and institutions are important spaces for socializing. The community fostered in these environments is important for revitalizing neighborhoods and contributing to the social life in Syracuse and Onondaga County.



The Salt City Market provides a new public space and economic opportunities.

Many organizations, government agencies and individual efforts have developed an extensive network of feeding programs to address food insecurity.

The structural problems of economic disparities in Syracuse and Onondaga County impact the food security for thousands of people in the area [10]. At one level, government programs – including the Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children (WIC), National School Lunch Program (NSLP), and the School Breakfast Program (SBP) – address the food security needs of CNY. However, even people who benefit from these programs, as well others who don't qualify for these programs often cannot meet their food needs for various economic, age or other reasons. The emergency food system in Onondaga County is a network of non-profit, religious, and community organizations that work to fill this food gap. The Interreligious Food Consortium alone serves over 70 food pantries in the County providing food for well over two million meals annually [11]. They work closely with the Food Bank of Central New York, which is the main distribution hub for the network of food pantries and soup kitchens in an eleven-county area of Central and Northern New York.



A neighborhood food pantry on the Northside of Syracuse

"The main issue is changing demographics... those over 75 years. They were very proud and didn't want to accept anything. Now they lack family. Families spread apart, their children have left Syracuse, mother and father are left here . . . Isolation is a big thing – loneliness is scary for them. That's why the congregate dining is important."

-- County Aging Services

Institutional food service plays an important role in the economy, feeding programs, and as potential buyers of local produce.

Some of the largest employers in the city and county are institutions. These schools, hospitals, government agencies, and other institutions are also eating places, responsible for purchasing food and serving meals, often to large groups of consumers. The Syracuse City School District, for example, provides free breakfast and lunch to thousands of students daily. In some schools, dinner is now also provided. Syracuse University likewise serves thousands of meals daily. Because of their consistent demands and buying power, institutions can wield significant leverage for making change in the regional food system. Providing healthy food options or sourcing locally are also consistent with the missions of many institutions.

"My main priority is to serve the children in Syracuse through school buildings. We have 32 buildings and we serve breakfast, lunch and snacks. And in some schools, we even serve supper...we work to help get children food for weekends."

-- School District Food Service Director

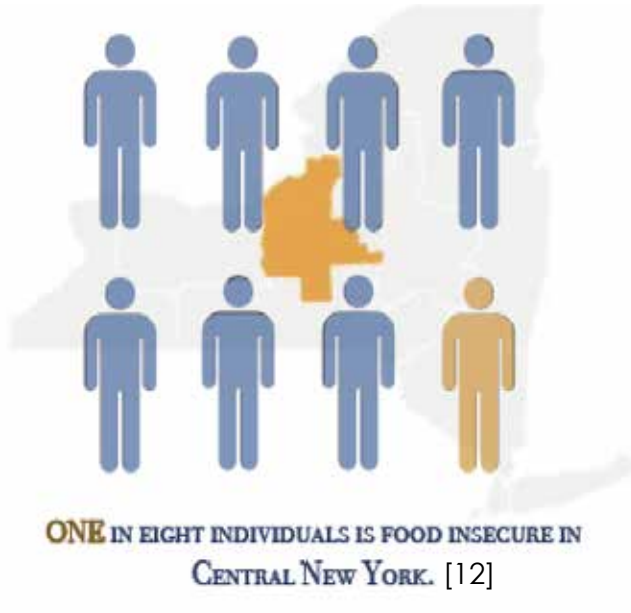


The rich food cultures of CNY support communities, public health, local identity and the economy.

The region has unique food products and dishes that are part of the identity and history of the area including salt potatoes, Utica greens, and chicken riggies. The regional food cultures continue to grow with the diversity of ethnicities and other culture groups that contribute distinct knowledge and practices of food procurement and preparation. This knowledge is important for maintaining cultural identity, contributing to the local economy, and providing culturally familiar approaches to healthy eating.

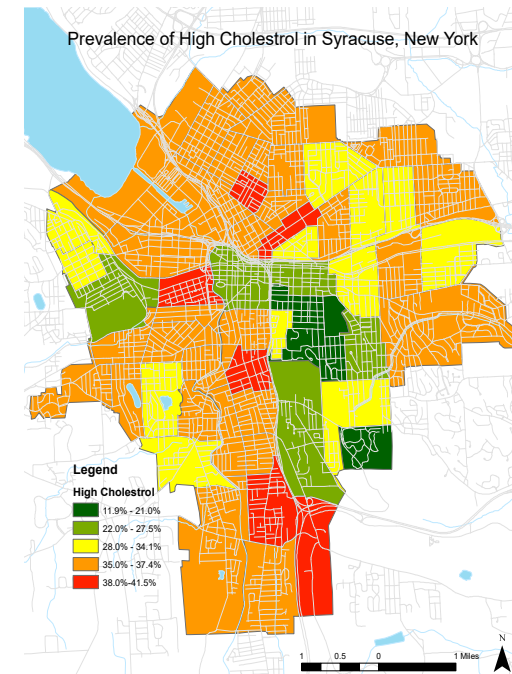
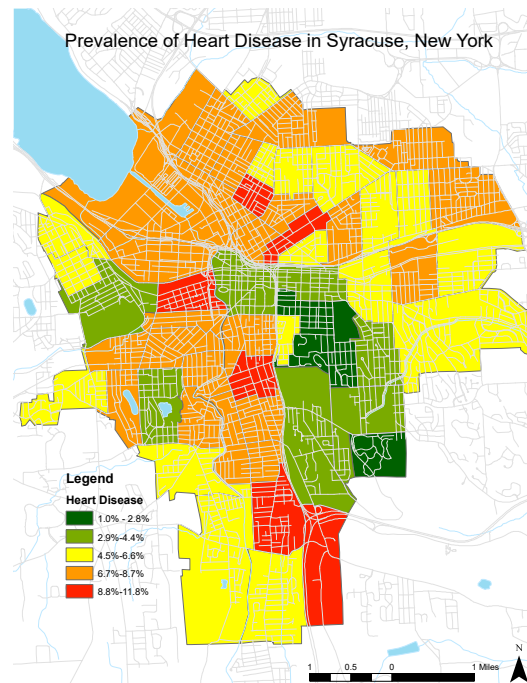
Consuming Challenges

People's choices of what foods to eat (good or bad) are influenced by larger relationships often beyond their awareness or control. The dominant food system is based on government support for corn and other commodities, as opposed to supports for fruits and vegetables. As such, it delivers large quantities of highly processed foods containing excessive amounts of sugar, salt and other ingredients that have negative health consequences. Consumer choices are also affected by economic disparities and the food environments people live in.



Food insecurity and hunger are chronic public health challenges.

There are clear indicators that economic disparities cause significant food insecurity. Central New York has the highest rates of concentrated poverty in the nation [13]. As grocery stores abandon these neighborhoods, residents have fewer healthy food choices.



CDC maps showing rates of high cholesterol and heart disease in Syracuse [14]. Dietary choices are critical influences on diabetes, heart disease, high cholesterol, and stroke. The patterns of these diseases correlate with areas of poverty and neighborhoods that lack access to healthy food choices.

