

New York State Council on Food Policy

Governor Andrew M. Cuomo

Commissioner Darrel J. Aubertine

F A L L M E E T I N G A P P E N D I X

Wednesday, November 9, 2011 * 10:00 am – 12:00 pm @ Cornell Cooperative Extension, Oriskany

- Appendix A:** Gleaning from New York State Farms to Benefit the Hungry:
Overview and Recommendations, Michael Hoffman
- Appendix B:** Address Community Needs: Forming a Food Policy Council, Jim Manning
- Appendix C:** Food & Health Network of South Central NY's Food System Assessment,
Diane Albrecht

Gleaning from New York State Farms to Benefit the Hungry: Overview and Recommendations

Executive Summary

The following report was designed to consider the needs, liability and logistics of New York State farmers. Farmers expressed an interest in seeing an increase in unsalable food from the farm donated directly to hunger relief agencies. Some recent projects and research focused on the benefits of farm gleaning efforts to the hungry, but tended to overlook the benefits and risks—especially liability for the farmer.

Additionally, we wanted to explore the role of Cornell Cooperative Extension, focusing on county associations with gleaning initiatives that include past, present, and future possibilities.

This project is an inventory (by no means comprehensive) of existing and recent farm gleaning efforts in New York State, as well as an exploration of what works and what needs tweaking.

Among our top findings is strong interest in expanding existing gleaning efforts. This interest comes from many sectors: farmers, hunger relief agencies, agricultural advocates, and so on. A few major limiting factors are: increasing knowledge about gleaning as an option, how to access gleaning programs, and suitable logistics for a successful gleaning effort. Among these logistical concerns: getting food to those that need it most in an economically viable manner, ensuring food safety, minimizing liability (especially for farmers), and preventing farmers from incurring additional expense.

The study also found that farmer liability, especially in allowing volunteer harvesters on private property, may be greater than many assumed. More examination is needed into the Emerson Good Samaritan Law. Increasingly, farmers seem interested in gleaning options that would allow for reimbursement of their own workers' time, or processing time, after donation of the food.

This report discusses several possible roles for Cornell Cooperative Extension, including serving as a “matchmaker” to bring together farmers and food banks promotion of gleaning opportunities, and nutrition and agriculture education. Cooperative Extension may also play a vital role in answering several research questions, such as determining the amount of food left unharvested, or unsold, per year; studying the relationship between processing plant capacity in New York State and food donation; and more.

Next steps for a farm gleaning effort in New York State likely include bringing together stakeholders for program development and priority-setting, securing funding for a project that allows for an expansion of food donations in New York State, as well as developing educational materials, promotion, and research issues.

1. Why This Report?

This report was inspired by New York State farmers who were interested in seeing an increase in donations of unsalable farm food to the hungry but wanted to better understand farm gleaning. Recent projects and research focus on the benefits of farm gleaning efforts to the hungry but tend to overlook the benefits and risks, especially liability for the farmer.

This project is an inventory of existing and recent farm gleaning efforts in New York State, as well as an exploration of what works and what needs tweaking. The project is a collaborative effort of the Cornell University Agricultural Experiment Station, New York State Agricultural Experiment Station, and Cornell Cooperative Extension.

2. Hunger and Food Pantry Use

The United States has long been known as a land of plenty—and paradoxically, a nation where hunger continues to plague the population. The United States Department of Agriculture estimated in 2009 that 14.7 percent of the population, or 17.4 million households, were “food insecure,” or “were, at times, uncertain of having, or unable to acquire, enough food for all of the household members because they had insufficient money and other resources for food,” (Nord, et al. 4).

Approximately one-third of food insecure households are classified by USDA as “very low food security.” 6.8 million households, or 5.7 percent of all U.S. households, experienced a range of food insecurity “in which the food intake of some household members was reduced and normal eating patterns were disrupted due to limited resources” (Nord, et al. iii). National rates of food insecurity in 2009 were largely unchanged since 2008 and were the highest since 1995, when the government began tracking the data (Nord, et al. i). New York State residents experience food insecurity at a somewhat lesser rate than the national average. The USDA estimated in 2009 that 12.9 percent of New York State households were food insecure; 5.1 percent of those households were classified as very low food security (Coleman-Jensen 7).

More than 50 percent of households that received Supplemental Nutrition Assistance Program food stamps, or free or reduced-price school lunches were classified as food insecure; 49 percent participated in the Women Infants and Children program, which provides specific food items for pregnant women and children age birth to five years old (Nord, et al. 32). “Typically, households classified as having very low food security experienced the condition in seven months of the year, for a few days in each of those months” (Nord et al. iv). Many of the households that turn to food pantries seem to be filling short-gaps in government and public service safety net programs; the majority seem to be looking to food pantries to alleviate short-term hunger emergencies.

“About 72 percent of households that obtained emergency food from community pantries were food insecure, and 39 percent had very low food security” (Nord, et al. 32). Nationally, 5.6 million households, or 4.8 percent of the U.S. population, “obtained emergency food from food pantries one or more times during the (year). A smaller number—625,000 households (.5 percent)—had members who ate one or more meals at an emergency kitchen” (Nord et al. 34).³

The eight regional food banks that comprise the Food Bank Association of New York State distribute food to 5,000 local food pantries, emergency food kitchens, low-income senior nutrition programs, and other hunger relief agencies. These efforts feed more than 3 million people annually, according to the Food Bank Association of New York State.

The 3 million meals served through the Food Bank Association of New York State does not reflect the total number of meals served via food pantries and similar organizations because a smaller number of local food pantries receive food from sources other than the regional food banks. These sources include local churches, community groups, and food drives.

3. How Much Food Goes to Waste?

Food losses—that is, edible food that does not make it the hands of hungry people—occur throughout the supply and marketing chains from farm to consumer, whether on the farm, in distribution, during food processing and manufacture, at the retail and foodservice level, or at home, by consumers themselves.

The United Nation’s Food and Agriculture Organization estimated in 2011 that 1.3 billion tons, or one-third of all food produced for human consumption, is wasted globally throughout the food supply chain (Gustavsson, et al. 4).

Even without firm numbers on how much food is lost at the farm, most experts seem to agree that a far greater amount of food is wasted as it moves up the marketing chain.

The United Nations estimated that in North America and Oceania (Australia and surrounding islands) per capita food loss from production to retail is 280-300 kg/year, and per capita food loss by consumers is 95-115 kg/year.

“In industrialized countries, more than 40 percent of food losses occur at the retail and consumer levels,” (Gustavsson, et al. 5).

In 1995, the USDA Economic Research Service estimated that “about 96 billion pounds, or 27 percent of the 356 billion pounds of the edible food available for human consumption in the United States, were lost to human use” (Scott Kanter, et al. 4) at the retailer, food service, and consumer marketing stages.

Two-thirds of lost/wasted food was fresh fruits and vegetables, milk, grain products, and sweeteners, including sugar and corn syrup (Scott Kanter, et al. 4). (The USDA reported that not all food lost was recoverable for human consumption.)

As food leaves the farm, it is subject to loss due to insect infestations, mold, spoilage, improper transportation, trimming in processing, and much more. Losses in food processing and manufacturing seem to be on the decline as processors develop new food products, or foster new revenue streams through composting, livestock feed, an industrial uses of edible products.

Food losses at the consumer level include food lost during meal preparation, cooking, food not consumed by its expiration date, spoilage, and plate waste.

4. Food Waste at the Farm Level

It’s important to include in any discussion of farm gleaning that not all of the food that does not make it to the food supply chain is necessarily considered a loss at the farm level. 4

Some farmers leave unharvested crops in the field to decompose and add organic matter back to the soil.

In fact, some crops, called cover crops, are grown not to be harvested, but to suppress weeds, add organic matter or nutrients to the soil, reduce erosion, reduce insect occurrence in fields, and more. Generally, cover crops are not varieties suitable for human consumption, but they can be wheat, rye, buckwheat, and others.

Another loss of food entering the supply chain that farmers may deem justifiable is food feed to livestock or even sold for livestock feed, albeit generally at prices below those of food-grade wholesale or retail. (In this case, much of the grains, produce, dairy, etc. feed to livestock eventually will make its way to the human food supply in the form of meat and dairy.)
How much food goes to waste at the farm level? It's difficult to know with certainty.

A 1997 report by the USDA Economic Research Service stated that “each year an average 7 percent of U.S. planted acreage was not harvested” (Scott Kantor, et al. 4). The report concluded that the majority of unharvested acres were damaged by storms, including freezing and hurricanes, and that “most of these commodities are not recoverable for human use” (Scott Kantor, et al. 4).

A small percentage of unharvested crops may be fit for human consumption but left in fields because of a lack of a market for the crop, cosmetic blemishes, mechanical harvesting that leaves behind some crop, or other factors.

It is worth noting that even a small percentage of unharvested crops could equal thousands, or millions, of tons of food, in some years.

Determining the amount of food not harvested each year is difficult, in part, because government data tracks the principal crops by state, leaving many secondary-value food items untrack—especially fruit and vegetables. Additionally, government data often does not distinguish among crops grown for food versus fuel, livestock feed, or other uses.

5. Gleaning and Farm Food Recovery

Gleaning is an ancient concept, thought to date to Old Testament times, and carried through the medieval feudal system, when farmers and large landowners were encouraged or required by law to allow the poor to gather crops in the field after the harvest. In contemporary times, gleaning generally refers to volunteers collecting food from fields and donating the goods to food banks or pantries that service the poor. The gleaned food may be left behind because of mechanical harvesting losses, cosmetic blemishes to the produce, lack of markets for the crops, and other reasons.

Gleaning in modern times may also refer to farm-food donations out of farmers' packing lines and storage houses.

Farmers in New York State donated 3.65 million pounds to food banks in 2009, according to American Farm Bureau, which tracks food donations through its Harvest for All program. (New York State leads the nation in farm donations to food banks, according to Farm Bureau.)⁵

The 3.65 million pounds of food donated from farms in New York State includes beef, venison, eggs, dairy, and produce. The vast majority of donations, however, are fruits and vegetables, said Peter Ricardo, food procurement director for the Food Bank of Central New York.

Although the food banks do not keep statistics on exactly what is donated, Ricardo said, the majority of produce donated is comprised of apples, onions, potatoes, and cabbage, with lesser quantities of tomatoes, sweet corn, summer squash, winter squash, and other items. Farm gleaning is traditionally viewed as field gleaning, but, increasingly in New York State the gleaning that does occur at the farm level comes off packing lines and storage houses. “Generally the produce that is donated to us has been harvested but not sold. It may come right from the packing line or from cold storage,” said Joanne Dwyer, Director of Food Industry Relations.

New York farmers do donate directly from the fields, and donation efforts have taken on a variety of different forms, as will be described later in this report.

The food bank directors interviewed for this effort reported their organizations looked to New York farmers as sources of food for donation because the food is locally grown, farmers are perceived to be community-minded, and New York lacks the food processing and manufacturing facilities that are sources of donations in other states (Ricardo). Food bank directors said there are obstacles to overcome in gathering donations from the farm, as will be discussed later, but that farms remain an attractive source of food for serving the needy.

“We have got to go to the source to get food donations. The more money that is invested in the product (as it moves through the supply chain), the harder it is to get it donated,” Ricardo noted.

6. Food Bank Food Sources

New York State is home to eight regional food banks organized through the Food Bank Association of New York State. The food banks are: Food Bank of Central New York (Syracuse), Food Bank for New York City, Regional Food Bank of Northeastern New York (Albany), Food Bank of the Southern Tier (Elmira), Food Bank for Westchester (Millbrook), Food Bank of Western New York (Buffalo), Food Link (Rochester), and Long Island Cares (Hauppauge).

The Food Bank Association of New York State is associated with the nationwide Feeding America. Together the eight regional New York food banks distribute food to 5,000 local food pantries, emergency food kitchens, low-income senior nutrition programs, and other hunger relief agencies. These efforts feed more than 3 million people annually, according to the Food Bank Association of New York State.⁶

Food banks typically receive food donations from grocery stores, food manufacturers, wholesale brokers and distributors, and the government, with lesser quantities of food coming directly from individual and group efforts such as local food drives.

A quantity of food donated to New York's food banks comes directly from farms. For example, the Central New York Food Bank receives 11.5 million pounds of food annually, 300,000 pounds of which comes from farms (Ricardo).

For operating expenses and to purchase food not donated, food banks rely on state, federal and private grants. New York State funding sources include Hunger Prevention and Nutrition Assistance Program, as well as other programs of the New York State Department of Health. Examples of federal funding streams include Community Development Block Grants, Federal Emergency Management Agency, Community Food and Nutrition Program, and the Emergency Food Assistance Program. Additionally, food banks receive monetary donations from individuals, churches, community groups, and others.

Food banks have some funds to purchase food they cannot get in donations. Occasionally, New York food banks are able to buy locally from area farms, directors said, but they are obligated to buy from the lowest-price seller, which typically means wholesale brokers. Increasingly, U.S. food banks are the recipients of food donations with limited nutritional value, including soda, candy, cakes, and more (Farmer). Many food banks feel obligated to accept the donations, out of fear major donors, including grocery stores, will cut them off from all donations (Farmer).

The Food Bank of Central New York is one food bank that has decided to go against the trend and reject food with little or no nutritional value.

"We don't feel we need to pass on the cheapest—the white flour processed baked goods or high-fructose sweetened drinks," Ricardo said. "We aren't the food police. We aren't telling people what to eat. We are trying to do the most we can with our resources, to supply people with food they cannot afford, compared to a box of nutrient-deficient snack food." The decrease in healthy food donations is one more reason food banks are interested in obtaining fresh produce and whole foods from farms.

7. New York State Gleaning Projects

The following projects are examples of recent and current farm gleaning projects in New York State. This is by no means a comprehensive list of all efforts but is intended to provide a snapshot of the types, size and scope of projects.

Additionally, these examples focus on agency-driven gleaning efforts. An unknown number of farmers decide to donate on their own each year. Previous studies, including those by USDA, suggest the greatest chance for sustainable gleaning efforts involve community partnerships.

A. **Harvest for All/Farm Bureau:** Harvest for All is a nationwide Farm Bureau effort to encourage farmers to donate food. It has been particularly embraced by New York Farm Bureau; New Yorkers have led the nation in donations for the past three years.⁷

Farm Bureau's role is to promote the program to its farmers members through newsletters and meetings.

"We try to help get the message out," said Patti Dugan, deputy director of member relations for New York Farm Bureau. "We encourage farmers to consider donating and working with the food banks."

American Farm Bureau also runs a contest that awards the top donation-getting state with a \$3,000 grant that goes to the food bank of the state's choice. Award winners are announced at the national annual meeting.

B. Food Bank of Central New York: The food bank receives 300,000 pounds of from-the-farm goods, mostly produce, but also venison, beef, dairy, and more (Ricardo).

The vast majority of donated produce is apples, cabbage, onions, and potatoes, with lesser amounts of tomatoes and other items. The Food Bank of Central New York will pick up donations at the farm, especially if the quantity is a field box or more and the farm is on the food bank's delivery and procurement route.