There is a need for more coordination across emergency food providers

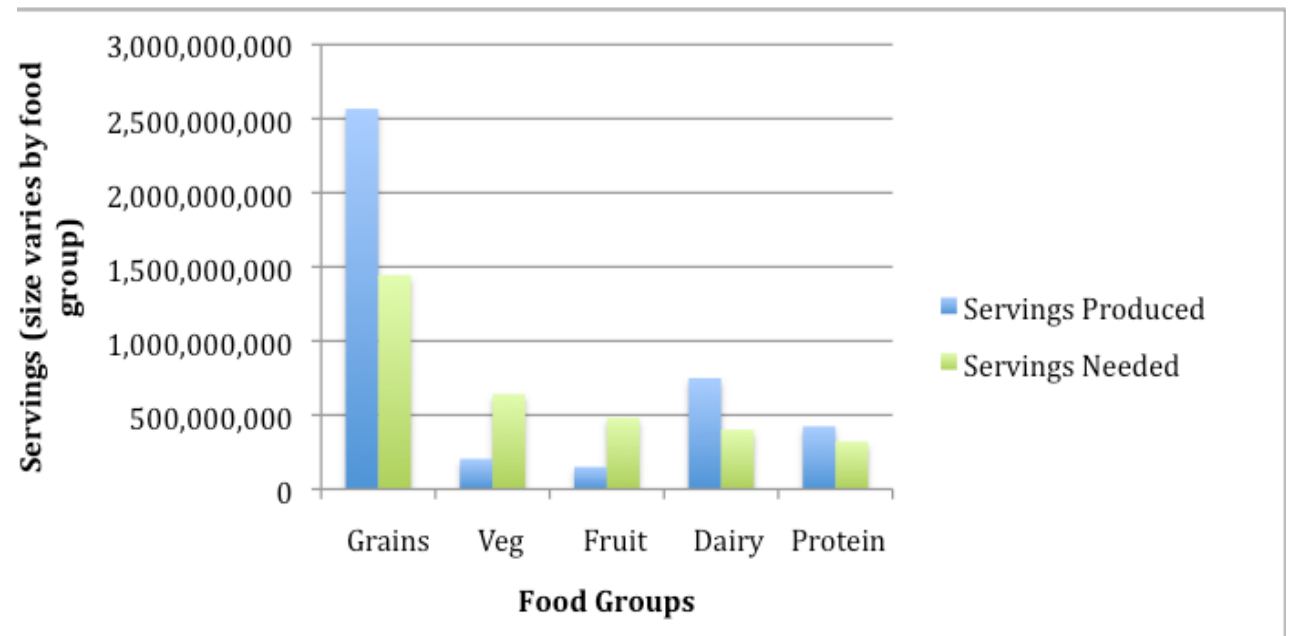
While there are many governmental and non-profit organizations working to address food insecurity and public health impacts, there is no structure for coordinating this work of efforts. Stakeholders in the emergency food system identified the need for sharing information, resources and collaborative planning [15].

"I think it's difficult for one agency to take this on by themselves. I think we need to be in the mud together."

-- Not-For-Profit Feeding Program Director

There is a gap between local consumption of fresh produce and local production

There is a mismatch between what people consume and how much of that comes from local sources. Local farms produce a very small portion of the daily recommended servings of vegetables and fruits [16]. Food system policies to help close this nutrition gap through local production, distribution, and markets would also support a more diverse and resilient agriculture.



What Onondaga County Produces compared with recommended servings for different food groups (source: Blaisdell, 2018)



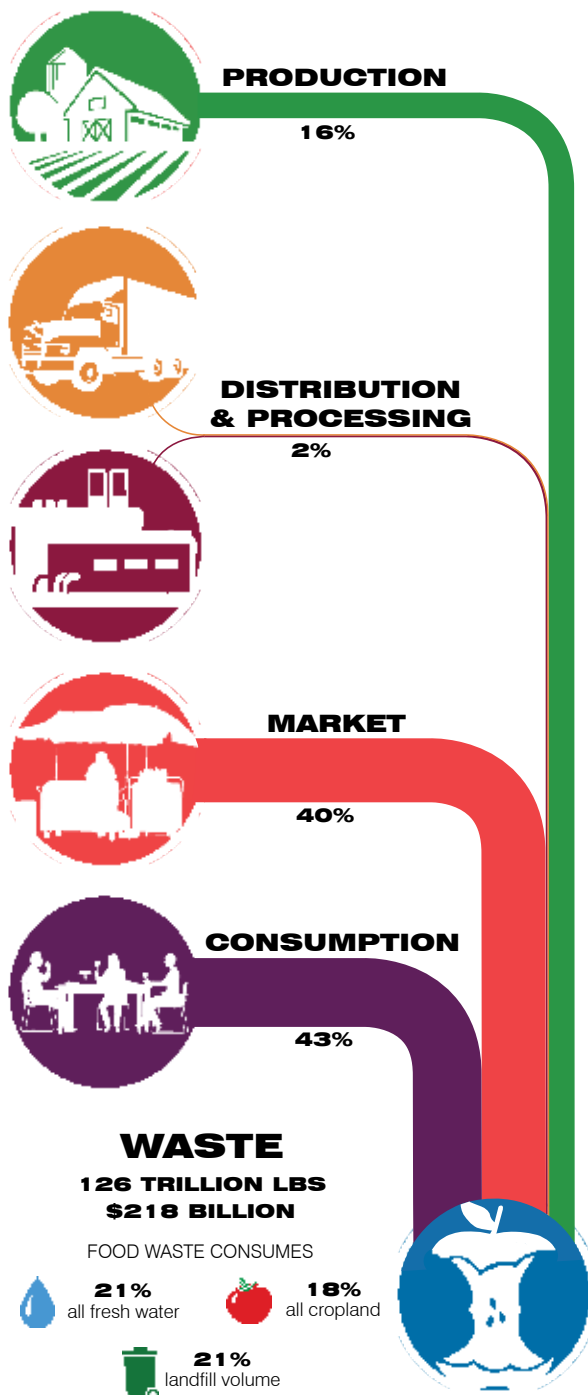
waste & recycling

There are thousands of tons of food lost in manufacturing and ending up in landfills,"

-- County Waste Manager

We've seen a growth in Ag industry using our products. The hops growers are using our compost,

-- County Waste Manager



National statics on the proportion of food waste generated by each sector in the system



WASTE and RECYCLING

Introduction:

Over 40% of the food produced in America is wasted [1]. Food waste is the single largest category of waste in landfills. "Plate waste," the food thrown away at the end of a meal, contributes only a portion of the total volume of food waste[2]. Waste is generated in all sectors of the food system:

- Producing: crop loss due to environmental conditions (drought, storms, etc.), pests, mechanical failures, contamination, changes in market demands, or labor shortages
- Distributing: shipping delays and inadequate climate control in storage causing moisture loss, molds and decay, spoilage or freezer burn
- Processing: scraps, waste water, errors or bad batches
- Marketing: overstocking, food past sell-by date, rejections of blemished produce, packaging damage
- Consuming: cooking and consumer waste at restaurants, institutions, and homes such as spoilage, uneaten leftovers, or overproduction

The food that is lost in the system also represents the additional losses of energy, time, labor, nutrients, water and other resources required to produce, distribute, process, market and prepare the food. While a severe storm or a mistake in processing procedure may account for the immediate cause of food lost, the massive volume of food waste generated on a daily basis results from more fundamental problems in the larger food system, most significantly:

- Abundance of inexpensive food with few incentives for reducing waste
- Lack of coordination or gaps between sectors
- Linear versus closed loop resource use
- Economic pressures to overproduce and compel overproduction

Waste and Recycling Assets

Onondaga County is a leader and innovator in public composting programs.

The waste to energy power plant in Onondaga County has provided the incentive to develop innovative food composting programs [3].

OCRRA is the largest permitted composting facility in the state and it provides leadership in systemic change through[4]:

- Transparency – providing public information on amount and quality of food waste reduction and composting
- Large volume composting of retail and institutional food waste
- Coordination with food recovery network of food pantries
- Closing loop by providing compost to regional producers and community gardens



The Numbers: Onondaga County

15

Percentage of residential trash that is food waste. [5]

4,400,000

Pounds of food recovered and distributed by the Food Bank of Central New York in 2018 [6].

We partner with most all of the grocery chains through the retail partnership program, a grocery rescue program . . . 3,000,000 pounds per year that would have gone to landfill,
-- Emergency Food Distributor

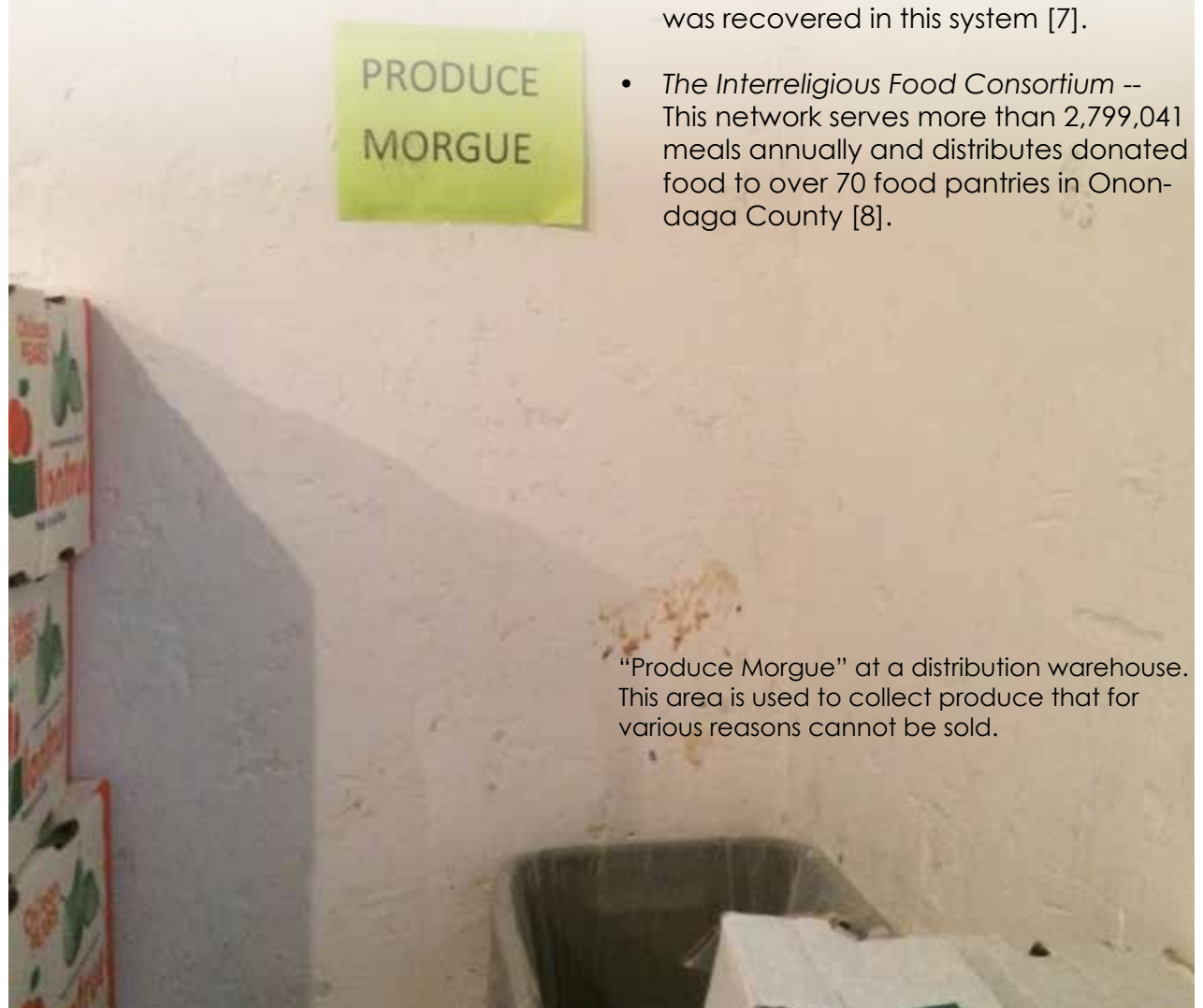
Addressing Root Causes of Waste and Food Insecurity

Food recovery has emerged as a solution to growing rates of food waste as well as widespread food insecurity simultaneously by removing edible food from the waste stream and providing it to those who need it most. Food recovery strategies have been widely embraced as a “win-win” solution, providing both an alternative to landfills for waste and an input for the emergency food system. Food recovery, however, as a tool to reduce wasted food and address food insecurity, is just part of the solution. In addition to these necessary programs, the root causes of problems need to be addressed. This includes looking at market incentives for recovery as well as the structural inequalities that impact food insecurity. Reduction of food waste and expanded food access are both needed to strengthen the CNY food system, yet longer-term solutions should remain the focus.

Emergency food networks play a critical role in reducing waste.

The region is served by a robust and diverse number of agencies and organizations that provide critical infrastructure to get food that would otherwise be wasted from farms, wholesalers, and retailers and distribute it in “emergency food networks.”

- *The Food Bank of Central New York* – Over 100 food retailer partners donate unsold fresh fruits, vegetables and other products to be redistributed by the Food Bank. In 2018 4.4 million pounds of food that would have gone to waste was recovered in this system [7].
- *The Interreligious Food Consortium* -- This network serves more than 2,799,041 meals annually and distributes donated food to over 70 food pantries in Onondaga County [8].



“Produce Morgue” at a distribution warehouse. This area is used to collect produce that for various reasons cannot be sold.

Challenges for waste and recycling

There is a gap between increased compost production and markets for agricultural uses of compost.

State policies are increasing the mandate for food waste composting programs. This creates an opportunity for growing the market for agricultural uses of compost. However, there is a shortage of agricultural producers who will buy and use the compost [9]. Shifting demand for compost depends on changing the agricultural paradigm of external inputs of chemical fertilizers to more closed looped systems using food waste compost. Increasing the use of compost also depends on the type of farm operation, existing soil nutrient profiles, and investments in transportation and equipment.

There is limited capacity of emergency food network and a need for better coordination.

Basic infrastructure for storage at food pantries and distribution are limited. This is especially critical in "surge events" when there is a surplus of seasonal produce.

During stakeholder meetings for this project, people working in the emergency food network identified gaps in the system and a need for better coordination.

There is limited communication and no shared infrastructure in place that would coordinate food recovery efforts across different agencies and organizations. There is also no platform for sharing information on food waste between farmers, processors, distributors, and food recovery organizations [10].

One of the key challenges to expanding donations of excess food is lack of awareness of supportive policies encouraging food donations. Two policy tools to encourage food donations are tax incentives and liability protections. Tax credits are available for businesses donating food and good Samaritan laws protect donors from liability.

There are barriers to increasing residential food composting.

The current OCRRA food waste composting program receives food waste from institutions and businesses. However, 15% of residential trash is food waste which contributes a significant amount of wet material to the waste stream [11].

Collecting residential food waste to bring to OCRRA facilities would require new infrastructure of trucks and labor as well as additional sorting at the household level [12]. To increase public awareness OCRRA does encourage composting by individual households to keep this waste from entering landfills.

Another challenge – tax credits for donations to food pantries, food bank right down to the farm. Are they taking advantage of these? They are not fully vetted. Even with good Samaritan laws there is still a mind set and legal barriers. These perceptions stop these donations,