Smaller-quantity farm or garden donations can be picked up by or delivered to local food pantries if the farmer makes arrangements.

Increasingly, the Food Bank of Central New York has sought opportunities to pay the farmers' harvesting crews; even one day of work can yield significantly more produce than volunteers do, Ricardo said, without requiring food bank staff oversight and farmer liability. "The efficiency is about 10 times greater because that's what these pickers do. They know how," he said. "We are sensitive to the idea that farmers are not taking \$0. The farmer is donating the produce, but not the packaging, distribution, and labor."

The food bank has also received grants to reimburse farmers for packages such as onion and potato bags. This year, the food bank unveils its own fleet of three-dozen field boxes, stamped with "Food Bank of Central New York," so farmers don't have to use theirs (which the food bank returns to the farm).

Eight farms per year take advantage of the labor-reimbursement program, Ricardo said. Costs average 5 cents per pound of donated food.

Occasionally, the food bank cannot take farm donations, especially if the farm is too far away from the food bank or provides undistributable food—rotten food or too much of a certain food to distribute or store.

"We hope the growers understand who we are and what we do," Ricardo said. "Is it a fit, or not? We're a business, too. We have to be good stewards with our budget. If we have to say no to a donation, it doesn't mean we don't want produce. It means there aren't efficiencies there."

C. Food Bank of the Southern Tier: The food bank has received donations of apples, onions, and potatoes from farmers, reported Knowles. Lesser quantities of farm donations were summer squash and green beans.

“We have attempted a couple of gleaning projects, but we don’t do a lot of it. The labor is tricky. It’s something we would like to do more of,” Knowles said.

The Food Bank of the Southern Tier reached out to farms through Cornell Cooperative Extension and visits to farmers markets.

Larger donations, such as 1,000 pounds of produce, can be picked up at the farm, especially if the farm is on the food bank’s regular procurement and delivery route. Farmers can make arrangements to bring smaller donations to the food bank or local food pantries, Knowles said.

D. Food Bank of Northeastern New York: The Food Bank of Northeastern New York receives donations of apples, winter squash, potatoes and more from farmers annually, totaling 1.2 million pounds of food.

Most donations come in between June and October.

“It all depends on the season and the market,” Dwyer said.

Farmers are increasingly reluctant to allow volunteer pickers on the farm out of liability and concerns about damage to property, such as fruit trees. The food bank has become interested in projects that use farmers’ own professional harvesting crews.

A small grant from a private foundation recently allowed the food bank to reimburse farmers for the labor in harvesting produce, especially apples, for donation.

“In a situation where we can pay real pickers, not volunteers, and where we can cover farmers’ labor, we can make these efforts work. We can recover food that can be used by the food bank,” Dwyer said. “Paid professional pickers get a lot done. They know what they are doing.”

E. Society of St. Andrew: Founded in 1978, the Society of St. Andrew is thought to be the largest nationwide network of farm field gleaners. The program is funded through individual, church, and corporate donations. New York’s program may be smaller than other state’s efforts.

New York gleaners, largely recruited from churches, harvest food from six farms each year, including 15 tons of winter squash and 14,000 pounds apples, according to volunteer coordinator John Conklin.

Occasionally, the group also receives donations of onions from cold storage. The farms that donate generally are affiliated with churches that promote gleaning, Conklin said. All volunteers sign a disclaimer agreeing to hold donor farms harmless in the event of injury. “Farmers are not sitting out there waiting to call about gleaning. They have liability concerns and if they aren’t religious, they don’t always understand the concept of gleaning,” Conklin said. “But farmers get a lot of satisfaction from donating something that may have rotted in the field.” 9

F. **Chautauqua County Rural Ministry:** Since 1999, the Chautauqua County Rural Ministry has gleaned and distributed 250,000 pounds of food from farm fields. Based in Dunkirk, the group receives funding from donations, and private and government grants.

“Funding fluctuates, so the gleaning program takes on different forms,” said Josh Curry-Dastcome, project coordinator for Chautauqua County Rural Ministry. The group recruits volunteer gleaners through local churches but has used interns and people enrolled in social services workforce reentry programs.

Annual donations run approximately 8,000 pounds, Curry-Dastcome said. He said, “The size of the crop dictates the size of the donations.”

The gleaning efforts have included harvesting from the field and picking up harvested goods at the farm. Top donations include sweet corn, winter squash, potatoes, zucchini, and tomatoes.

Over the years, the group has created a database of potential farm donors, created by word-of-mouth promotion and cold-calling farmers.

Lack of funding for gleaning efforts and farmer reluctance to allow volunteers in the field are limiting factors, Curry-Dastcome said.

G. **Cornell Cooperative Extension:** To complete this project, we reached out to county offices of Cornell Cooperative Extension to determine how many offices were involved in gleaning, and the extent of their involvement. Eighteen counties responded, 14 of which have, or recently had, some form of a gleaning project.

i. **Cayuga:** The Master Gardener program has taken the lead in gleaning efforts in Cayuga County, including maintaining community gardens through a BOCES vocational school and a residential home for the elderly. The Master Gardeners raise the funds for seeds, soil, raised beds, and more. Food is donated to local pantries.

Additionally, the association has promoted the Venison Donation Coalition program and encouraged farmers-market vendors to donate unsold produce (Ververs).

ii. **Dutchess:** Working with the Community Food Security Committee of Dutchess County, the Extension office participated in a farm gleaning project from 2003-2007. The Extension office recruited volunteers from its own programs, as well as Girl Scouts, Boy Scouts, and other programs. Gleaners gathered as much as 5,800 pounds of food per year, according to Christine Sergent, family and consumer education program leader.

Cooperative Extension played a key role in recruiting farmers they knew, said Linda Keech, executive director. CCE Dutchess also worked with farmers to provide a training session for volunteers new to farm work.¹⁰

The association discontinued the gleaning effort over liability concerns about bringing volunteers onto farmland and food safety. Today, the association runs a garden that donates produce to the hungry.

iii. Essex: The CCE Essex association has a promotional role in gleaning. They have successfully encouraged area farmers to donate to the Meals on Wheels program, which provides low-cost meals to the homebound (Deming).

iv. Jefferson: The association has a promotional role in gleaning efforts, working with two donor farms as well as two community gardens—one at a church and the other at a low-income senior housing complex (Root).

The association's Master Gardener program also has a demonstration garden funded through a plant sale. Approximately 100 pounds of produce is donated annually (Root).

v. Madison: The association has promoted gleaning, including at least one church garden that donates produce for a local food pantry. The association recently applied for grant funding for a project to encourage farmer-food pantry relations (Baase).

vi. Monroe: The association has approached farmers about gleaning but found farmers were reluctant to allow volunteer pickers on the farm. Some farmers donate produce picked by their own professional crews (Nelson).

vii. New York: Through its MarketMaker program, the association has provided five trainings that reached 600 faith-based organizations; education was focused on forging farmer-agency connections and teaching aid groups how to access farmers and fresh produce (Cho).

viii. Niagara: The association will soon be starting a Creating Healthy Places grant-funded project that includes a gleaning component (Lovejoy Maloney).

ix. Orange: Cornell Cooperative Extension of Orange County operates perhaps the largest farm-gleaning project among the New York Cooperative Extension associations. The program started in 2003, funded through the Hunger Prevention and Nutrition Assistance Program, a grant program of the New York State Department of Health, and Vitagrant.

The association operates a refrigerated truck and recruits 400 volunteers annually for gleaning efforts (Joyce). Since 2006, the association has collected 621,977 pounds of produce and 6,188 pounds of meat (Joyce).

The association is also collaborating with Feeding America as a pilot site for a new toll-free, nationwide hotline designed to make it easier for farmers to locate local food pantry, food bank, and donation programs (Ullrich). The hotline is slated to start in fall 2011.

x. Rockland: The association's Master Gardeners distribute seed packets and gardening kits funded through the Garden Writers Association's Plant a Row program. They encourage farmers and gardeners to donate produce and hold gardening workshops. In 2010, the effort donated 3,200 pounds of produce (Cooke).¹¹

xi. **Schuyler:** Cornell Cooperative Extension of Schuyler County encourages farmers to donate to the area food bank. At least one apple farm donated (Chedzoy).

xii. St. Lawrence: The association hosts a demonstration high tunnel, staffed by interns from local colleges; produce is grown for Cooperative Extension outreach efforts, including 4-H camp, food preservation demonstrations, and more (Chambers). Raised beds were built by inmates at a correctional facility.

xiii. Ulster: Nutrition educators pickup produce at a local farm and distribute the food to participants in low-income nutrition education efforts, including healthy cooking techniques (Greenwald).

Additionally, the Master Gardeners promote the Plant A Row program through mailings, appearances at fairs and farmers markets, and gardening workshops.

CCE Ulster also promotes gleaning. At least one 4-H club, a community garden, and an apple farmer donate produce (Crawford).

xiv. Yates: CCE Yates encourages farmers to donate produce and promotes the Venison Donation program. At least two farmers donated produce (Landre).

8. Farmer Concerns About Gleaning

There are numerous logistical conditions to a successful farm gleaning effort. These include funding, nonprofit liability, limited time in securing and distributing perishable food, food bank knowledge of farmers and how to reach out to them, and so on. Often overlooked are the concerns of farmers themselves.

Farmer concerns included lack of knowledge about how to donate and donation requirements, including food safety protocols, packaging, etc.

A. Farm Liability: The top concern of farmers seems to be in understanding how much liability the farmer is assuming in allowing volunteer gleaners on the farm or donating food for the hungry. This is an area that requires more study, but it seems clear that farmers are assuming some liability, despite efforts by nonprofit groups, including hold harmless agreements, etc.

For example, in instances where county offices of Cornell Cooperative Extension organize volunteer gleaners on privately owned farms, liability in the event a volunteer is injured would first fall to the injured party. In the event he or she does not have adequate insurance, liability moves to the farm, then to Cooperative Extension (Fleming). Cornell Cooperative Extension requires farms to provide a certificate of insurance (Fleming).

“Farmers are at risk having volunteers on the farm,” said Kimberly Fleming, a professional development specialist with Cornell Cooperative Extension. 12

Each farmer’s insurance policy may limit volunteers or visitors on the farm or place limitations on who can use hand tools, power equipment, work in the vicinity of animals or chemicals, and so on.

For more on food safety liability, see Section 9.

B. Theft and Damage to Farm Property: Farmers also seemed concerned about theft and damage to personal property, including volunteers trampling crops, damaging fruit trees and bushes, and more.

Food banks with experience organizing farm-gleaning efforts reported that there was a strong need to supervise volunteer gleaners, including children, as they are generally not knowledgeable about farms and typically require training in how to harvest. There were some reports that food went home with the volunteers and never made it to the food bank.

“There has been a lot of bad history with volunteer gleaners. People sometimes thought a farmer had free produce every year,” Ricardo said.

Melissa Knowles, food-sourcing manager for the Food Bank of the Southern Tier, recalled a gleaning project at an apple farm where the food bank was not invited back due to the number of unsupervised children who came with the volunteers.

“They didn’t want children stomping all over the place,” she said.

C. Cost to Farm: Additionally, farmers seem concerned about the loss of their own time and money (often on top of the lost revenue in the donated crop) implicit in many gleaning efforts. Farmers and their paid staff may feel compelled to be on site or assist in gleaning efforts, drawing their time away from others endeavors.

Almost all of the food bank and nonprofit organizations interviewed in this study reported that they promoted gleaning to farmers in part through the use of federal tax incentives: that is, farmers that donate may be eligible for tax breaks based on the value of their food donations. In fact, such tax incentives for farmers seem to be exaggerated.

“Generally, a contribution is limited to the income tax basis of the property being donated. So those that raise ... food would have no deduction for the contribution because the expenses of raising the food have been included on the tax return,” said Joseph Bennett, a CPA, and tax specialist with the Cornell University Dyson School of Applied Economics and Management.

In other words, because the expenses of farming are already tax deductible to the farm business, deducting a donation might be viewed as “double-dipping” to the Internal Revenue Service.

Over the years, the government has passed enhancement taxes that allow farmers to deduct farm-raised food as both a business expense and charitable contribution. Most recently, an enhancement tax for food donations was passed following the destruction of 13 Hurricane Katrina in 2005 but was not renewed in subsequent years (Bennett). That legislation allowed for deductions of property basis plus 50 percent.

Farmers that did not deduct the expenses of raising the crop but wished to deduct for charitable contributions would be limited to deductions only when the contributed value exceeds 20 percent, but not more than 50 percent, of adjusted gross income—meaning farmers that contribute smaller amount of food generally are not eligible for charitable tax deductions, according to IRS Publication 526.

D. Efficiency: Because much of farm donated goods are highly perishable, there is generally a short window in which gleaning or other donation efforts need to be accomplished. Additionally, as farmers or farm workers may be pulled away from other tasks to assist in gleaning efforts, there is pressure to glean efficiently.

Unfortunately, volunteer gleaners are generally not efficient workers. They may have limited or no experience being on a farm and do not know how to harvest. Volunteers may require training by the farmer.

Some with experience in farm gleaning projects reported that the volunteers may be uncomfortable working in farm conditions, especially heat and rain. Others said volunteers are always motivated workers.

“They are out there to help and feel good. They aren’t necessarily motivated to work hard,” Dwyer said.

Farmers and food bank directors that were interviewed reported they are interested in farm gleaning efforts that use paid workers, especially the farm’s own crew, rather than volunteers.

9. Good Samaritan Law

The Bill Emerson Good Samaritan Act, passed in 1996, is federal law that “promotes food recovery by limiting the liability of donors to instances of gross negligence or intentional misconduct” (Waste 21).

The law seems to protect donors from unintentional liability related to food safety, including the “nature, age, packaging, or condition of apparently wholesome food” (Waste 21). The law has been understood to protect farmers from general liability, although it’s unclear how the law interacts with insurance policies. Additional research on the subject is required.

“The Act also protects farmers who allow gleaners on their land” (Waste 21). However, the law cannot stop anyone who is injured from suing a farmer: “Anyone can file a lawsuit against anyone else. The ‘Good Samaritan’ laws just set some guidance for who would win such a lawsuit” (Citizen’s).

10. AmeriCorps Gleaners

Although New York does not have direct experience using AmeriCorps workers as farm gleaners, an AmeriCorps initiative from several years ago may offer a template.¹⁴ AmeriCorps is a national, federally supported program that provides funding to nonprofit agencies to hire workers to provide “national service to address critical community needs in education, public safety, health and the environment.” Workers receive an education stipend and or living allowance, health care benefits, and child care assistance. Sometimes billed as the “domestic Peace Corps,” AmeriCorps was founded in 1993 under President Bill Clinton.

Each year, AmeriCorps offers employment to 75,000 people, according to its website. In 1996, the United States Department of Agriculture initiated the “Summer of Gleaning,” in which AmeriCorps workers at 22 sites in 20 states organized farm gleaning efforts. The programs were administered by USDA Rural Development, Farm Service Agency, and Cooperative Extension associations.

The programs worked on an aggregator model in which 88 AmeriCorps workers recruited 1,600 non-compensated volunteers (USDA). The bulk of the gleaning occurred on farms, but some donations efforts took place at restaurants, bakeries, etc.

USDA reported that the 22 gleaning programs established in 1996 were still taking place in 1999 without AmeriCorps assistance.

AmeriCorps workers in New York have collected food for donation at grocery stores and participated in farm-to-school projects, said Jack Salo, director of the Rural Health Network of South Central New York. Salo has supervised AmeriCorps workers for more than a decade.

AmeriCorps provides general liability insurance, but the host site for the project work would be the first insurer, Salo said.

“There would always be an intermediary between the farmer and the AmeriCorps workers,” Salo said.

AmeriCorps does provide workers compensation for its workers, which many volunteers would not have. Paid workers may be more committed to the project.

11. Requirements to donate

Often, food banks can pickup donations at the farm, especially if the quantity is field-box size or larger and the farm is near a regular food bank delivery and procurement route. Smaller-quantity, farm or garden-size, donations can be picked up by or delivered to local food pantries if the farmer makes arrangements.

None of the food banks interviewed for this study required Good Agricultural Practices certification. Good Agricultural Practices, or GAPS, are standard for how fresh produce is handled at the farm level. In recent years, grocery stores, wholesale brokers, food processors, and other large scale buyers have required GAPS compliance from farms. Likewise, none of the food banks interviewed for this study placed restrictions on farm production practices, such as fertilizer or pesticide use. Food bank directors seemed contented that food originally intended for sale was fit for consumption. 15

Some food banks prefer food donations to come packaged, sized and weighted; check with local organizations for their requirements.

Food banks do not want rotten food, but may accept a large donation, such as a trailer load, if the farmer discloses that a small percentage of the donation, say 10 percent, was spoiled. Food banks need to be able to determine if the value of the donation outweighs the cost of sorting through damaged goods (Ricardo).

Food banks are required to meet all health standards and laws related to the distribution and storage of food, such as the refrigeration or freezing of meat, dairy, and eggs.

12. Venison for Donation

An established gleaning program in New York State that may offer a template for other projects is the Venison Donation Coalition. A nonprofit coalition of hunters, farmers, state environmental conservationists, federal natural resource conservation specialists, and food banks coordinates the

donation of legally hunted venison meat to food pantries and the needy around the state.

Hunters donate the meat. Meat processors are reimbursed for their costs in animal slaughter and packaging. Food banks pickup the packaged meat along their trucking route of taking food from regional warehouses to the thousands of smaller food pantries around New York.

Since forming in 1999, the Venison Donation Coalition has facilitated the donation of 337.5 tons of meat to New York food banks, according to its website.

“Venison is a nutritional red meat. It’s low in fat, and people said, ‘why aren’t we doing more with it?’” recalled Richard Winnett, a recently retired coordinator with the Finger Lakes Resource Conservation and Development Council. “The RC&D councils were the catalyst that got the program going. The food banks wanted to see the program.”

RC&D councils are nonprofit entities established by the USDA Natural Resource Conservation Service, which provided a federal conservationist to serve as coordinator, as well as funding for administrative costs. New York has eight regional councils that worked on agricultural and rural conservation and economic development projects.

The RC&D councils helped promote the venison donation program and played a critical administrative role in bookkeeping and administering program funds, especially through the Federation of New York State RC&D Councils, and the Finger Lakes RC&D and Central New York RC&D councils.

In the summer of 2011, federal funding to the RC&D program was eliminated nationwide. Each council maintains separate nonprofit status and is currently grappling with next steps, including seeking alternative funding, combining with another organization, or dissolving. Winnett said the Venison Donation Coalition program has funds to continue for several more years.

To participate in the Venison Donation Coalition program, hunters call the toll-free phone number, 1-866-862-3347. Hunters must check in with the Coalition before taking a carcass to a 16 processor and must deliver the animal to a processing facility that has been approved by the Coalition.

Donated venison must be properly field dressed and processed at a state-licensed deer processing facility; all donations must be packaged and labeled with the following information: a statement of “not for sale,” the type of meat (venison), the license number of the hunter, the carcass number of the deer, the name and address of the processor, and date of processing.

To keep processing costs low, deer are generally processed entirely into ground or stew meat in 1-2 pound packages. Occasionally 5-10 pound packages of meat may be assembled for soup kitchens and other volume users.

The Venison Donation Coalition does not offer statistics on the number of deer donated by sportsmen versus farm owners. However, it is clear that the Venison Donation program has targeted the farm community for donations, especially through relationships with agricultural service organizations that provide promotion, including state and county Farm Bureau, Cornell Cooperative Extension, USDA Farm Service Agency, USDA Natural Resource Conservation Service, and others. Farmers are strategic partners as they tend to own large tracts of rural land where deer live. Additionally, farmers may obtain nuisance hunting permits which allow for killing animals that threaten

crops.

The majority of donated venison comes into food banks in autumn, which suggests most of the deer are caught during the regular hunting season. Some venison is donated during the summer, which suggests those animals are caught with nuisance permits, Winnett said.

An additional logistical hurdle to donating deer outside of the standard hunting season is that many custom meat processors operate their businesses seasonally or may process deer in the fall and switch to livestock during other times of the year.

Running the Venison Donation program requires approximately \$125,000 per year, Winnett estimated. The Coalition reported that it spent \$105,000 on processing in 2008 alone.

From 2003-2008, the venison donation project was supported by a \$500,000 grant from the New York State Department of Environmental Conservation. The grant funds paid for meat processing and packaging costs, and some program promotion. The grant was contingent upon a match of time from Resource Conservation and Development coordinators.

In 2009, New York started the DECALS program, in which hunters were encouraged to donate \$1 to the donation program at the time they paid for a hunting license. The DECALS effort has not proved as fruitful as expected.

Winnett reported the DECALS program brought in \$25,000 in its first year, when 500,000 licenses were purchased. To keep the Venison Donation Coalition going, cash donations came in from hunting clubs, county Farm Bureaus, and other organizations. In some cases, food banks also paid for venison processing.

Starting in fall 2011 the Food Bank Association of New York will continue the venison donation effort, aided by a five-year, \$500,000 grant from the New York State Department of Health Hunger Prevention and Nutrition Assistance Program. 17

There are venison and game donation programs similar to New York's in other states. In Maryland, all hunting license fees include a mandatory fee that helps support the venison donation program.

Maryland licensing fees are expected to generate \$100,000 annually toward processing costs, according to the Fairfield County (Connecticut) Deer Management Alliance.

13. Beef and Meat From Livestock

In recent years, there have been small-scale, localized efforts to donate beef and livestock meat from farms to food banks and pantries in New York.

In interviews conducted for this project, both the Food Bank of Central New York and the Regional Food Bank of Northeastern New York reported receiving beef from farmers in the past few years.

Joan Smith, a dairy farmer from New Hartford, NY, started a beef-gleaning project in 2010 in Oneida County. From fall 2010 to fall 2011, six dairy farms each donated a cow to the project. Smith's goal was to donate one cow per month to the effort, but the project has been hampered as the market price for beef has risen.

“I would like this project to get bigger and better, but when meat prices went sky-high, we couldn’t really push farmers,” Smith said.

She was inspired to start the effort by a farmer friend in Indiana who participates in a project where beef and hog farmers donate meat to food banks; that effort is funded through farmer, agri-business and church donations.

In Smith’s project, farmers were reimbursed by the Food Bank of Central New York for the cost of trucking live cattle from the farm to slaughterhouse and for the cost of slaughter and meat packaging. The Food Bank of Central New York picked up packaged, frozen meat at the slaughterhouse and distributed it to food pantries and emergency food providers throughout the Central New York region.

Logistical hurdles to getting the effort off the ground included that to be legally compliant, all donated meat had to be killed and slaughtered at a USDA-certified facility. Smith struggled to find

slaughterhouses willing or able to participate in the project, with some slaughterhouses reporting that they scheduled kills eight months in advance. The project has located two facilities that will process the beef for pickup by the food bank.

A lesser hurdle, Smith reported, was that some farmers were interested in donating only if they were assured the meat would go to feed the needy within their own town or county. In fact, such a stipulation is generally unattainable. Food pantries in smaller towns and counties often do not have the freezer space or scope of program to distribute 600-800 pounds of beef. Working with a regional-scope food bank with the ability to distribute food among hundreds of outlets made the effort doable, Smith said.

Donated beef occasionally comes from injured animals, such as a cow with a broken leg, where the meat is food-safe. Other donations come from farms with surplus animals.¹⁸

The farm donation effort is promoted to farmers through the Cornell Cooperative Extension of Oneida County news bulletin, Farm Flash, and through word-of-mouth among farmers, Smith said.

14. Cornell Cooperative Extension Role

Cornell Cooperative Extension associations seem ideally suited for participation in gleaning projects. Assets include the organization’s nonprofit status, education mission, and cross-disciplinary approach in agriculture, gardening, nutrition, home economics, and family care.

Although some county associations have approached gleaning as organizers of field gleaning efforts, liability may preclude these efforts. In most cases, Cooperative Extension’s insurance requires farmers to provide certificates of insurance (Fleming), and some farmers have expressed reluctance to assume additional liability.

Additionally, Cooperative Extension’s insurance covers enrolled volunteers, but gleaning efforts may require recruiting volunteers outside the Extension program. Another consideration is that

Extension's insurance requires that vulnerable populations, including children, elderly, and the disabled who participate in Extension programs are supervised by staff or enrolled volunteers (Fleming).

Cornell Cooperative Extension associations have already branched out into other roles in gleaning efforts, including promotion of others' gleaning programs; agriculture, gardening and nutrition education, and more.

An additional promotional role for Cornell Cooperative Extension associations could be serving as a matchmaker between farmers and food banks. Yet another role could be serving in an advisory capacity in gleaning programs, grant-seeking efforts, and similar situations. Some of the roles ideally suited for Cornell Cooperative Extension associations would be well-augmented by collaborations with other agricultural service groups including the New York State Department of Agricultural and Markets, Farm Service Agency, Resource Conservation and Development Councils, and nonprofit groups.

15. Funding for Gleaning Efforts

Gleaning projects in recent years in New York State have allowed food banks, food pantries, and nonprofit groups to provide or extend from-the-farm donation activities, including supervised volunteer pickers, paid harvesters, packaging of farm goods, pick up at the farm, meat processing, delivery to the food bank, and more.

These projects have largely been temporary and regional or local. Although most organizations seemed reluctant to share solid numbers, project funding seemed to range from several hundred dollars to less than \$10,000 for 1-3 year efforts. At least one effort was funded by a regional Community Foundation.

Other efforts are focused on buying gardening equipment, seed, and plant inputs for community gardens whose bounty will be donated to the hungry. One example is the Garden Writers Association and its Plant a Row for the Hungry program, which provides vegetable seeds and other items to groups that grow food for the hungry. 19

The Plant a Row for the Hungry program has donated 14 million pounds of seeds to gardening-donation efforts since 1995, according to its website.

Additionally, some efforts were funded through fundraising efforts such as Master Gardener plant sales, or through donations from individuals, churches, business, and altruistic-minded organizations. One county Cooperative Extension said they received gift cards from local big box stores to purchase gardening supplies.

16. Potential Funders

A farm gleaning project funded through grant sources could take on a variety of appearances, depending on the partners involved, size and scope of goals, funds allocated, and more.

There may be some support, whether government or private, for aspects of gleaning or farm-food-donation efforts, especially where public education, health, and hunger-alleviation needs are met; all these goals make the Cooperative Extension system an ideal partner, perhaps especially where

Cooperative Extension may use its cross-disciplinary approach in the areas of agriculture, gardening, nutrition, human health, community development, and more.

Potential funding programs at the federal level for a gleaning project could include USDA Community Food Projects; U.S. Department of Health and Human Services' Healthy Food Financing Initiative; AmeriCorps, and others.

State funders could include the NYS Department of Health.

Private foundations, such as the Kellogg Foundation, may be ideally suited to a gleaning effort.

In addition to hunger-relief programs, funding streams may include those that address food deserts, workforce development funding, community gardening, and more.

Due to the philosophical reluctance of most grant funders, public and private, to pay for costs they perceive as belonging in the private sector, it may be difficult to locate funders willing to pay (or reimburse) for the labor of harvesters on privately held farms. Many requests for proposals and grant applications are written in a manner that would not consider such a funding request, even if the labor was employed solely for the purpose of collecting food for donation to the needy, i.e., a public good.

Even in the event that grant funds to cover farm labor were located, such funding would likely be short-term. To ensure long-term project success and sustainability, gleaning and farm-food-donation projects will likely need to partner with organizations that can provide coordination, oversight, and advocacy as well as fundraising. Some or all of these functions might be performed by food banks, and community and religious groups. Because of this restriction, projects may remain localized or regionalized.

17. Potential Incentives

Alternatively, opportunities to expand or initiate gleaning projects may not come not from grant funding or grant funding alone, but from legislative change. More study is needed, but such changes could include:

- Farm Bill amendments, such as payments, loan forgiveness, etc. in exchange for charitable contributions
- Reinstatement of the federal enhancement tax that enables farmers to make charitable tax deductions for donations
- Additional research into unanswered questions, such as the strengths and weaknesses of the Good Samaritan law; an assessment of how much food is left unharvested in the field; etc.
- Legislation that directs a portion of hunting fees to pay for game donation programs
- Legislation that allows livestock meat for donation to be processed at custom butcher shops, similar to the venison requirements
- And others

This report was prepared with support from the College of Agriculture and Life Sciences, the Cornell University and New York State Agricultural Experiment Stations, and Cornell Cooperative Extension.

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Addressing Community Needs - Forming a Food Policy Council

Partners



Catholic Charities of Oneida and Madison Counties
City of Utica
The Community Foundation of Herkimer and Oneida Counties
Cornell Cooperative Extension of Oneida County
For the Good, Inc.
Food Bank of Central New York
Foodshed Buying Club
Foothills Rural Community Ministry
Hope House
Leaf Loaf & Ladle
Mohawk Valley Community Action Agency
Mohawk Valley Housing and Homeless Assistance Coalition

Mohawk Valley Resource Center for Refugees
New York State Council on Food Policy
Oneida County Board of Legislators
Oneida County Farm Bureau
Oneida County Health Department
Oneida County Ag Economic Development
Oneida County Planning Department
Oneida-Herkimer-Madison BOCES District
Oneida-Herkimer Solid Waste Authority
Resource Center for Independent Living
Rust to Green NYS Action Research Project
Small Business Development Center at SUNY-IT
Utica City School District
Utica Public Library
United Way of the Valley/Greater Utica
Young Scholars Liberty Partnerships Program

Restoring Prosperity
THE STATE ROLE IN REVITALIZING AMERICA'S OLDER INDUSTRIAL CITIES

THE BARRINGER INSTITUTE METROPOLITAN POLICY PROGRAM

R2G
rust2green utlba

ACROSS THE COUNTRY, CITIES TODAY ARE BECOMING MORE ATTRACTIVE TO CERTAIN SEGMENTS OF SOCIETY. MEANWHILE, ECONOMIC TRENDS-GLOBALIZATION, THE DEMAND FOR EDUCATED WORKERS, THE INCREASING ROLE OF UNIVERSITIES-ARE PROVIDING CITIES WITH AN UNPRECEDENTED CHANCE TO CAPITALIZE UPON THEIR ECONOMIC ADVANTAGES AND REGAIN THEIR COMPETITIVE EDGE.