-- County Waste Manager

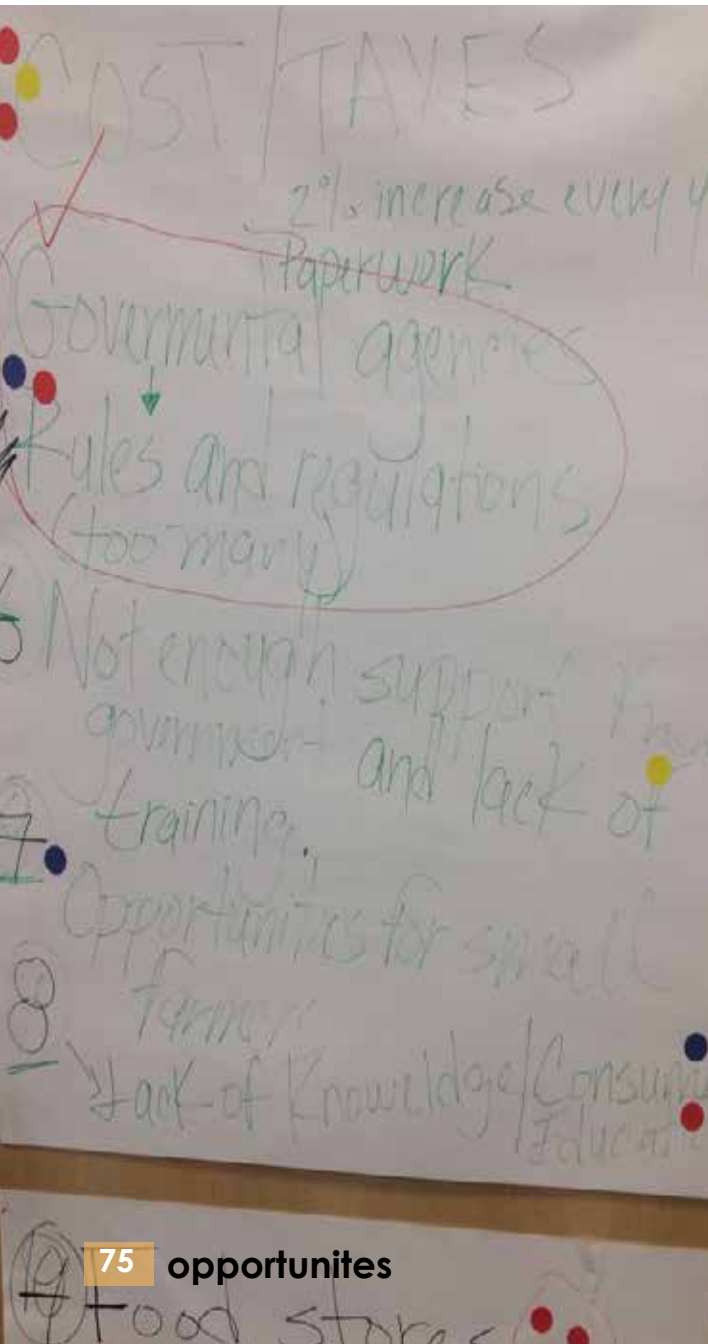


PART II: Planning for Food Opportunities and Recommendations

We don't believe that top down is the best method for building something. And grassroots isn't the sole solution as well. There's a space to find where the top-down meets the bottom-up. But the challenge is that process takes so much time. And our society is a right-now society. But the systems we've created didn't happen overnight. So, the work is going to take time.

— Local Foundation

OPPORTUNITIES and RECOMMENDATIONS



Part I of FoodPlanCNY gives a baseline assessment of the Central New York food system. It reveals significant challenges, largely the result of a food system dominated by large scale globalized production, distribution, processing and marketing. However, the assessment also identifies important assets to build on to address these challenges and create a stronger food system for Syracuse, Onondaga County, and Central New York. The most important assets are the collective experience, knowledge, and efforts of stakeholders to solve problems in order to maintain the complex and essential processes of the regional food system.

Part II outlines a set of opportunities and recommendations for leveraging existing assets to strengthen the economic, public health and environmental outcomes of the food system. These opportunities and recommendations are based on local knowledge through in-depth interviews and public meetings with key stakeholders.

Opportunities for strengthening the CNY food system in Syracuse and Onondaga County are organized in three interrelated themes:

- *resilience*
- *access*
- *coordination*

These are system-wide opportunities across all the sectors of production, distribution, processing, markets, consuming, and waste. As common themes they provide a framework for the collective efforts of diverse stakeholders and actions.

Recommendations that follow identify more specific ways of realizing these opportunities.

Opportunity:

resilience

Everyone benefits from a resilient food system, one that is able to respond to changing economic, social and environmental changes. Everyone working in the local food system faces significant challenges as a result of larger trends of consolidation by large corporations, increased scale of production, and competition from global supply chains [1]. In interviews with stakeholders many shared stories about their efforts to adapt and respond to these challenges in order to pass the farm to the next generation or keep a grocery store open to serve the needs of the community.

Central New York benefits from the efforts of farmers, businesses, community leaders, policy makers, academics, organizations, public health advocates, activists, and others working across the different sectors of the food system, all of whom dedicate time, energy, knowledge, and extensive resources to maintaining resilient operations, programs and organizations. Taken collectively, this resilience is a core strength of the CNY food system.

We need to figure out how to support them [farmers] so that they don't need to sell road front properties for development . . . Protect farmland from a systems point of view rather than land governance or regulation perspective.
-- Community Planner

Key opportunities for enhancing the economic, social, and environmental resilience of the CNY food system:

Inclusive Economic Development

The diverse and innovative local food system enterprises can be a significant driver of the region's economy.

Environmental Quality

The local food system can play a critical role in the region's environmental systems, energy consumption and helping to reduce greenhouse gases.

Public Health

The local food system can address disparities in food access and improve public health outcomes throughout CNY.

Cultural Resilience

All sectors of the food system rely on and support cultural knowledge and identity.

Opportunity:

access

Equitable access to healthy, affordable, and culturally appropriate food is fundamental for healthy communities. This depends on many factors including the location of stores, transportation options, living wage jobs, and the social networks that make for healthy food environments in homes, institutions, and neighborhoods. A strong and resilient food system also relies on people and organizations having access to critical resources -- economic, natural, social, and political. Access to information is important for making decisions, whether it is consumers learning about the availability of local products or organizations having the information about what communities need, and the ability to assess the effectiveness of their programs.

Key opportunities for improving access in the CNY food system:

Food access

The local food system can increase access to fresh, affordable, and culturally appropriate foods for every community.

Land and capital access

Strategies for increasing access to land and capital can benefit new farm operations, processing and market enterprises,

Information access

Sharing information and assessing how well the food system is performing would help people make better decisions across various sectors of the food system.

Economic access

Leverage the food system for economic development opportunities that can benefit all Central New Yorkers.

Opportunity:

coordination

Food systems are complex and require coordinated efforts across different sectors, organizations, and government agencies to foster change. To increase the amount of regionally produced food in local markets, for instance, involves coordination with producers, distributors, processors, government agencies, funding organizations, and different types of markets. Creating quality employment opportunities in the food system requires coordination between potential employers and workforce development programs. In addition, economic growth and innovation in the food system is best achieved through coordination between business owners, economic development organizations, policy makers, and government agencies. Many people and organizations work hard to address critical issues in the regional food system. However, coordination would increase the effectiveness of these efforts, reduce the duplication of resources, and greatly expand the scale of impacts.

Key opportunities for coordination in the CNY food system:

Connecting the productivity of the region to local markets and communities

Efforts to rebuild the regional food system infrastructure are important in order to get regionally produced food into local markets and into communities that lack access to healthy, affordable food.

Ongoing food system planning and policy coordination

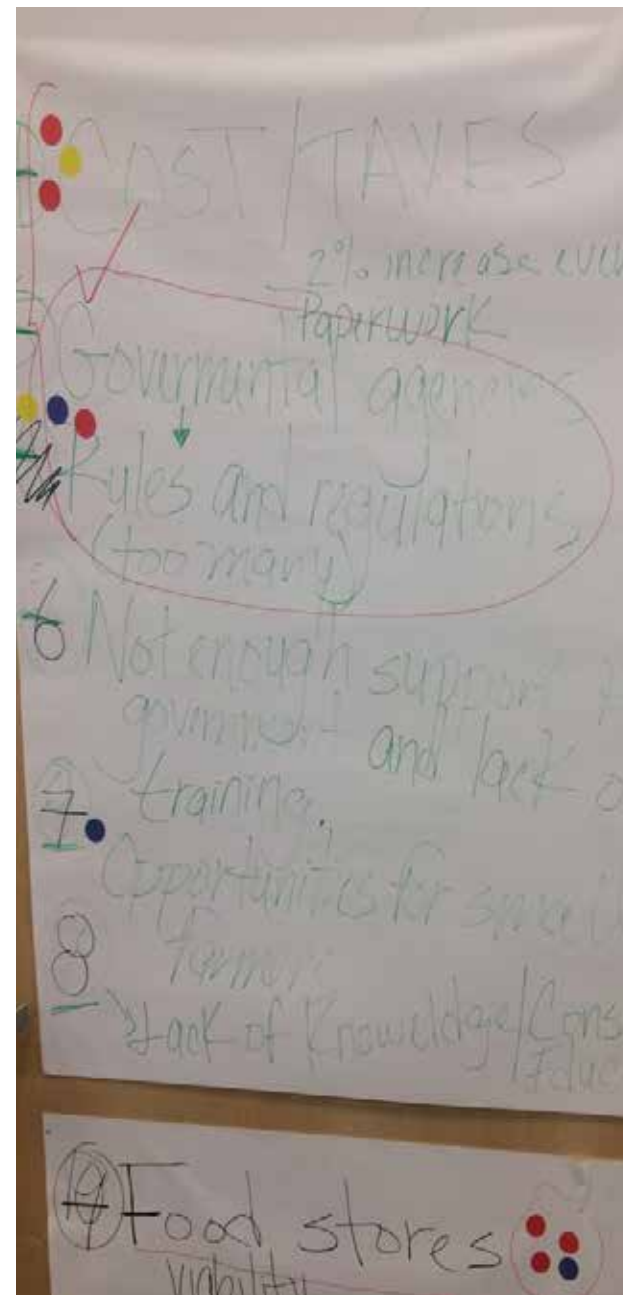
A framework for coordinating local governments, organizations, businesses, and key stakeholders will help to realize the great range of opportunities in the CNY food system.

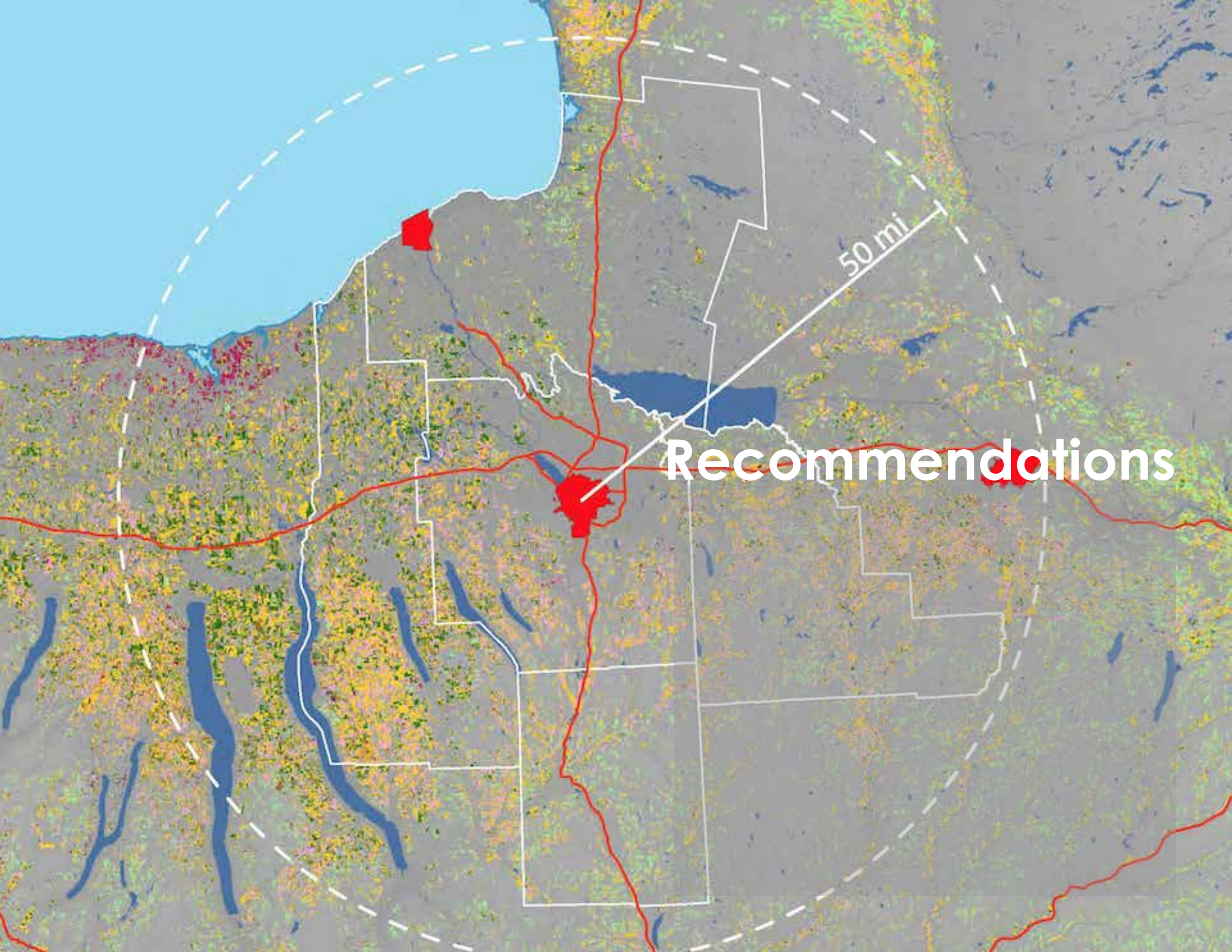
Re-connecting consumers to the food system

Creating a local place-based food system can rebuild important connections with producers, distributors, processors, and local markets that have economic, environmental, and public health benefits.

Linking farms to institutions

Coordinating producers with the buying power and scale of institutions will help overcome the barriers and provide opportunities to increase institutional purchases of regional produce.





Recommendations

RECOMMENDATIONS

In this section FoodPlanCNY outlines a set of recommendations that address food system goals of:

- strengthening economic opportunities and performance
- improving public health outcomes
- creating a more sustainable environment

The recommendations were developed from the baseline assessment, stakeholder input, and analysis of opportunities. Collectively these recommendations:

- (1) leverage and build on existing resources, projects, programs, organization, and businesses within the food system,
- (2) look to existing models and best practices elsewhere in the United States,
- (3) indicate where CNY could be a national leader in food system planning.

The 5 key recommendations provide a framework of strategies for coordinating food system efforts across the different sectors and the diverse community of stakeholders. As a living document, it provides a road map for stakeholders to play an active role in charting more specific actions for implementation. The “measures of success “ identify important indicators for assessing the progress towards achieving the aims of each recommendation.

1 Strengthen the “middle” of the food system:

Re-build the infrastructure and capacity of regional food distribution and processing

The growth of global distribution networks as a result of consolidation and vertical integration in the food industry creates intense market pressures that impact all sectors of the food system in Central New York, depressing milk prices and limiting access to affordable fresh produce. It distances everyone from the environmental impacts of the food we eat. Rebuilding and creating new links in the “middle” of the food system – aggregating food from local producers, and distributing it to processors and diverse market outlets – can have major benefits for all the other sectors of the food system:

- Increased market share for producers, processors, and distributors
- Differentiation of products as local which also adds value
- Diversifying regional production
- Transparency – knowing where food comes from and who benefits
- Sustainability – environmental benefits of reduced energy inputs and connection to local ecologies
- Consumer choice

CNY is well situated to respond to growing consumer demand to reconnect with local/regional foods:

- A significant metropolitan area surrounded by productive agricultural region
- Transportation infrastructure that provides access to large metropolitan consumer markets of the Northeast U.S.

Strategies:

Building Infrastructure

- Invest in distribution infrastructure to enhance existing facilities and new infrastructure for aggregation, storage, and distribution to serve the regional system. This involves public/private partnerships that link institutions and public agencies with distributors and producers.
- Invest in the CNY Regional Market as a unique and critical public space and distribution hub for independent distributors
- Identify opportunities for regional food production and processing to take advantage of access to Northeast markets (e.g., New York City, Boston, Philadelphia).
- Value Added Processing – develop processing infrastructure that increases the value of regionally sourced foods.

Recommendation: Strengthen the “middle” of the food system.

Strategies:

Building Capacity and Connections

- Create Public/Private entity for coordinating the aggregation and distribution of regionally produced food. Work with existing assets, including the knowledge of generations of experienced local distributors as well as public agencies.
- Marketing and Branding – support programs to distinguish local products and their effective marketing (e.g., Onondaga Grown)
- Technical support – provide training across the food system from producers to markets on how to build regional value chains.
- Expand Institutional purchasing – promote policies to preferentially purchase regionally sourced food.
 - Provide technical assistance to facilitate regional purchasing and integrating into institutional practices
 - Pilot Projects – develop projects that provide models for other programs and institutions:
 - Farm-to-School (SCSD, BOCES)
 - Farm-to-Institution (universities, hospitals, offices, etc)
 - Build upon existing models, such as the Good Food Purchasing Program (see: goodfoodpurchasing.org), which is “designed to do for the food system what LEED certification did for energy efficiency in buildings.”
- Grow direct to consumer sales through existing entities such as the CNY Regional Market (e.g., identify growers, separate from dealers) other farmers' markets, and Community Supported Agriculture (CSA).
- Make market access easier for regional farmers through independent distributors that increase short-supply chain sales.