..., THESE CITIES NEED THOUGHTFUL AND BROAD-BASED APPROACHES TO FOSTER PROSPERITY.

"RESTORING PROSPERITY" AIMS TO MOBILIZE GOVERNORS AND LEGISLATIVE LEADERS, AS WELL AS LOCAL CONSTITUENCIES, BEHIND AN ASSET-ORIENTED AGENDA FOR REINVIGORATING THE MARKET IN THE NATION'S OLDER INDUSTRIAL CITIES.

Rust to Green Questions



- How can NY's rust-belt cities pursue revitalization and sustainable prosperity? What barriers and how to overcome them?
- What contributions can Cornell make to advancing regional sustainability and resilience and serving mutual public/community and academic interests?
- What can we learn together- models, policies, theories emerging from our collaboration and partnership?



Food generates **jobs, economies and wealth**

Food generates **health, nutrition and wellness**

Food generates **community life and connections**

Food generates **environments**

Food generates **creativity, empowerment and self-control**



Community food security...

is a “condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance, social justice and democratic decision-making”.

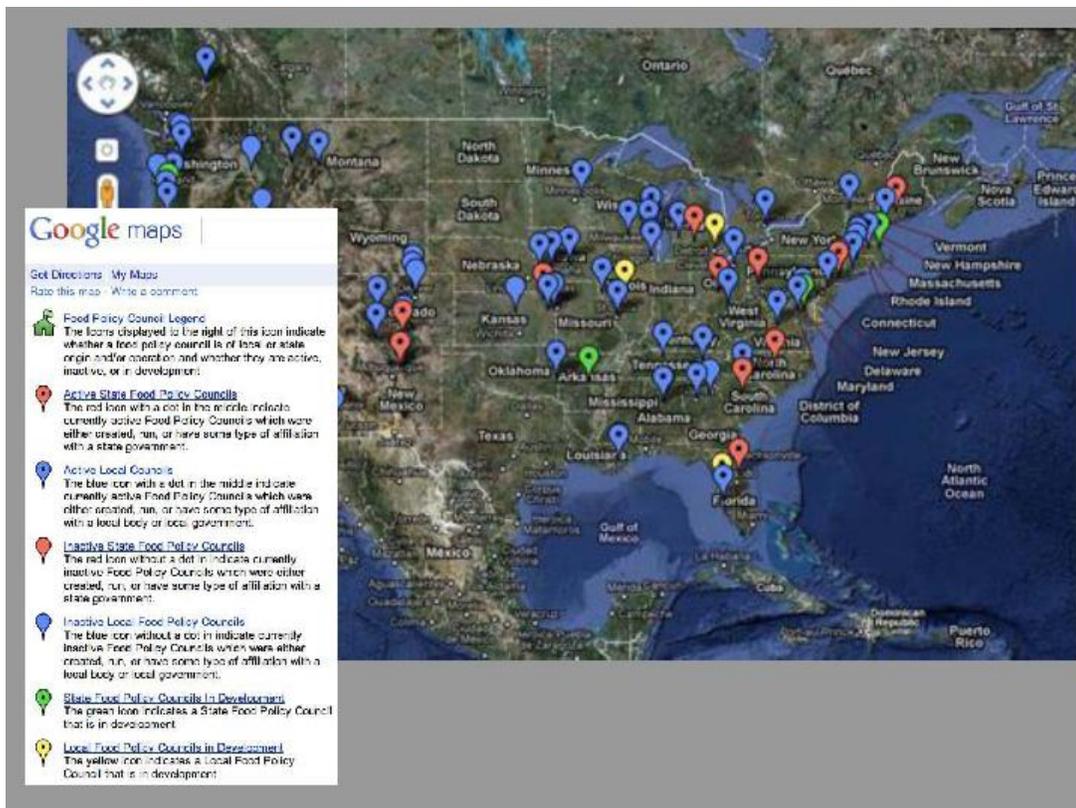
Hamm and Bellows, Rutgers Food Policy Institute



A USDA Hunger Free Communities Grant brings us together, offering an opportunity for grantees in partnership with other organizations in their communities to improve access to nutritious food through research, planning, and implementation of hunger relief activities.



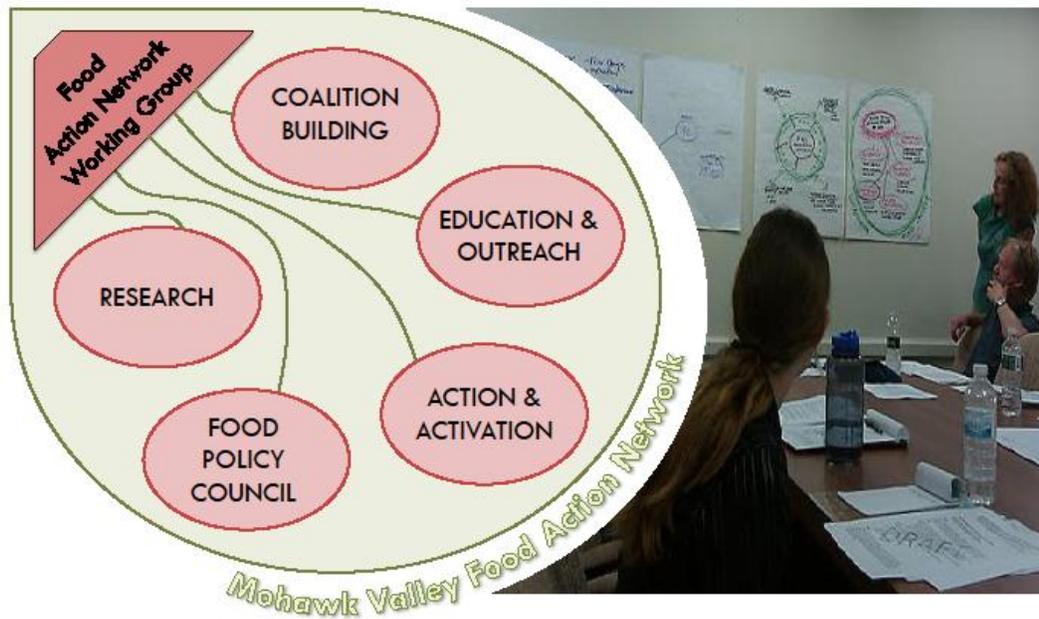
Oneida County is one of only 14 grant recipients out of 200 applicants nationwide



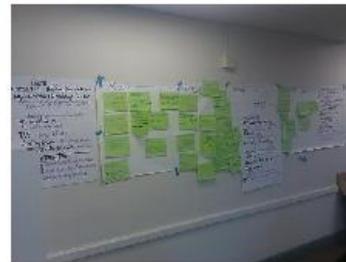
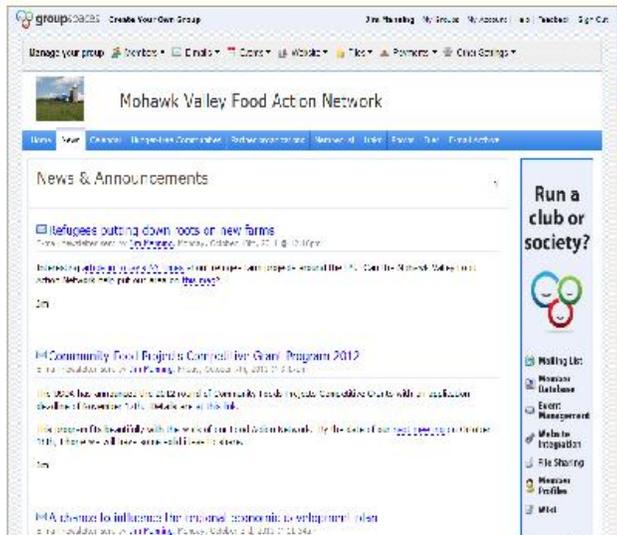
Mohawk Valley Food Action Network



Network System



Partner Engagement



Steps:

1. Study what shapes and affects our **food system** and the **food security** of our community and its citizens
2. Work together to build consensus, educate the community, catalyze actions and implement programs that lead to greater community **food security** and a resilient **food system**
3. Form a **Food Policy Council** to lead on-going community decision-making on food system issues and recommend policies

Food System Assessment, 4-Part Strategy

1. SURVEYS
2. DATABASE
3. INDICATORS
4. MAPPING

Food System Assessment 1. SURVEYS

Purpose:

To assess community food insecurity and availability

Example question: Do you sometimes skip meals because you can't afford to buy food?

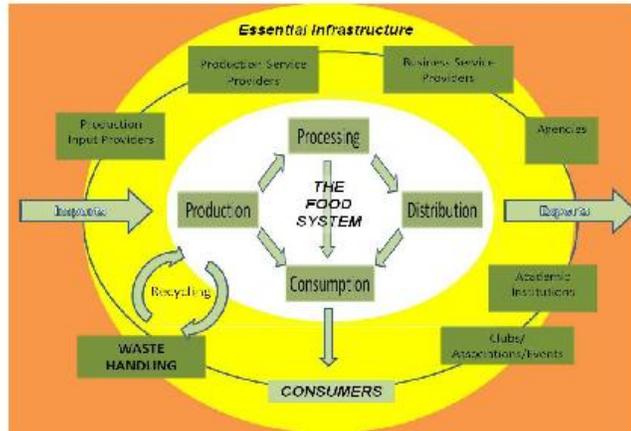
Mohawk Valley Food Action Network COMMUNITY FOOD SURVEYS					
	phone	1 on 1 interviews	focus groups	web	observational
Individuals/Residents	X	X	X		
Food providers		X		X	
Food retailers					X

Food System Assessment 2. DATABASE

Purpose:

To understand and describe food system sectors and how they relate

Ex Question: What % of milk produced in Oneida County is consumed in County?

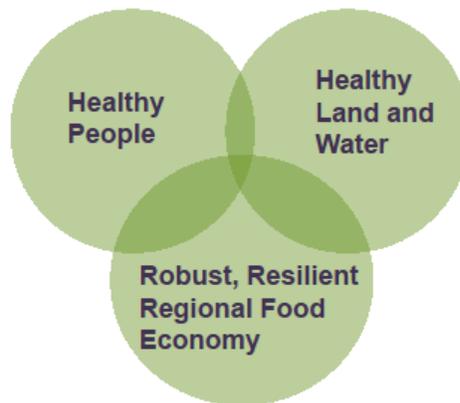


Food System Assessment 3. INDICATORS

Purpose:

To measure baseline conditions and food system performance over time in three areas

Ex Question: Is the study area diabetes rate increasing or decreasing?



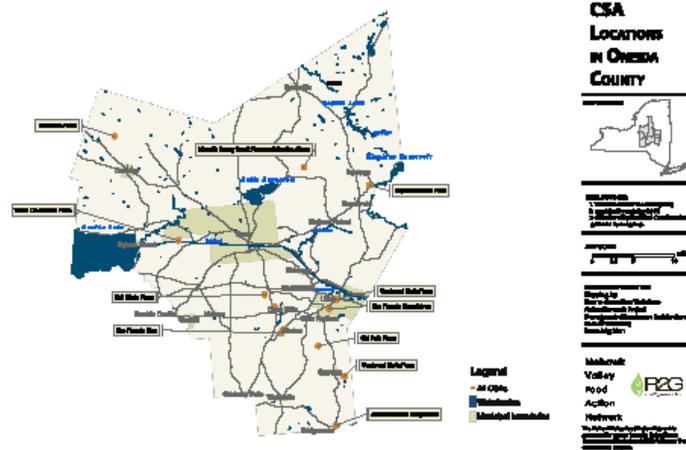
Food System Assessment

4. MAPPING

Purpose:

To represent and analyze the geography of the food system

Ex Question: What is the relationship between poverty rate and access to healthy food?



Other Connections



Vacant Lots Used for Urban Agriculture

Oneida County Public Market

MLK School Garden

Utica Monday Nites

ESNY

Master Gardeners

Community Gardens

Master Gardener

Garden from Afar

A collage of images illustrating various food system initiatives in Oneida County. The images include: an aerial view of vacant lots; a public market stall; a school garden; people at a community event; a woman in a garden; and a group of people at a market. Logos for R2G and ESNY are visible.



MOHAWK VALLEY FOOD ACTION NETWORK

www.mvfoodaction.com

www.rust2green.org





Introduction

As a fundamental element of our survival, food powerfully defines our lives in many seen and unseen ways. It solidifies our role as interdependent *community* members of humanity and Earth, connecting us to land and people we may never see. As such, our relationship with food has tremendous potential in shaping the wellbeing of all life.

Revived community food systems are helping realize this potential in positive ways nationwide. The sustainability—economic, social, and environmental—of local and regional food systems starkly contrasts with the adverse effects of the globalized food system that has developed over the past century. While increasing quantity and convenience, the globalized food system has in some ways sacrificed the quality of our food and the health of our economy, people, and land. These global problems are evident in a damaged agricultural economy threatening the success of small and mid-scale farms, social injustice manifested in growing food insecurity and unfair agricultural labor practices, high rates of diet-related illness and food safety crises, and a polluted agricultural landscape that continues to shrink.

The promise of community food systems in repairing and preventing these consequences is growing more visible. These food systems *integrate* the production, processing, distribution, consumption, and post-consumption sectors as a means of ensuring economic, social, and environmental wellbeing. In a strong community food system, all consumers can easily access a grocery store, farmers’ market, and CSA and—at a price fair for both them and the producer—acquire nutritious foodstuffs that were produced locally in a manner supporting the wellbeing of the environment and food system workers. This model builds community and ensures food security additionally through initiatives like community and home gardens.

“Eating is an agricultural act.” Wendell Berry

Our regional food system at a glance

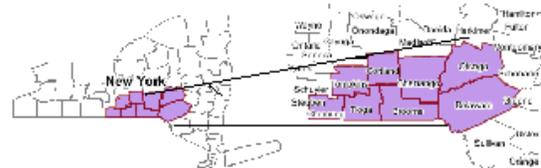
Economic Vitality: 5,328 farms, farming 502,916 acres generated \$370,571,000 in 2007, up 21% from 2002. However, less than half of farms reported net gains in farm income in 2007.

Food Security: Food banks distributed 1,873,327 lbs. of fresh produce to hunger relief agencies in 2010. Despite this, 1 in 8 residents are food-insecure, and only 63% of eligible individuals receive SNAP (food stamp) benefits.

Healthy Environments: 50.1% of livestock farms reported practicing rotational or management-intensive grazing in 2007. 23.4% of farms use conservation methods.

Healthy People: Only 1 of 8 counties meets the US goal of residents eating 5 or more servings of fruits and vegetables per day. 127,200 residents are reported to be obese—over 1 out of every 5 individuals. The percent of obese preschool children in every county is higher than the NYS goal of less than 11.6%.