Measures of Success

- Increased capacity of physical infrastructure for storage and distribution of regional food
- Shorter supply chains – reducing marketing costs for energy and transportation.
- Growth in volume and sales of regionally produced foods distributed to local markets
- Increasing number of farms participating in regional distribution and local marketing channels
- Expanded processing capacity for regional agricultural products
- Farmers, processors, distributors capture greater proportion of total market value of each agricultural transaction.
- Growth in market share for CNY food and agricultural products
- Expansion of marketing programs with measurable impacts (brand identity, sales figures, participation rates)
- Increased jobs in processing sector
- New brands and regional identity campaigns
- Increased dollar value of institutional purchases of regional foods
- Number of institutions participating in farm-to-institution programs
- Adoption of the Good Food Purchasing Program throughout CNY

2 Grow community-based, healthy food environments

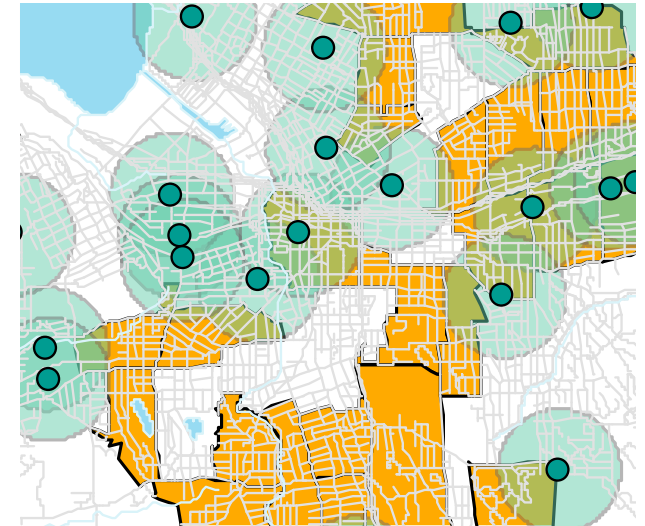
Equitable access to healthy, affordable, and culturally appropriate food is essential to the daily life of every community. The food environments people live in shape what they eat and impact public health. Food environments provide different sources of food from commercial spaces such as retail stores or restaurants, as well as community sites such as food pantries, schools, community gardens, farmers markets or community kitchens. Different neighborhoods have different food needs and the food environments of a neighborhood influence what types of food are available, and how healthy, affordable, and culturally appropriate it is. The New American refugee community in Syracuse's Northside neighborhood, for instance, has larger average family size and greater proportion of children and young adults with distinct nutritional needs and cultural preferences in food.

The lack of food system policy across the country has left it up to market forces to determine the location and size and type of retail food stores. This has left serious gaps in local food environments. Everyone -- residents, local businesses, organizations, and government agencies can play a role in mending those gaps to create more complete food environments.*

Strategies:

Support community-based process for creating diverse, resilient food environments at the county, city, and neighborhood levels.

- Engage organizations and residents to help develop food environment plans integrated with city and county programs. Input at the neighborhood or town level is important for identifying community needs, gaps, and opportunities for creating more complete food environments. This level of engagement has been demonstrated by ReZone Syracuse and the Tomorrow's Neighborhood Today (TNT) framework.
- Coordinate public/private interests to promote food related economic opportunities as part of community development strategies.
- Support policies, planning efforts, and projects that promote community food spaces such as public markets, and community gardens and kitchens. These spaces have multiple benefits for public health, community building, and improving overall environmental quality. Identify areas where these spaces could be most beneficial and compatible with other uses.
- Link disparities in food access to broader efforts to address structural issues of poverty and income disparities. Building complete community food environments can be linked to work force development, housing policy, community development funding, and efforts to increase high school graduation rates [2].



Locations of full-service grocery stores with half-mile buffer. Orange areas indicate low-income neighborhoods without access to grocery stores (USDA Food Access Atlas mapping)

Building “Complete Food Environments:”

Similar to the movement to create Complete Streets, Complete Food Environments provide a greater range of options to meet food needs of all people. Complete Food Environments address disparities of access, making it easier and more affordable to find healthy and culturally appropriate food.

Recommendation: Grow community-based healthy food environments.

Strategies:

Ensure equitable access to healthy, affordable, and culturally appropriate food for every neighborhood

- Coordinate public/private interests to promote food related economic opportunities. Attract and retain a diversity of retail food markets. Understand the challenges and opportunities for retail food markets in different neighborhoods and direct planning and policy toward areas that will have the greatest impact on food access and economic opportunities for communities.
- Support public markets as integrated strategy for improving food access, direct market opportunities for farmers, and activating public space.
- Continue efforts to work with existing convenience stores as places for healthy, affordable food options
- Explore innovations in non-traditional retail and distribution options such as virtual supermarkets and CSAs that bring food to people.
- Integrate retail access into transportation planning so pedestrian routes, bike routes, and transit stops include healthy food retail access points. Supermarket size and locations in CNY have been linked to highway infrastructure. Out of necessity people without cars in underserved neighborhoods have had to develop their own creative strategies for getting to supermarkets. Food outlets are an important destination and service to link with transportation infrastructure.

Promote diverse food cultures of CNY

Food cultures are an important part of people's identity, and they provide knowledge and practices that have sustained communities for generations. Food cultures are also potential resources for new businesses and cultural exchange.

- Provide education and programming that celebrate the practices (growing, cooking, preserving, eating) of different food cultures of the region
- Support policies and programs for maintaining and promoting culturally specific food spaces such as markets, restaurants, gardens, and community kitchens.
- Encourage policies and incentives to support diverse retail opportunities

Increase community demand for healthy foods

- Increase demand for healthy food by providing knowledge, skills, and ability to select and prepare affordable, nutritious, and culturally appropriate meals.



Measures of Success

- Number of neighborhoods completing food access assessments
- Increased number of healthy corner stores per capita for neighborhoods and participation in Onondaga County Health Department programs
- Reduction in number of USDA "very food insecure households" throughout CNY
- Increase in food spaces that provide options for diverse food cultures
- Documented review of zoning regulations pertaining to food and agriculture
- Expanded production of niche products available within neighborhood markets
- Anti-poverty programs inclusive of food, including focus on decreasing access disparities and increasing quality job access

3 *Create healthy, resilient environmental systems:* *Link the economic advantages of a regional food system to improving environmental quality*

The food we eat comes from the land, soil, water and a broader web of environmental relationships. In this way the economic sustainability of the food system is ultimately linked to a healthy, sustainable environment. However, this fundamental connection has been disrupted by global commodity systems and the economic pressures that cause environmental problems at the local level. Many of the environmental challenges that individual farmers face are the result of these larger structural relationships in the food system. The responsibility and means of solving these environmental problems goes beyond individual farmers, processors or other operators, but is of broad public interest.

Food system change at the regional level can be an effective means of achieving sustainability goals of reducing energy consumption, increasing biodiversity, and promoting water and soil conservation, while at the same time creating economic opportunities. A regionally based food system can create new market opportunities and distribution networks that add value to local production and processing [3]. Linking environmental quality with the economic potential of a regional food system can help create both resilient environmental and economic systems. Because of the close relationship between the mid-size city of Syracuse and the surrounding countryside, this is an area where CNY can play a leadership role and be a model for other regions.

Strategies:

Identify food system practices that reduce energy use and green house gas emissions, and integrate them into climate action plans.

Food system activities such as production, transportation, processing, and waste are major contributors to greenhouse gases [4]. However, reducing food miles through local food networks, grass-based livestock production, reducing waste, and other practices can improve the environmental performance of the food system. Policies and projects that promote these practices can support City and County climate action plans

Promote the multiple values and ecological services of agriculture

Onondaga County farmers serve as stewards of the land and can help to reduce floods, and provide habitat for diverse wildlife. Healthy soil acts as a carbon “sink,” sequestering carbon dioxide and reducing effects of climate change.