The Food and Health Network of South Central New York (FaHN) was founded on this opportunity and seeks to explore it through this regional food system assessment. FaHN is a coalition of organizations and individuals from many sectors of the food system who work together to create food-secure communities and improve the quality of life in the region. The group supports practices, projects, and policies leading to increased use of nutritious and locally produced foods. See www.foodandhealthnetwork.org. We serve the following eight counties, all of which are included in the assessment: Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Tioga, and Tompkins.



The FaHN Food System Assessment (FSA) is a priority in the group's 2011 work plan. Through this type of assessment, "communities examine the connections between production, distribution, consumption, and waste disposal and measure their impacts on the environment, human health, and livelihoods through a set of indicators over time."¹ FaHN will update the FSA every year, with data updates for US Census of Agriculture data every five years, to measure progress, collect data on additional indicators as resources permit, and develop a comprehensive regional food system plan.

Goals of the 2011 FaHN FSA

- Establish baseline regional food system information that can be easily replicated and measure progress over time.
- Provide a tool for evidenced-based programmatic, municipal, and regional food system planning and evaluation that protects the viability and regional character of the eight-county region served by FaHN.
- Add value to partner initiatives through their ability to use the FSA in program development.
- Strengthen the vital connections between agricultural and rural interests with urban interests and other sectors of the food system.
- Provide a model that may serve other communities with limited resources that are interested in conducting food system assessments

Regional Overview

County	Pop., 2010 ²	Sq. miles	Pop. density: people/sq. mile, 2010 ³	% of total pop. in poverty, 2009	% of children & youth - 18 yrs. in poverty, 2009 ⁴	% of racial minority pop., 2010 ⁵
Broome	200,600	707	284	16.3%	22.7%	11.9%
Chemung	88,830	408	218	15.8%	22.9%	10.6%
Chemango	50,830	894	56	15.5%	21.7%	3.2%
Cortland	49,336	500	99	17.8%	20.4%	4.8%
Delaware	47,980	1,446	33	15.4%	23.4%	6.0%
Otsego	62,239	1,003	62	16.4%	17.8%	8.1%
Tioga	51,125	519	99	11.3%	15.6%	3.0%
Tompkins	101,364	476	213	18.8%	15.9%	17.2%
Region	652,524	5,953	110	N/A	NYS: 20.2%	N/A

Our region is predominantly rural, though home to several small cities, the largest of which is the City of Binghamton with a population of 47,376.

Agricultural Overview and the Role of Dairy

Agriculture is an essential part of South Central New York's economy. In 2007, 5,328 farms generated \$370,571,000 in sales.⁶ Multiplier effects suggest that the economic impact of agriculture in our area is approximately two times greater than the value of these sales. Farming positively impacts our regional economy in two ways:

- First, through the upstream effects of the jobs and revenue resulting from goods and services that farmers purchase within the community to produce their products: Farmers rely on local businesses such as feed and seed dealers, fuel companies, machine repair shops, veterinarians, and more.
- Second, through the downstream effects of the jobs and revenue resulting from the processing, transporting, marketing, wholesaling, retailing, and food services necessary to bring products to consumers.



Livestock operations, dairy in particular, are prominent in our agricultural landscape because of the hilly topography, slope, soil depths, and dominant soil types; more land in our region is better suited for the production of perennial forage crops (pasture, dry hay, haylage, and greenchop) rather than the production of annual crops (corn, soy, wheat, and vegetables).⁷ According to the 2007 US Census of Agriculture, **69 percent of all gross agricultural sales are from sales of milk and other dairy products from cows.** The top crop item for every FaHN county was forage crops. However, vegetables, orchard fruit, wine grapes, and maple syrup are also defining pieces of our agricultural economy, especially in the context of small- and mid-scale operations.

The following graph depicts averages for the eight FaHN counties:



Total Market Value of Ag Products Sold, 2007⁸: \$370,571,000

Our temperate climate provides us with abundant rainfall and a sufficient growing season. The average annual rainfall amount for our region is approximately 39 inches, and most of our region falls into USDA Hardiness Zone 5 (average annual minimum temperature of -10° and -20°F) with small portions in Zone 4 (average annual minimum temperature between -20° and -25°F).

Many opportunities exist for season extension, and the drive for locally produced food throughout the year is growing. Ensuring the success of livestock operations also helps ensure a vibrant regional food system year-round.

Given agriculture's essential role, our region's economy would greatly benefit from initiatives to tap the unrealized potential of agriculture-based economic development. More jobs can be created and more products proudly made and sold in South Central New York. This potential could be realized with initiatives such as development of value-added products, processing facilities, and development or expansion of regional food hubs which facilitate aggregation, storage, processing, distribution, and marketing of regionally produced food products.

Our regional food system extends beyond the boundaries of the eight counties covered by FaHN. This area also benefits from fruits and vegetables more easily grown in other parts of the state and in neighboring states: One study conducted for New York State suggests that "specialization could enable local and regional food systems to supply a large share of the state's food needs," and that it may be more realistic to think of local and regional food systems supplying certain foods, rather than certain geographic areas.⁹

As such, the FaHN FSA recognizes the food system's *potential* to provide greater access to fresh, nutritious, and affordable food for all residents in South Central New York.

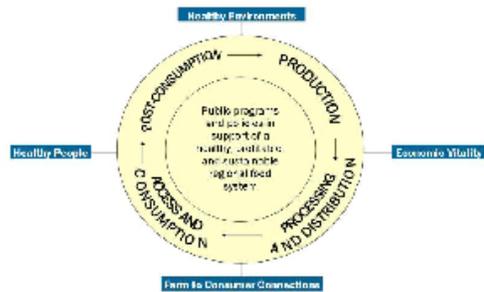
Food System Assessment Overview

With several model assessments in mind, four broad vision statements were developed as a means for organizing the indicators in this FSA:¹⁰

- **Healthy Environments:** Farmers use practices to maintain and restore agricultural productivity, biodiversity, and environmental quality for healthy soil, water, air, plants, and animals. Consumers reduce food waste and compost to foster healthy environments post-consumption.
- **Economic Vitality:** Profitable farms; win-win partnerships with slaughterhouses, processors and distributors of local foods; and just labor practices contribute to the region's wealth through the triple bottom line of economic, community, and environmental health.
- **Farm to Consumer Connections:** Locally produced food that is accessible and affordable is purchased by citizens and institutions through a variety of channels. Citizens have means of producing, preparing, and preserving their own food.
- **Healthy People:** Residents are food-secure with nutrient-dense diets, eat recommended amounts of fruits and vegetables, and have low rates of obesity and diabetes.



Ithaca Farmers' Market



Process

The process for developing the FSA was designed to be inclusive and highly participatory as a means to engage and energize people in open discussions about the connections between all pieces of the regional food system. A ten-member FaHN Task Force guided the development of the FSA. An additional 36 stakeholders were interviewed and offered suggestions to make this assessment as meaningful and useful as possible. The Task Force is grateful for their insights. The whole FaHN also offered substantive input and was responsible for reviewing the final draft report recommended by the Task Force.

Indicators

Food system stakeholders identified key indicators that best supported the visions of healthy environments, economic vitality, farm to consumer connections, and healthy people. To the extent possible the indicators meet the following criteria:

- Reliable and credible source of data, with data regularly collected to determine trends
- Data publically available and at the county level
- Measurable, valid, understandable, and relevant to the region

We placed strong emphasis on the availability of secondary data mainly due to limited resources for primary data collection. However, we recognize that data is powerful in shaping systems. If the current food system is broken, then the existing secondary data may not always appropriately measure that which is reflective of a strong regional food system.

It is our hope that by recommending future measures, identified as such due to current unavailability of data, we may initiate the process of agency data collection that will more genuinely inform regional food system assessments. A streamlined approach to the collection of data *at the source*, then made publically available and easily accessible, will improve the ability of varied entities throughout the state to conduct food system assessments with limited resources.

Assumptions and Limitations of this FSA

Food systems are intricate and dynamic entities. The interconnectedness of the food system means that some indicators may apply to more than one vision; additionally, many indicators relate to one another and evolve in meaning when viewed in conjunction with related indicators.

While some indicators are related, some may be contradictory. For instance, maximizing food assistance may come at the expense of promoting healthy eating, similarly, promoting healthy eating may sacrifice the integrity of fair production practices (think of the migrant workers who harvest a great percentage of food sold in the United States but do not receive fair wages and work in unsafe environments). Tension also exists between the need for farmers to make a living by charging fair prices and the ability of all individuals, including those with limited incomes, to afford locally produced food.

We do not intend this document to provide answers to all of the possible questions that may develop when thinking about food system reform. Our indicators are not perfect. For example, much of the data pertaining to agriculture is from the US Census of Agriculture, which is conducted every five years. 2007 is the most current year for this census. Despite these and other limitations, such as possible undercounting of farms by the census, we hope this FSA will generate meaningful dialogue around what we need to do to become our ideal definition of a regional food system.

The intent is for future FaHN food system assessments to build on this product and particularly address indicators that identify specific needed interventions: These “on the ground” interventions help measure progress over time better than broad, framing indicators. It is important to review this FSA with all of these considerations. The most enlightening insights will surely come with an awareness of the many nuances that exist in food systems and this FSA.

Issues Affecting Healthy Environments

Hydraulic Fracturing

Planned natural gas extraction in the Marcellus Shale, which includes the FaHN region, using the controversial method of hydraulic fracturing (also known as hydro-fracking or fracking) poses serious implications for agriculture and our regional food system. Only rigorous regulation and enforcement, as described in our Healthy Environments policy indicator, will ensure the protection of our regional foodshed.

The concerns voiced by people who informed this FSA vary. Numerous potential environmental hazards may render agricultural land unsuitable for production—especially organic production—and taint our regional food supply: polluted water and soil contamination; bioaccumulation of radioactivity, heavy metals, and toxic chemicals; soil erosion and compaction from machinery; and decreasing crop yields from ground level ozone emissions. Fragmentation of farmland from the construction of pads and access roads may eventually decrease the profitability and sustainability of farms and shrink the infrastructure that supports them. Also a significant concern, especially with a nationwide shortage of farmers, is the possibility of farmers discontinuing farming because of money earned from leases. Efforts to strengthen our regional food system may be hindered by potential negative perceptions of consumers about food produced in a region with hydro-fracking.

Importance of Grass-Fed Beef and Dairy Operation

As previously noted, land in South Central New York best supports perennial forage crops because of our region's land slopes, soil depths, and soil types. As such, raising livestock primarily on forage crops and pasture (rather than with grain-based feed) is the method best-suited to our land for converting local plant energy into local food for consumption. Furthermore, because land suited to the production of pasture-raised dairy and meat is more readily available, it is theoretically possible to feed more people who eat a *modest* amount of pasture-raised meat than would be possible on a diet containing conventional meat and dairy or even on a vegetarian diet.¹¹ Furthermore, research increasingly proves that meat raised primarily on pasture and forage crops is a nutritious source of protein with fewer calories and grams of fat as well as higher amounts of heart-friendly omega-3 fatty acids than conventional meat. Currently, only 8.6 percent of cropland acres in our region are used for pasture or grazing; however, a promising 50.1 percent of livestock farms practice rotational or management-intensive grazing.

Issues Affecting Economic Vitality and Farm to Consumer Connections

The national trend of farm consolidation and corporatization has endangered small- and mid-scale farms, which play critical roles in strengthening regional food systems:

- **Small producers who connect directly with consumers:** Even though these farms account for only two percent of total farm sales and may increase up to ten percent at most, they foster thriving local food communities through farmers' markets and community supported agriculture (CSA) programs. They also serve as agricultural innovators, sparking new farming and business practices.
- **Mid-scale producers:** The ideal role of mid-scale farms is to produce at a scale profitable for the farm and affordable for consumers, without severely damaging the environment or compromising the health of employees and livestock. This depends on many factors, including the type of production and the number of acres available for production. Defined in this report as farms with gross annual sales between \$100,000 and \$500,000, these farms play a critical role in supplying institutions like schools, health care facilities, senior centers, large retail stores, and restaurants. From 2002 to 2007, the region lost 94 mid-sized farms. This presents a challenge in sustaining farms that can grow availability of local food in the channels through which most food is purchased.
- **Value-added producers:** Value-added production provides innovative ways of increasing profitability and increasing availability of local produce year-round.
- **Regional hubs:** These sites of aggregation pave the way for efficient distribution of food from local producers through regional market channels.

Issues Affecting Healthy People

The direct relationship between increasing rates of food insecurity and increasing rates of diet-related health problems like obesity and diabetes is visible across the country. In 2009, 12.9 percent of individuals in our region were food-insecure, with similarly high rates of obesity and diabetes between 2006 and 2009. Access to healthy foods can be a challenge: Residents on a tight budget may find it difficult to afford nutritious fresh fruits and vegetables or sources of protein, especially with increasing expenses for other necessities of life. This can leave some households little choice but to choose unhealthy options.

Food deserts exacerbate this problem as the lack of grocery stores in some urban and rural areas makes it even more difficult for some consumers to not only access food but also choose healthy options. Increasing the accessibility of grocery stores through the number of stores and innovative transportation initiatives, increasing the availability of produce (especially local) through hunger relief agencies, and increasing subsidized direct sale initiatives through farmers' markets and CSAs all serve as meaningful interventions for this problematic paradox.

KEY INDICATORS AND MEASURES AT A GLANCE: PROMISING TRENDS, CHALLENGES AND OPPORTUNITIES

Overarching indicator: Increase in local, county, state, and federal public programs and policies in support of a healthy, profitable, and sustainable regional food system					
	Production	Processing and Distribution	Access and Consumption	Waste Management	All Sectors of the Food System
Healthy Environments	<p>Promising trend: Sustainable nutrient management practices are improving, as indicated by nitrogen and phosphorus balances of inputs and outputs on farms.</p> <p>Positive indicator: 50.1% of livestock farms reported practicing rotational or management-intensive grazing in 2007.</p> <p>Challenge: Only 23.4% of farms reported using conservation methods in 2007.</p>	<p>To be addressed in future Food System Assessments.</p>	<p>Positive indicator: 201 farms with 24,315 organic acres in the region generated \$10.3 million in sales of certified organic products in 2007.</p>	<p>Opportunity: Need for more institutions and homes to practice composting. Cayuga Compost and Tompkins County Master Compost program are examples of programs that work.</p>	<p>Opportunity: State and municipal laws and regulations need to be in place and enforced to protect farmland, crops, livestock, and water quality from the adverse effects of hydro-fracking for natural gas.</p> <p>Challenge: Increase earnings for agricultural employees and food service employees at least equal to the average for all employees in the county.</p> <p>Opportunity: Children's health can benefit from increased public support of school districts' wellness policies and efforts to provide children and youth with nutrient-rich food choices.</p>
Economic Vitality	<p>Challenge: Reverse the trend toward fallow land in the region: Acres in cropland decreased by 3.1% from 2002 to 2007.</p> <p>Challenge: Young farmers needed. The average age of farmers is increasing and was an average of 57.1 years in 2007.</p> <p>Challenge: More women and minority principal farm operators needed.</p>	<p>Challenge: Need for increased capacity of slaughterhouses within 100 miles of farms, processors and distributors of local foods, and regional distribution hubs for win-win strategic partnerships with farms.</p>	<p>Challenge: Need for growth of mid-sized farms: The number of mid-sized farms decreased by 12%. The market value of their ag products sold increased by only 1.4% from 2002-07. Mid-sized farms are central to increasing the supply of local food for residents and institutions.</p> <p>Challenge: Increase the percentage of all farms reporting net gains in farm income from the average of 41% in 2007.</p>		
Farm to Consumer Connections	<p>Opportunity: Build on increasing public interest to create and expand the availability of community gardens and urban farms as well as restore urban farms and community gardens lost to Hurricane Irene and Tropical Storm Lee.</p>	<p>Opportunity: Build on increasing public interest in the local foods movement to promote home canning and freezing of locally grown food.</p>	<p>Promising trends: The value of agricultural products sold directly to consumers increased 59% from 2002 to 2007. While promising, this represents only \$11.29 per capita spent on direct purchases of food from local farms or farmers' markets in 2007, representing only 2% of total farm sales. There may be potential to increase this up to 10% and benefit many small farms. In 2010, there were 26 CSAs in the region.</p> <p>Challenge: Increase access to local foods by residents of all income levels: (1) All 36 farmers' markets participating in EBT up from 50% in 2010, with increases in EBT sales up from \$21,741 in 2010.</p>		
Healthy People	<p>Promising Trend: The New York Center for Agriculture and Health, affiliated with the Bassett Healthcare Network, is working to improve farmworker health and safety by preventing and treating occupational injury and illness.</p>	<p>Opportunity: In 2010, 3,052 lbs. of donated venison was processed by approved processors for food banks. Hunter awareness of this program could increase availability of this nutritious meat to reduce hunger.</p>	<p>Challenge: Reduce hunger: 13,010 people in the region do not have enough nutritionally adequate food to sustain them. Outreach is needed to increase the percent of eligible residents receiving SNAP (food stamp) benefits. Also need to increase amount of produce and venison that food banks distribute.</p> <p>Challenge: Improve health through consumption of more nutritious food: Need to reduce adult age-adjusted diabetes rates, reduce obesity rates for all ages, and increase the percentage of residents eating 5+ fruits and vegetables daily.</p>		

HEALTHY ENVIRONMENTS

Vision	Indicator	Measure
<p>Farmers steward the land and other natural resources in a way that maintains agricultural productivity, biodiversity, and environmental quality.</p>  <p>Grazing dairy cows photographed by the New York Grazing Lands Conservation Initiative coordinator, Karen Hoffman</p>	<p>Farmers are adopting sustainable practices in all aspects of production.</p> <p>Farmers are adopting agricultural practices <i>consistent</i> with the soils, topography, geography, and climate of the region.</p>	<p>Cropland nitrogen and phosphorus balances (i.e., manure and fertilizer nutrients minus nutrients utilized by crops in a county) trend toward zero, often indicating a reduced risk of nutrient excess (and associated nutrient losses to water or air) or a reduced risk of nutrient deficiency (and associated losses in crop and livestock quality and productivity).</p> <p>Increase in number and percent of farms using conservation methods, such as no-till, limited tilling, nutrient management, filtering field runoff to remove chemicals, riparian buffers, and fencing animals to prevent them from entering streams, etc.</p> <p>Increase in number and percent of livestock farms practicing rotational or management-intensive grazing.</p> <p>Increase in number and percent of acres used for certified organic production.</p> <p>Increase in sales of certified organic products from local producers.</p> <p>Increase in number and percent of farms generating energy or electricity on the farm.</p> <p><u>Future measures when resources and data are available:</u></p> <p>Increase in number and percent of acres of land that certified organic farmers set aside for native pollination: Collect data with possible use of a return postcard at a NOFA conference. Decrease in plastic waste on farms. Increase in number of counties completing Agricultural Environmental Management (AEM) report cards. Counties in the Chesapeake Bay Watershed meet Environmental Protection Agency's biennial targets for water quality. Targets for Total Maximum Daily Load (TMDL) for the Susquehanna River are met.</p> <p>Increase in number and percent of acres used for pasture or grazing, suggesting conversion of harvested cropland acres to pastureland and fallow land to land in production.</p>
<p>Food waste is minimized and diverted from the waste stream through the production of compost, which is then returned to the soil.</p>	<p>Institutions, schools, other facilities with food services, and households minimize food waste and engage in composting and compost education.</p>	<p>Increase in pounds of food waste diverted from the waste stream to compost facilities.</p> <p><u>Future measure when resources and data are available:</u></p> <p>Increase in number of collaborative composting programs. Increase in number and percent of households that compost food waste. Increase in municipal policies for composting at the home and institutional level.</p>
<p>Local, county, state, and federal policies and funding support this vision for a healthy environment.</p>		<p>State and municipal regulations in place and enforced, as a means to protect farmland, crops, livestock, and water quality from the adverse effects of hydraulic fracturing for natural gas.</p>

MEASURES FOR HEALTHY ENVIRONMENTS

Measure and desired direction of change	↑ # and % of acres used for certified organic production, 2007 ¹³		↑ Sales of organic products from local producers ¹³	↑ # and % of farms using conservation methods, 2007 ¹⁴		↑ # and % of livestock farms practicing rotational or management-intensive grazing, 2007 ¹⁴		↑ # and % of cropland acres used for pasture or grazing ¹⁴		↑ # and % of farms generating energy or electricity on the farm, 2007 ¹⁷		Nutrient inputs and outputs approach a balanced 0.0 lbs./acre ¹⁷			
	#	%		#	%	#	%	#	%	#	%	Nitrogen lbs./acre		Phosphorous lbs./acre	
County			2007									2002	2007	2002	2007
Broome	928	2.1%	\$322,000	104	17.9%	141	65%	2,891	6.6%	8	1.4%	26.8	7.0	4.1	-1.4
Chemung	N/A	N/A	N/A	84	23.5%	88	62%	3,616	11.0%	5	1.3%	33.0	11.5	2.7	-1.2
Chenango	3,680	4.2%	\$967,000	220	24.2%	201	44%	7,507	8.7%	8	0.9%	56.5	33.7	4.7	0.5
Cortland	3,860	6.3%	\$1,584,000	139	23.7%	135	51%	4,319	7.0%	13	2.2%	67.3	45.7	9.0	1.2
Delaware	4,061	5.9%	\$101,000	208	27.8%	219	50%	7,475	10.8%	6	0.8%	50.1	35.8	6.9	6.5
Otsego	3,385	3.8%	\$1,002,000	172	17.6%	185	42%	7,890	9.0%	5	0.5%	70.6	36.0	6.3	1.1
Tioga	2,586	4.8%	\$1,098,000	129	22.8%	131	46%	4,693	8.7%	8	1.4%	33.9	45.5	4.1	1.7
Tompkins	5,815	8.6%	\$5,263,000	188	32.0%	132	62%	3,974	5.9%	13	2.2%	46.8	22.7	4.1	0.04
Region	24,315	4.8%	\$10,337,000	1,244	23.4%	1,232	50.1%	43,365	8.6%	66	1.2%	N/A	N/A	N/A	N/A

Amount of food waste diverted from the waste stream to compost facilities	
Facility	Amount diverted from waste stream
Cayuga Compost	3,424 tons of organic food waste composted, resulting in approximately 3,000 cubic yards of finished product, 2010 ¹⁹
Delaware County Solid Waste Management Center & Compost Facility	Of the 27,000 tons of garbage processed through the digester, 65% was turned into compost, 2010 ²⁰
Notable Intervention	
<p><i>The Conservation Effects Assessment Project (CEAP)</i> is a national effort by the Natural Resource Conservation Service division of the USDA to evaluate the effects of conservation practices on croplands, grazing lands, wetlands, and wildlife. <i>The CEAP-Cropland Assessment on the Effects of Conservation Practices on Cultivated Cropland in the Chesapeake Bay region</i>, finds that the adoption of conservation practices on cultivated cropland has reduced edge of field sediment loss by 55%, losses of nitrogen with surface runoff by 42%, losses of subsurface nitrogen flows by 31%, and losses of phosphorous by 41% in the Chesapeake Bay region.</p> <p>http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1042078.pdf</p>	

Notable Interventions
<p><i>Grazing Lands Conservation Initiative (GLCI)</i>: Through local, state, and national partnerships and on-the-ground coalitions, GLCI seeks to preserve grazing lands through improved management practices. GLCI is driven by agricultural producer, conservation, scientific, watershed, erosion control, and other environmental organizations and the voluntary participation of private landowners who own and manage grazing lands. GLCI emphasizes high quality technical assistance, expanded grazing lands research and education, and an informed public. The New York chapter of GLCI carries out this mission for our region. http://www.glci.org/index.html#</p>
<p><i>Cayuga Compost</i>: This local business successfully provides compost services for local institutions, including restaurants and schools, and local events. Close collaboration with the Tompkins County Division of Solid Waste contributes to successful collection of food scraps and the sale of resulting compost to local businesses and residents. A drop-off option for local residents wishing to compost food scraps is in the works. Industrial capacity enables Cayuga Compost to compost meat, dairy, compostable plastics, and other materials that will not decompose in home composting systems. Compost education and outreach provided by Master Composters of Tompkins County also plays a role in the successful rate of home composting and institutional and event composting through Cayuga Compost. http://www.cayugacompost.com</p>

ECONOMIC VITALITY

Vision	Indicator	Measure
<p>Viable farms and their lands are preserved. Farms make profits for themselves, the community, and the economy. People who want to farm have access to farmland.</p> <p>Mid-scale farms and the cottage and artisanal food economy thrive.</p>	<p>Farmland is kept in production.</p> <p>Farms regularly make a return on investments and are able to further invest in their businesses.</p> <p>"Ag of the Middle" is sustained: Mid-scale farms remain in production and are viable.</p> <p>Farmers benefit from research and product development and have the skills to run successful, innovative businesses.</p>	<p>Increase in number and percent of acres of total cropland on farms. <i>(If data on number of active and inactive farm acres were accessible instead of total cropland acres, this would be used)</i></p> <p>Increase in number and percent of farm operators reporting not gains in farm income.</p> <p><u>Future measure when resources are available to collect data:</u> Increase in number of acres offered through programs that link farmers with owners of fallow land. Increase in number and percent of farmers earning a livable wage, defined as income appropriate for the local cost of living.</p> <p>Increase in number and percent of mid-sized farms (annual gross sales between \$100,000 and \$500,000). Increase in the market value of agriculture products sold by mid-sized farms.</p> <p><u>Future measures when resources and data are available:</u> Increase in number and percent of farms using techniques, such as hoop houses, to extend the growing season.</p>
<p>Farms reflect the diversity of the culture in which they exist.</p>	<p>Minorities have an equal opportunity to serve as the principal operators of farms.</p>	<p>Increase in number and percent of minority and women principal farm operators.</p>
<p>Viable family farms continue from generation to generation, farming is considered a respectable career, and young people are inspired to become farmers.</p>	<p>Younger farmers are operating farms on a fulltime basis.</p>	<p>Decrease in average age of farmers. <i>(If data on % of young farmers were available instead of average age, this would be used)</i></p>
<p>Farmers are supported by a robust labor force and service-based infrastructure.</p> <p>Value chains thrive within the local/regional food system: Farmers, processors, distributors, and hubs enjoy cooperative rather than competitive relationships, fostering win-win strategic partnerships for the long-term benefit of all.</p> <p>Farmers, processors, distributors and hubs are maximizing their assets, have adequate capital and skilled labor, and are working at capacity in a manner that supports agriculture's triple bottom line of economic, community and environmental vitality.</p>	<p>Agriculture-related support and technical assistance businesses and organizations are thriving and accessible to farms.</p> <p>There is an adequate supply of trained and experienced agricultural labor.</p> <p>Farmers have access to slaughterhouses, fruit, vegetable and meat processing, and centrally located food hubs.</p> <p>Food hubs—which facilitate the aggregation, storage, processing, distribution, and/or marketing of regionally produced food products—create opportunities for producers, processors, distributors, wholesalers, and retailers.</p> <p>Value-added production is accessible to and utilized by local producers.</p>	<p>Increase in number of USDA conventional and certified organic slaughterhouses within approximately 100 miles of most conventional and certified organic farms in the region.</p> <p>Increase in the percentage of farm operators reporting high speed internet access.</p> <p>Examples of development and use of commercial kitchen enterprises, instant quick freeze facilities, and cold chain processing and distribution that serve local producers.</p> <p>Examples of regional food hubs that are new or expanding.</p> <p><u>Future measures when resources and data are available:</u> Increase in number of agriculture support businesses and organizations, such as equipment, feed, seed, and veterinary assistance. Increased public dollars for agriculture training. Expansion or addition of training programs for processing at Community Colleges and BOCES. Increase in number of beginning producers utilizing farm and food incubators. Slaughterhouses reach carrying capacity through growth of infrastructure, with consideration of height. Increase in slaughterhouses and processors that are cash-positive and have adequate business to operate year-round. Increase in small- and mid-scale ventures producing value-added products. Increase in sales of value-added products. Increase in jobs through value-added product processing. Increase in on-farm creameries. Increase in availability and use of economic development dollars for processing, distribution, and hubs. Decrease in food miles.</p>
<p>Local, county, state, and federal policies support this vision for economic vitality.</p>		<p>Examples of effective new policies and funding that preserve farms and farmland; support ethnic, gender, and age diversity on farms; and foster a vibrant regional food economy.</p>

MEASURES FOR ECONOMIC VITALITY

Measure and desired direction of change	↑ # of acres cropland ²¹		↑ Cropland as % of total acres on farms		↑ # of total number of farms		↑ # of total farms reporting net gains in farm income ²²		↑ % of total farms reporting net gains in farm income		"Ag of the Middle" farms as economic drivers Mid-sized farms: \$100,000-\$500,000 in gross annual sales ²³							
											↑ # of mid-sized farms		↑ % of mid-sized farms		↑ Market value of agricultural products sold in \$000's		↑ % of total market value of agricultural products sold	
	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007
County	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007	2002	2007
Broome	54,413	43,575	55.3%	50.3%	588	580	157	211	27%	36%	50	34	8.5%	5.9%	\$10,326	\$8,836	35.9%	29.6%
Chemung	37,283	32,923	53.9%	50.1%	427	373	117	140	27%	38%	27	27	6.3%	7.2%	\$5,845	\$7,029	48.4%	42.3%
Chenango	100,601	86,719	53.0%	48.9%	960	908	484	411	50%	45%	175	151	18.2%	16.6%	\$35,022	\$35,405	67.0%	53.8%
Cortland	70,226	61,458	55.3%	49.2%	569	587	214	218	37%	36%	95	82	16.7%	14.0%	\$17,999	\$18,983	45.3%	34.6%
Delaware	92,038	68,959	48.1%	41.7%	788	747	398	319	51%	43%	144	123	18.3%	16.5%	\$31,702	\$28,739	62.8%	52.1%
Otsego	112,145	88,174	54.4%	50.0%	1,028	980	412	410	40%	42%	169	139	16.4%	14.2%	\$33,021	\$28,905	65.1%	56.2%
Tioga	74,588	53,816	58.2%	50.1%	604	565	258	213	43%	38%	81	73	13.4%	12.9%	\$15,241	\$18,296	50.9%	49.9%
Tompkins	66,980	67,292	66.4%	61.9%	563	588	228	243	40%	41%	56	74	9.9%	12.6%	\$12,347	\$17,500	41.2%	47.7%
Region	608,254	502,916	54.8%	49.7%	5,527	5,328	2,268	2,165	41%	41%	797	703	14.4%	13.2%	\$161,503	\$163,693	52.8%	44.2%

	↑ % of farm operators reporting high speed internet access, 2007 ²⁴
Broome	40%
Chemung	30%
Chenango	44%
Cortland	35%
Delaware	36%
Otsego	31%
Tioga	38%
Tompkins	47%

Distributors of Locally Grown Food in the Region include CNY Bounty, Joe Angello, Regional Access, and Red Jacket. CADE's HUFED Feasibility Study may also result in a new local food distribution system. Expansion of regional food hubs for storage and distribution, such as Evan's Creamery in Chenango County, would be an asset to farmers and spur economic growth. The Wallace Center is a resource for hub development.