- Document ecosystem services, open space values, and recreational uses of farmland as basis for land use decisions and assessing the value of farming to communities.
- Develop local certification of best environmental practices and link them to building value chains and marketing opportunities.
- Develop public awareness that celebrates leadership in environmental stewardship.

Recommendation: Create healthy, resilient environmental systems

Diversify Agricultural Production and Landscapes.

According to the USDA, growing a greater diversity of crops increases ecological as well as economic sustainability. Diversity helps to reduce risks from extremes in weather, market conditions, or pests while contributing to soil conservation, wildlife habitat, and populations of beneficial insects [4].

Farmers in CNY face challenging price structures and significant global competition on agricultural commodities. There are opportunities for more diversity in scale, and types of production that can increase the long-term economic and environmental viability.

- Support agricultural transitions and beginning farms for diverse crop and livestock production with incentives, business planning, and new market opportunities.
- Innovate -- promote research, pilot programs, and implementation of innovative agricultural models including new production methods, season extension and crop varieties that increase ecological sustainability

Develop market-based strategies and incentives for sustainable agriculture.

It is important for environmental values to also be supported in the marketplace.

- Build regional "value chains" through branding and certification programs that promote the multiple benefits of local, sustainable production

Close the loop – reduce and re-integrate waste as resource at all sectors of the food system

Food waste occurs at all sectors and represents lost energy (see waste section), and it impacts environmental quality.

- Coordinate food recovery efforts across agencies and organizations
- Provide incentives that link compost from OCRRA with local farms.
- Promote landscape planning coordinated with incentives for Best Management Practices that reduce nutrient runoff.
- Waste to energy – build on existing national and local models such as anaerobic digesters for producing electricity.

Integrate farmland protection with food system planning

Productive agricultural soils are unique living systems that take hundreds of years to develop, yet can be lost for future generations as a result of short term development decisions.

- Link current protection strategies of easements and transfer development rights with food system planning to strengthen farm viability.
- Increase support for Best Management Practices (BMP).
- Engage the agriculture community at the beginning stages of any environmental or land use decision process.

Measures of Success

- Increased number of farmers and value of production
- Increased number and percent of mid-sized farms (\$100,000 -- \$249,999)
- Growth in number of acres in diverse production
- Growing number of participants and acres in conservation and preservation programs
- Improvement of habitat and ecological services of farmland
- Volumes of commercial and residential waste composted
- Increased diversity of women, minority, and younger farm owners/operators
- Development of collaborative programs across food recovery agencies
- Number of farms generating energy

4 *Expand public space and participation in the food system*

The food system has been increasingly consolidated and controlled by large-scale private interests which reduces the public awareness, engagement and decision-making role in the fundamental necessities of food. Reclaiming public space and participation in the food system can have multiple benefits, including public health, a greater participation in the food economy, and social justice.

Strategies

Improve access to resources necessary for a thriving food system.

Businesses require access to capital for development and expansion; farmers need access to land for growing CNY agriculture, employers require skilled workers and workers are eager for quality jobs; and all sectors of the food system seek accurate, reliable, and updated information to ensure optimal system functioning.

- Capital needed to start and grow businesses could be made available through grants, low-interest loans, and tax agreements.
- Land, in both urban and rural settings, is an obvious requirement for food system development. Public programs could help inventory land, assess the multiple values, facilitate the ease of acquiring land, and ensure land is affordable for agricultural uses. Within the City of Syracuse, community based efforts for urban agriculture or food related enterprises can turn the liabilities of vacant properties (both lots and building infrastructure) into valuable community assets. Because access to land and other resources is especially difficult for communities already impacted by economic disparities policies and programs can help facilitate these efforts. Planning is important to assure that these efforts also contribute to economic development, environmental, and public health objectives.
- Programs, such as those already offered throughout the region could link trained workers with job opportunities in food and agriculture.
- Access to information is a widely reported need by food system stakeholders. Information gathering and sharing could be a primary function of a food council.

Recommendation: Expand public space and participation in the food system

Expand Access to Markets

Central New York is one of the most productive agricultural regions in the Northeast and there are significant populations of urban consumers in close proximity. Increasing access to these markets will have significant impacts on the economic sustainability of regional agriculture and other food industries.

- Reduce barriers for farmers and processors to market their produce. This involves:
 - Technical assistance (e.g., GAP and other certifications)
 - Training in marketing practices
 - Access to shared aggregation and distribution infrastructure
- Strengthen the regional value chain through previously mentioned programs, policies, and practices to strengthen regional food aggregation, processing facilities, and distribution infrastructure.

Promote Business Development and Economic Participation

Food businesses provide important economic opportunities and contribute to community development.

- Business incubation -- Provide support for new food-related businesses that provide jobs, community wealth building, and economic mobility for communities
- Labor -- work with farmers, workers organizations, and policy makers to negotiate policies that address economic and social justice problems for both workers and producers.
- Reduce competitive disadvantages -- review state and regional policies and economics that impact the economic competitiveness of regional producers.
- Workforce development -- promote the training programs, education partnerships, local hiring incentives, and support services for a diverse, qualified work force (examples: With Love Restaurant and Salt City Market)

Measures of Success

- Number of new food-related businesses
- Number of food industry sector jobs
- Development of strategies to ensure fairness for workers and business owners alike
- Expansion of regional product sales both within and outside CNY
- Development of technical assistance programs
- New market opportunities
- Development of local government program to offer access to capital to food and agriculture businesses
- Successful collaboration to attract public and private grant dollars to CNY for food system growth
- Pilot land access programs within both Onondaga County and the City of Syracuse to facilitate land acquisition for food and agriculture economic development
- Building of jobs program within CenterStateCEO (similar to WorkTrain and the emergent Syracuse Build) with focus on food and agriculture economic opportunities
- Information clearinghouse within new Food Council

5 Coordinate food system projects, planning, and policy:

Support the newly formed Syracuse Onondaga Food System Alliance

The success of the food system is related to how all the stakeholders interact with one another. The single most important factor of localizing the CNY food system will be its ability to effectively coordinate the numerous day-to-day relationships needed to build a resilient and just food system. Many cities and regions have developed food councils as a way to coordinate planning, policy, and projects across all the different stakeholders and sectors of the food system.

Coordination was one of the primary goals of FoodPlan CNY:

“Develop a framework for a coordinated, systemic approach to addressing critical social, economic and environmental issues of the Central New York food system and leveraging the system as an asset to benefit the region.”[5] Through stakeholder interviews and meetings, and presentations to diverse groups, FoodPlan CNY helped initiate dialogue and coordination across the different food system sectors.

As this FoodPlan was being completed a group of people representing diverse organizations, including local government agencies, and stakeholders formed the *Syracuse Onondaga Food System Alliance* (SOFSA). This organization is positioned to play a critical role in coordinating ongoing food system efforts.

Strategies

Inclusive Process – Identify core partners and a process for determining the lead agency/organization for a council. The process will outline structure, scope, function and participants of a food council for Onondaga County within the region of Central New York. There are many agencies and organizations that have the potential to play a role in a food council.

Project based – Focus the formation of a food council around a shared project to be realized in the very near future.



Recommendation: Coordinate food system projects, planning, and policy

Integrate food systems into city and county policies, plans and programs.

Creating a resilient, equitable, and economically thriving food system also depends on coordination across different governmental departments at the City and County level, including departments of Planning, Public Health, Transportation, Zoning, Parks and Recreation, Neighborhood and Business Development, and Environment.

Continue to monitor critical issues and monitor change through collaborative studies

There is a need for gathering and sharing information about the impacts of projects and policies developed by a food council and other collaborating groups. These studies also serve to build collaborative engagement around food system issues across different disciplines and agencies. The key areas for study include:

- Economic performance of the food system, including economic justice issues
- Environmental impacts
- Local markets, distribution, and food access
- Document and quantify the benefits and challenges of diversified production
- Ongoing evaluation of the impacts of food system policies and actions

Measures of Success

This recommendation will be considered successful when there is sustained support of SOFSA beyond three years and:

- active participation from a diversity of food system sectors
- stakeholder coordination around formulating projects, programs and policies
- leveraged public and private investment toward achievable projects
- Food systems are on the agendas of City and County government departments managing interrelated systems such as transportation, zoning, housing, and economic development.