Slaughterhouses: Notable Interventions and Unmet Needs

- **Larry's Custom Meats**, in Hartwick, Otsego County, opened a new US Department of Agriculture (USDA) certified slaughterhouse in 2011.
- **NV Custom Processing** received a grant in 2011 to purchase equipment for a new USDA slaughterhouse in the Town of Bridgewater, Otsego County, and expects to hire 14 new employees.
- Currently, the closest certified organic slaughterhouse and meat processing facility is in Troy, Pennsylvania. There are no certified organic slaughterhouses in the region. **Eldred Farm** in the Town of Hartsfield, Delaware County, is in the process of developing a facility for both organic and traditional meats capable of processing 5,000 head.
- **Opportunities for developing slaughterhouses are improving:** USDA's Rural Development is offering loans and grants to small packing houses and processors to expand, upgrade, or update facilities. There is greater cooperation between the USDA's Food Safety and Inspection Service and facilities. USDA's Rural Business Enterprise Grants (RBEIG) for slaughterhouses and feasibility studies have improved.
- USDA is currently inspecting custom slaughterhouses that are USDA exempt on a yearly basis. Several are considering becoming USDA certified. Prior to this, custom slaughterhouses exempt from USDA certification were inspected less often by New York State.

Processors: Notable Interventions and Unmet Needs

- **Meat and Poultry Processing:** LCM and Purdy & Sons' Foods, Inc., a USDA processor in Chenango County, will soon be certified organic. Several poultry processors, which are USDA exempt plants that process less than 20,000 head of poultry per year, are located in the region and include: **Eldred Farm** in Delaware County, **K&K** in Otsego County, and **Norwich Meadows** in Chenango County.
- **Dairy Processing and Value-Added Products:** **Agro Farms**' plant in Chenango County is the largest yogurt maker in the US and continues to expand to keep up with demand for **Chobani** Yogurt. **Kortright Creek Creamery** in Delaware County received an RBEIG award to purchase creamery equipment and is currently raising funds to build the building. When complete, the facility is expected to be available to local farmers to process their products. Several farms in the region have also developed on-farm creameries.
- **Fruit, Vegetable and Grain Processing:** **Lucky Dog Farm**, in the Town of Hamden, Delaware County, is developing a commercial kitchen. Commercial kitchens outside of the region: **Farm to Table**, in Kingston NY, is also used by firms in the region, as is **Nelson Farms** in Madison County. **Cayuga Pure Organics** in Tompkins County produces sustainably produced organic beans, grains, and flours for wholesale and retail in addition to producing organic feed for livestock.
- **Needed enterprises** include commercial kitchens, individual Quick Freeze facilities, and cold chain processing and distribution that serve local producers. Funding opportunities for processing projects are available, particularly for job creation. These include County IDA's, Regional Economic Development Agencies, and USDA Rural Business Enterprise Development grants.

Job Training: Notable Interventions and Unmet Needs

- **Farm Incubator Program:** **Groundwell Center for Food and Farming** is launching the first farm incubator program for beginning farmers in the region.
- **Needed:** Visible apprenticeships and internships with farms and, particularly, processors.

FARM TO CONSUMER CONNECTIONS

Vision	Indicators	Measures
<p>Local food citizens of all income levels are connected to local agriculture and consume more locally produced, fresh, safe, and healthful food.</p> <p>Consumers recognize and support the economic and cultural value of small farms and cottage, artisanal food enterprises in the region.</p>  <p>Isaac and four chickens in his Tompkins County backyard</p>	<p>Residents support local producers through direct sale purchasing.</p>	<p>Increase in direct farm sales and percent of total farm sales.</p> <p>Increase in value of direct farm sales per population in each county, suggesting an increase in the amount of the food dollar that is spent by residents on local food.</p> <p>Increase in number of farmers' markets, number of times per week farmers' markets are held, and number of winter farmers' markets.</p> <p>Increase in number of CSAs (Community Supported Agriculture programs) and buying clubs/cooperatives selling to residents in the region.</p> <p><u>Future measures when resources and data are available:</u> Increase in agricultural tourism, outreach, and education. Increase in number of mobile units selling direct farm-to-consumer. Increase in number of established, well-organized, volunteer "Crop Mob" programs similar to that in Tompkins County, to increase consumer-to-farmer connections and provide help to farmers when needed.</p>
	<p>Low-income residents have improved access to and ability to afford local food through market channels that include emergency food providers.</p>	<p>Increase in number and percent of farmers' markets using Electronic Benefits Transfer (EBT) for customers to purchase local foods with SNAP and other benefits.</p> <p>Increase in the value of sales from EBT at farmers' markets.</p> <p><u>Future measures when resources and data are available:</u> Increase in number and percent of CSA programs that accept EBT. Increase in number and percent of NYS-grown food purchased by Emergency Food Providers.</p>
	<p>Local food citizens of all income levels grow more of their own food.</p>	<p><u>Future measures when resources and data are available:</u> Increase in number of home gardens. Increase in availability of open space suitable for urban agriculture. Increase in number of brownfield acres reclaimed for urban agriculture.</p>
	<p>Schools, universities, restaurants, other institutions with food services, grocery stores, and restaurants in the area buy more local food products from farms, processors and distributors of local foods.</p>	<p><u>Future measures when resources and data are available:</u> Increase in wholesale activity: Local food purchased by school districts, colleges and universities, health care facilities, prisons, senior centers, and other institutions; large retail stores, such as Price Chopper, Weis, and Wegmans; and restaurants. An ideal measure might be the percent of the total food dollar that institutions spend on local foods.</p>
	<p>School-aged children understand and value the local food system and have opportunities to grow and consume local food as part of a comprehensive education program.</p>	<p><u>Future measures when resources and data are available:</u> Increase in number of schools with educational gardens: This will be added to FaHN's annual Regional Community Garden survey. Increase in number of Farm to School programs (use of this measure is pending a standard definition of a Farm to School program).</p>
<p>Local, county, state, and federal policies support this vision for farm to consumer connections.</p>	<p>Local, county, state, and federal policies support increased consumption of locally produced, processed, and distributed food.</p>	<p>Examples of newly adopted policies, such as zoning changes or geographic preference guidelines.</p>

MEASURES FOR FARM TO CONSUMER CONNECTIONS

Measure: And direction of desired change	↑ Value of agricultural products sold directly to individuals ²⁵		↑ % of total farm sales that are direct farm to consumer sales		↑ # of farms selling directly to individuals		↑ Direct farm sales/capita ²⁶	↑ # of farmers' markets ²⁷	↑ # of times farmers' markets held per week	↑ # of winter farmers' markets	↑ # of farmers' markets with EBT 2010		↑ Sales from EBT at farmers' markets	↑ # of community gardens and urban farms ²⁸
	2002	2007	2002	2007	2002	2007	2010	2010	2010	2010	#	%	2010	2010
County														
Broome	\$553,000	\$676,000	1.9%	2.3%	63	93	\$3.46	5	6	4	5	100.0%	\$4,468	10
Chemung	\$408,000	\$916,000	3.4%	5.5%	54	50	\$10.42	5	4	5	1	20.0%	\$2,207	2
Chenango	\$383,000	\$1,032,000	0.7%	1.6%	98	136	\$20.20	3	5	3	0	0.0%	N/A	1
Cortland	\$538,000	\$714,000	1.4%	1.3%	58	59	\$14.75	4	6	3	2	50.0%	\$1,877	2
Delaware	\$986,000	\$1,155,000	2.0%	2.1%	120	134	\$24.93	6	6	5	0	0.0%	N/A	1
Otsego	\$538,000	\$1,172,000	1.1%	2.3%	98	144	\$18.83	3	8	3	1	60.0%	\$106	1
Tioga	\$623,000	\$767,000	2.1%	2.1%	84	80	\$15.23	2	2	3	1	50.0%	\$364	1
Tompkins	\$598,000	\$933,000	2.0%	1.6%	81	84	\$9.29	8	10	6	8	100.0%	\$12,719	17
Region	\$4,627,000	\$7,365,000	1.5%	2.0%	656	780	\$11.29	36	N/A	32	18	50.0%	\$21,741	33

	↑ # of CSAs serving local residents	↑ # of farms with a minority principal operator, including women, 2007 ²⁹		↑ % of farms with a minority principal operator, including women, 2007 ³⁰		↓ Average age of farmers		<p>Notable Interventions:</p> <p><i>Binghamton Urban Agriculture Zoning:</i> Pending approval from the City Council, amendments to the city's zoning ordinance would increase the number and types of animals allowed for keeping in the city and more adequately define community gardens, urban farms, and beekeeping and related permissible activities. Proposed amendments were developed through a collaborative effort between the City of Binghamton Department of Planning and Development, the Broome County Health Department, the Food and Health Network, and the Binghamton Regional Sustainability Coalition.</p> <p><i>Healthy Food for All:</i> A partnership between the Tompkins County CSA coalition and the Tompkins County Cornell Cooperative Extension, this program makes available subsidized CSA shares to people with limited income in the Ithaca area. The program also offers free nutritional cooking classes to teach preparation of local, seasonal products as well as biweekly workshops on composting, home preservation, and u-picking. This program is supported by benefit harvest dinners throughout the growing season at local farms, with local chefs and wineries making use of seasonal ingredients for the meal. http://www.fseerobs.com/fullplatefarms/healthyfoodforall.htm.</p> <p><i>Community garden initiatives:</i> In Binghamton, Volunteers Improving Neighborhood Environments (VINES) supports the added development and continued sustainability of the city's community gardens, including its urban farm by coordinating leadership, fundraising, and education: http://vinescommunitygardens.org/. In Ithaca, Gardens 4 Humanity operates similarly and provides a biannual garden-based teaching training program for community members interested in becoming community garden site coordinators/volunteers and/or garden educators: http://ccotompkins.org/garden/community-school-gardens.</p>
	2010	Women	Racial Minorities	Women	Racial Minorities	2002	2007	
Broome	3	100	12	20.8%	2.1%	56.9	56.8	
Chemung	1	75	8	25.2%	2.2%	54.3	56.7	
Chenango	3	168	13	21.7%	1.5%	54.2	58.0	
Cortland	1	90	9	18.1%	1.6%	53.4	56.4	
Delaware	3	142	3	23.5%	0.4%	55.0	56.7	
Otsego	1	192	24	24.4%	2.5%	54.9	58.3	
Tioga	2	113	9	25.0%	1.6%	54.6	58.5	
Tompkins	12	175	9	42.4%	1.6%	53.9	55.4	
Region	26	1,055	87	24.7%	1.7%	54.7	57.1	

HEALTHY PEOPLE

Vision	Indicator	Measure
<p>Residents of all income levels have access to a nutritious diet of affordable, fresh, healthful, minimally processed, culturally appropriate food. Everyone has the skills and knowledge essential for the production, preparation, and enjoyment of nutritious food.</p>  <p>Fewer individuals are experiencing food insecurity.</p>	<p>There is a low prevalence of diet-related health conditions and chronic diseases.</p> <p>Residents consume recommended amounts of fruits and vegetables.</p> <p>More residents are food-secure.</p> <p>Residents who need food from food banks and food pantries have increased availability of fresh produce and local healthy meats, such as venison.</p> <p>Individuals eligible for SNAP (formerly Food Stamp) benefits are enrolled in the program.</p> <p>No residents live in a food desert: They have access to a grocery store where they can purchase affordable, high-quality, culturally appropriate, and nutritious food.</p>	<p>Decrease in percent of adults ever having been told by a doctor that had diabetes. Age-adjusted rate.</p> <p>Decrease in number and percent of obese adults, (BMD>30). Age-adjusted rate.</p> <p>Decrease in percent of children, ages 2-4, participating WIC, who are obese, (>=95th Pct).</p> <p><u>Future measures when resources and data are available:</u> Decrease in rate of obesity and diabetes for all ages.</p> <p>Increase in percent of adults eating 5 or more servings of fruit and vegetables daily. Age-adjusted rate.</p> <p>Decrease in number and percent of food-insecure individuals.</p> <p>Increase in number of pounds of fresh produce distributed by food banks to hunger-relief agencies.</p> <p>Increase in number of pounds of donated venison processed by approved processors for food banks.</p> <p>Increase in number and percent of eligible individuals receiving SNAP benefits.</p> <p><u>Future measures when resources and data are available:</u> Increase in amount of healthful, local food obtained through gleaning programs. Decrease in food deserts: USDA's Economic Research Service's definition of a food desert appears inadequate for the region. A more nuanced definition of a food desert is needed, building on the work of Mari Gallagher.</p>
<p>Residents are protected from food contamination and other hazards, such as genetically modified organism (GMO) products.</p>	<p>Farmers selling to institutions, such as schools, have documented certification that they follow safe handling procedures for fruits and vegetables.</p>	<p>Pilot program on Bridge the Gap developed, yielding an increase in number of farmers with training and certification that are selling to schools.³¹</p>
<p>Empowered workers in all sectors of the food system are paid livable wages and have safe working conditions.</p>	<p>Food system jobs are plentiful and earnings for a food system employee are at least equal to the average for all employees in the county</p>	<p>Increase in number of people working in the food system.</p> <p>Increase in average annual earnings for food system employees.</p>
<p>Local, school district, county, state, and federal policies and funding incentives promote consumption of healthful food and this vision for healthy people.</p>	<p>Public policies, funding, and marketing promote purchase and consumption of nutrient-rich foods and discourage purchase and consumption of sugared soft drinks and other high-calorie/nutrient-poor choices.</p>	<p>Public support of school districts' wellness policies and efforts to provide children and youth with nutrient-rich food choices.</p>