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COVID-19 PANDEMIC

A System Responds

"We saw an absolute frenzy in retail and drop off in everything else. Schools out. The whole food service side crumbled in 10 days... but retail went crazy."
— local distributor.

"It sounds crazy, but right before COVID, our oven broke, and the piece we needed was in China. We couldn't get the part—we went through the pandemic without an oven."
— Restaurant Owner

The final review of this FoodPlanCNY report began in early 2020, just as the coronavirus pandemic hit Central New York with all its devastating effects. During the ensuing months, a time of extreme uncertainty, one fact remained consistent -- everyone needs to eat. However, as grocery store shelves emptied, the readily available supply of food that we all had taken for granted—at least through emergency food measures—was now threatened.

It is difficult to comprehend the full scale and complexity of impacts from COVID-19. The sudden shutdown of restaurants, schools, institutions, and other eating places had a domino effect that impacted the entire system. Distributors were left with perishable food that would go to waste if not redirected to emergency food outlets. Producers lost major portions of their markets. Dairy farmers were especially impacted as the price for fluid milk dropped below what were already tight margins. Processors advised farmers to reduce the size of their herds by processing the meat, but for many that was not an option because COVID-19 labor restrictions reduced the capacity of slaughterhouses. Milk had to be repackaged for emergency distribution or dumped. Retail grocery stores were one of the few places that remained open, but they were overwhelmed by demand and disruptions in long-distance supply chains[1].

This global pandemic serves as a major stress test of the food system. To document the impacts and how the food system has responded, the Syracuse-Onondaga Food System Alliance (SOFSA) conducted a series of interviews with stakeholders in the system. Many of those interviewed had been part of the original research for the FoodPlanCNY. Initial findings from these interviews, along with additional research from statistics and reports summarized below, reveal some of the vulnerabilities as well as important strengths of the local food system.

The emergency food system worked overtime to meet unprecedented need.

With record job losses resulting from the public health response to Covid-19, the need for emergency food soared. Organizations, businesses, funding agencies, and individuals met the challenges and responded in exceptional ways. Between March and June of 2020, the Food Bank of Central New York distributed over 8 million pounds of food – over 40% of all the food they had distributed since the organization began in 1984 [2]. Meals on Wheels, schools, and other feeding programs had to revise menus and retool their kitchens from serving hot meals to offering packaged meals to go. Churches and restaurants opened their kitchens to community-led efforts to prepare and deliver meals. Schools became critical food distribution sites. The emergency network also bridged the gap between people in dire need and producers with excess product. These efforts redirected massive amounts of food that would have been wasted and provided partial compensation to producers for the loss of their market sales.

The pandemic exacerbated endemic social inequalities in the food system.

Food insecurity is a persistent daily crisis for thousands of people in Syracuse and Onondaga County. COVID-19 has starkly revealed the pre-existing conditions of social disparities in housing, income, employment, and food access. The combined, or syndemic, effects of these conditions disproportionately increased the rates of illness and material hardship for Black, Hispanic/Latino, indigenous and immigrant communities, deepening the structural violence stemming from systemic racism [3]. While unemployment has soared, job losses have been concentrated in lower paying industries, especially in the food service sector. According to a Restaurant Association survey, 80% of restaurant workers in New York State lost their jobs during the early stages of the pandemic [4]. Those front-line workers who did retain jobs in food service faced higher levels of exposure to the disease.

The local food system provided reliable and safe sources of food.

During the pandemic, local producers reported that more people came out to farms to buy produce, and memberships in CSAs soared. In a period of global uncertainty, people turned to local producers as reliable, safe sources of food. Local food systems offer shorter supply chains, which are less prone to disruption, and enable more direct communication between producers and consumers. The local food co-op with a diversified supply chain was not impacted by any disruptions and sales increased by 45%. Local producers, markets, and restaurants adapted with curbside services and developed new online services for orders and delivery [5]. In these ways, local systems demonstrated flexible and resilient responses to change.

“We decided to switch to produce frozen meals instead of hot and cold, so that we could store and mass produce them. We simplified our menu, and then delivered the meals by putting them at the doorways of each of the individuals.”

– Emergency Food Organization



Members of the Deaf New American community delivering meals prepared in the kitchen of the With Love restaurant on the Northside of Syracuse.

"We built a network that's grown all of our lives." – local food distributor

"We were all of the sudden in high-velocity emergency distribution." – Food Pantry Manager

The local food system has built valuable social capital in the form of networks, knowledge, and collective experience.

Local organizations, agencies, businesses and workers in the CNY food system were able to leverage their knowledge, resources, and connections to solve problems. With trust built over many years, and in some cases generations, people were able to quickly form new collaborative partnerships. Local organizations also know the distinct needs of the community. For instance, emergency food efforts on Syracuse's Northside adapted programs and volunteer efforts to the needs of larger average family sizes of New American refugee groups. The value of this kind of social capital has yet to be fully documented and realized. This and other aspects of the response to the COVID-19 crisis demonstrate the importance of a resilient local food system.

Distribution networks were critical to the resilience of the whole system.

Disrupted supply chains, restaurant and institutional closures, and panic buying created bottlenecks in distribution with shortages in some sectors and excess supply in others. With increased demand for storing surpluses and frozen meals, there was a shortage of refrigeration space. Renting freezer trailers was one example of many stop-gap strategies used by Meals on Wheels and other to ensure that food got to people who needed it, reduced the economic losses of producers, and helped to cut waste. Wholesale distributors who served restaurants and institutions had to rapidly retool their businesses. Instead of packaging produce for sale in large pallets, it was repackaged into cartons and other smaller units for retail sales. A collaborative partnership between local distributors (Russo Produce Co. and G&C Foods) and the Food Bank of CNY was successful in securing federal funding through the Coronavirus Food Assistance Program (CFAP). They put together a network to source produce, including from local producers, and packaged it in family food boxes, which were distributed in CNY and throughout the Northeast.

SOFSA provided the platform for a coordinated response.

This crisis hit Central New York just months after the formation of the Syracuse-Onondaga Food System Alliance (SOFSA). This organization has demonstrated the importance of having a coordinating entity to respond to the complexities of unprecedented disruptions in the food system. SOFSA brought together diverse stakeholders and organizations to respond to the unfolding crisis. They sent out a rapid-response survey to assess the needs in the community and produced an online map of emergency food resources. SOFSA provided direct funds to programs in need and joined other organizations and foundations to help coordinate the distribution of emergency funds and other resources to support food system efforts. Additionally, SOFSA convened a meeting of school food service directors from across the country to identify the challenges for providing meals during school closures, including regulatory barriers as well as sharing best practices discovered during the pandemic.

There are opportunities for building a more resilient food system.

The pandemic impacted the food system in profound ways. It exposed the vulnerabilities and significant gaps in a system that has become increasingly reliant on global supply chains. At the same time, the need to respond to immediate demands at the local level demonstrated unexpected strengths of the organizations and stakeholders in the local food system.

These preliminary findings, from interviews and other data, point to several important opportunities, such as the need for more refrigeration space or policies that expand food access and reduce the stigma of food insecurity [6]. As this FoodPlanCNY report concludes while the COVID-19 crisis is still impacting the community, it can inform immediate efforts, as well as highlight the potential for building a stronger, more resilient food system in the long-term.

"You walk in the schools and the common theme is "we're front line." We are part of the essential service and the scale is huge. We served over 400 meals today. Years from now you can say you helped to feed a city."
Syracuse City School Food Service Director.



A temporary restaurant "parklet"
The necessity for social distancing during the pandemic impacted indoor public gatherings, forcing many eating places to close. The loss of these places revealed how important they are for the economy and social life of communities. Temporary "parklets" on what were parking spaces helped restaurants to reopen. These eating spaces also demonstrated how food can help create more vibrant public spaces.

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