MEASURES FOR HEALTHY PEOPLE

Measure and desired direction of change	↓ % of adults with physician-diagnosed diabetes, age-adjusted ²¹		↓ % and # of obese adults (BMI>30), age-adjusted, 2003-09 ²²		↓ % of obese children in WIC, 2-4 years ²⁴		↑ % of adults eating 5 or more servings of fruit and vegetables daily, age-adjusted		↑ Pounds of donated venison processed by approved processors for food banks ²⁵		↑ Pounds of fresh produce distributed by food banks to hunger-relief agencies ²⁶		↓ # and % of food-insecure individuals, 2009 ²⁷		# of SNAP recipients ²⁸		Pop. <125% Federal Poverty Level		↑ % of pop. <125% FPL receiving SNAP benefit	
	2008-09	#	%	2006-08	2008-09	2006-08	2008-09	4/10-3/11	2010	#	%	June, 2009	2006-08	June, 2009	2006-08	June, 2009				
Broome	8.6%	37,500	24.9%	14.7%	14.7%	27.4%	427	211,318	26,540	13.6%	24,449	33,256	74%							
Chemung	11.3%	19,900	30.0%	13.2%	13.2%	28.0%	956	279,261	12,780	14.5%	12,293	17,006	72%							
Chemango	12.1%	13,300	34.9%	13.6%	13.6%	24.4%	0	34,848	6,770	13.3%	6,947	9,071	77%							
Cortland	10.5%	11,100	29.7%	11.7%	11.7%	29.3%	1,078	48,031	6,740	14.0%	5,790	7,918	73%							
Delaware	8.7%	9,800	27.5%	17.0%	17.0%	24.2%	0	313,050	6,340	13.7%	4,501	8,659	52%							
Otsego	6.6%	11,600	23.1%	15.6%	15.6%	28.1%	0	718,646	8,040	12.9%	4,842	11,526	42%							
Tioga	10.7%	9,400	24.1%	14.9%	14.9%	22.5%	1,669	127,443	5,930	11.8%	5,325	6,369	84%							
Tompkins	7.4%	14,600	20.0%	12.8%	12.8%	33.1%	0	140,730	13,010	12.9%	7,150	18,931	38%							
Comparison	Upstate NY ²⁹ : 9.0%	Region 127,200	Upstate NY: 24.61%	NYS Goal: 11.6%	Upstate NY: 27.7%	US Goal: 33%	Region 4,130	Region 1,873,327	NYS 2,616,780	NYS 13.5%	Region 71,297	Region 112,736	Region 63%							

	# of people and average annual earnings for food system employees, 2009 ³⁰									<p><i>Notable Interventions</i></p> <p><i>Food Bank of the Southern Tier's Backpack program:</i> This program provides children in the free and reduced lunch program with nutritious, kid-friendly food every Friday during the school year to ensure food security over the weekend and school breaks. http://www.foodbankst.org/index.asp?pageid=154</p> <p><i>Rock on Cafe:</i> This service of Broome-Tioga BOCES food service, with 15 participating school districts, seeks to provide nutritious, affordable school meals. The Rock on Cafe is a strong advocate for Farm to School and is working hard to reform geographic preference guidelines to better enable them to purchase food for the cafeteria from local growers within New York State or within 100 miles. http://rockoncafe.com/</p>
	Working in Agriculture			Working in Food Services			Working in Food Manufacturing			
	Annual average # of people	Average earnings	% of average earnings by county	Annual average # of people	Average earnings	% of average earnings by county	Annual average # of people	Average earnings	% of average earnings by county	
Broome	155	\$24,013	65.3%	6,619	\$12,919	35.1%	908	\$41,662	113.2%	
Chemung	40	\$15,017	40.6%	2,665	\$13,272	35.9%	N/A	N/A	N/A	
Chemango	86	\$21,752	61.5%	740	\$11,374	32.2%	199	\$33,214	93.9%	
Cortland	156	\$26,198	77.8%	1,533	\$11,623	34.5%	29	\$28,738	85.3%	
Delaware	124	\$26,384	76.1%	808	\$11,367	32.8%	N/A	N/A	N/A	
Otsego	63	\$22,839	64.7%	1,803	\$13,321	37.7%	177	\$42,546	120.5%	
Tioga	54	\$22,988	48.6%	640	\$10,594	22.4%	171	\$44,850	94.9%	
Tompkins	490	\$35,233	82.3%	3,025	\$15,098	35.3%	169	\$19,592	45.7%	
Region	Total: 1,168	\$24,303	64.2%	Total: 17,833	\$12,446	32.9%	N/A	N/A	N/A	

- 1 Ellsworth, S. & Foenstra, G. (2010). *Assessing the San Diego County Food System: Indicators for a More Secure Future*. Retrieved February 19, 2011, from <http://sandiegofoodsystem.com>.
- 2 Source: 2010 Census Redistricting Data (Public Law (P.L.) 94-171) Summary File—Broome County/prepared by the U.S. Census Bureau, 2011.
- 3 Source: US Census Bureau. State and County Quick Facts. Retrieved July 28, 2011, from http://quickfacts.census.gov/qfd/maps/new_york_map.html. Population density is also from this source.
- 4 Source: Kids Well-Being Indicators Clearinghouse, NYS Council on Children and Families. Retrieved July 28, 2011, from http://www.nykwic.org/get_data/county_report.cfm.
- 5 Includes: American Indian and Alaska Native, Black or African American, Asian, Native Hawaiian and other Pacific Islander, and persons of Hispanic or Latino origin. Source: US Census Bureau. State and County Quick Facts. Retrieved July 28, 2011 from http://quickfacts.census.gov/qfd/maps/new_york_map.html.
- 6 Source: US Census of Agriculture, Table 2.
- 7 Fick, G.W., Peters, C.J., & Wilkins, J. L. (2008). Land and Diet: What's the most land efficient diet for New York State? *Rural New York Minutes*. (19). Cornell University Community & Rural Development Institute (CaRDI).
- 8 Source: US Census of Agriculture, County Profiles.
- 9 Bills, N. L., Fick, G.W., Lembo, A. J., Peters, C. J., & Wilkins, J. L.(2011). Mapping potential foodsheds in New York State by food group: An approach for prioritizing which foods to grow locally. Cambridge University Press.
- 10 Values modeled after the "Whole Measures for Community Food Systems" Fields and Practices and the "Charting Growth to Good Food" Values and Definitions.
- 11 Fick, G.W., Peters, C.J., & Wilkins, J. L. (2008). Land and Diet: What's the most land efficient diet for New York State? *Rural New York Minutes*. (19). Cornell University Community & Rural Development Institute (CaRDI).
- 12 Source: US Census of Agriculture, Table 43. Certified organic information was not collected in the 2002 Census. N/A for Channing County means that the data are suppressed to avoid risk of disclosing an individual respondent's data. This might occur if a farm was large enough to dominate the cell total. Please note that certified organic farming is a very good but imperfect indicator of a healthy environment: Certified organic farms may not always use all available and applicable environmental management practices. Conversely, some farms in the region use organic methods of production but are not certified organic. Similar to other categories, readers should consider all of the indicators as a group that may collectively improve our understanding of the status of the regional food system.
- 13 Source: US Census of Agriculture, Table 44.
- 14 Source: US Census of Agriculture, Table 44.
- 15 Source: US Census of Agriculture, Table 44. The total number of livestock farms from Table 1 of the US Census of Agriculture includes the number of farms reporting beef cows, milk cows, sheep and lambs inventory.
- 16 Source: US Census of Agriculture, Table 8. 2002 data is not used since it is not comparable with 2007 data, due to changes in definitions.
- 17 Source: US Census of Agriculture, Table 44.
- 18 Data is rounded to the nearest 10th. Source: 2007 Nitrogen Balance: Chase, L.E., Czajmsak, K.J., Ketterings, Q.M., Swink, S.N., & van Amburgh, M. E. (2011). Nitrogen balances for New York State: Implications for manure and fertilizer management. *Journal of Soil and Water Conservation* 66(1): 1-17. Source: 2002 N balance and 2007 P balance: Correspondence with Quirine Ketterings and Sheryl Swink, Nutrient Management SPEAR Program, Cornell University. Source: 2002 Phosphorus balance: Journal Article: Chase, L.E., Czajmsak, K.J., Ketterings, Q. M., Mekkan, J.C. * & Swink*, S.N. (2009). Past and future phosphorus balances for agricultural cropland in New York State. *Journal of Soil and Water Conservation* 64(2):120-133.
- 19 Source: Cayuga compost
- 20 Source: Delaware County Solid Waste Management Center and Compost Facility
- 21 Source: US Census of Agriculture, Table 8; also source for "Cropland as % of total acres on farms"
- 22 Source: US Census of Agriculture, Table 4. Note: Farms with total production expenses equal to total market value of agricultural products sold, government payments, and farm-related income are included in farms with net gains
- 23 As defined by the FaEN Task Force
- 24 Source: Atlas of Rural and Small Town America, www.ers.usda.gov/data/ruralatlas/download.htm
- 25 Source: US Census of Agriculture, Table 2. Also the source for % of sales that are direct farm to consumer sales and # of farms with direct farm sales.
- 26 Source: USDA Food Environment Atlas

- 27 Source: Farmers' Market Federation of New York; also source for "Farmers markets with EBT machines," and "Sales from EBT at farmers' markets"
- 28 Source: Food and Health Network Regional Community Garden Survey
- 29 Source: US Census of Agriculture, Tables 48, 50, 51, 52, 53, 54. Minority categories include: American Indian or Alaska Native; Asian; Black or African American; and Spanish, Latino, or Hispanic Origin
- 30 Source: US Census of Agriculture, Tables 48, 50, 51, 52, 53, 54. Minority categories include: American Indian or Alaska Native; Asian; Black or African American; and Spanish, Latino, or Hispanic Origin
- 31 The importance of food safety cannot be overstated: It is crucial to maintaining a healthy population, supporting the institutional purchasing of locally produced food, and cultivating a sense of trust in our food system. Promoting responsible and ethical production practices is a notable contributor to food safety as are food safety policy measures. Equally important is the importance of food safety policies that take into account the differences between small and large food production and manufacturing operations
- 32 Diabetes rates are based on a random sample of residents in each County and defined as ever having been told by a doctor that respondent had diabetes, excluding pre-diabetes and women with diabetes only when pregnant. Source: Expanded Behavioral Risk Factor Surveillance System (BRFSS), July 2008 – June 2009 data. NYS Department of Health. Same source used for fruit and vegetable consumption. <http://www.health.ny.gov/statistics/brfss/expanded/2009/country> Note: comparable data for earlier years not available. CDC data for counties is available for earlier years but has limitations.
- 33 Source: Expanded Behavioral Risk Factor Surveillance System (BRFSS) www.health.ny.gov/statistics/prevention/obesity/about.htm. Estimated # of obese adults rounded to the nearest hundred.
- 34 Source: Expanded Behavioral Risk Factor Surveillance System (BRFSS), NYS Department of Health Based on % obese children in WIC ($\geq 95^{\text{th}}$ Pct), 2-4 years, Low SES. <http://www.health.state.ny.us/statistics/prevention/obesity/>
- 35 Source: Correspondence, July 21, 2011: Matthew Griffin, Director of Agency Services and Programs, Food Bank of the Southern Tier; Food Bank of the Southern Tier includes Broome, Chemung, Tioga, and Tompkins Counties; Central New York Food Bank includes Chenango and Cortland Counties; Regional Food Bank of Northeastern New York includes Delaware and Otsego Counties.
- 36 Source: Correspondence, July 21, 2011: Matthew Griffin, Director of Agency Services and Programs, Food Bank of the Southern Tier.
- 37 <http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx>. Food Security is defined as the USDA's measure of lack of access at times to enough food for an active, healthy lives for all household members; limited or uncertain availability of nutritionally adequate foods. Map the Meal Gap 2010.
- 38 County-by-County Review of SNAP/Food Stamp Participation, January 3, 2010. Food Research and Action Center, www.frac.org SNAP recipients are for June 2009. The population under 125% of Federal Poverty Level is 2006-2008.
- 39 Upstate NY means exclusive of New York City
- 40 Source: New York State Department of Labor, Quarterly Census of Employment and Wages. Data for number of employees and wages collected quarterly, yielding an annual average. Number of people working in agriculture includes the New York State Department of Labor sector Agriculture, Fishing, and Forestry. Data for each sector in each county not always available.

GLOSSARY

Community supported agriculture (CSA): CSA models vary, but in general community supported agriculture programs allow consumers to act as shareholders of farms, thus sharing the risks and benefits of the farm with the farm owner(s). In the traditional model, shareholders pay for their share in full at the beginning of the season and receive shares of the harvest throughout the growing season. Innovative models are finding ways to make CSAs affordable for consumers of all demographics throughout the year.

Food desert: Generally, food deserts serve as a label for areas in which consumers have difficulty accessing food retailers that offer nutritious, affordable food. Food deserts are difficult to precisely define because the ability of consumer to access affordable, nutritious foods depends on several factors, including (as noted by the USDA) the distance between food retailers and the consumer, the consumer's travel patterns, individual consumer characteristics (income level, access to a vehicle, disability status), and neighborhood characteristics (public transportation, sidewalk availability and crime patterns).

Food-secure: The USDA specifies varying degrees of food security and food insecurity as defined by reported indications of changes in diet and food intake. Food insecurity is the USDA measure of lack of access, at times, to enough food for an active, healthy life for all household members, i.e., limited or uncertain availability of nutritionally adequate foods.

Hubs: The working definition from the Know Your Farmer, Know Your Food Regional Food Hub Subcommittee is a centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products.

Nutrient-dense: Nutrient-dense foods have a high nutrient to calorie ratio, i.e. foods that are rich in nutrients relative to calorie content.

Mid-scale producers: The ideal role of mid-scale farms is to produce at a scale that is profitable for the farm and affordable for consumers, without severely damaging the environment or compromising the health of employees and livestock. Ultimately, this depends on many factors, including the type of production and the number of acres available for production. For the purposes of this report, mid-scale producers are defined as farms with gross annual sales of \$100,000-\$500,000.

Organic: As defined by the USDA, organic food has been produced through approved methods that integrate cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Synthetic fertilizers, sewage sludge, irradiation, and genetic engineering may not be used. Many farms practice organic agriculture but do not have the USDA certification, which requires annual inspection and fees.

Serving: Serving sizes as recommended by the USDA vary depending on the type of food and an individual's age and sex. For fruits, the recommended daily serving for individuals who exercise for 30 minutes or less per day is 1-2 cups (according to age and sex); for vegetables, the recommended daily serving is 1-3 cups (according to age and sex).

SNAP/EBT: The Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program, provides food and nutrition assistance for low-income individuals. Electronic Benefits Transaction is an electronic system that automates the delivery, redemption, and reconciliation of public benefits.

Value-added: In this report, value-added products refer to one of the following (adapted from the USDA definition): a) A change in the physical state or form of a product (e.g. cheese, yogurt, slaughtered livestock for sale as meat, preserves, flours); b) the production of a product in a manner that enhances its value, as demonstrated through a business plan (e.g. organic products).

Value chain: As defined by the National Good Food Network, a value chain is a supply chain that is designed to link supply with markets efficiently, but to do so while promoting the values of *equity and fair pay* for farmers, farm workers, food producers, and workers in the chain; *ecological sustainability* on the farm and in production practices; *community capacity* to better meet and to build a more self-reliant economy; and *health and food access for all*, especially those with limited means.

ACKNOWLEDGMENTS

The Food and Health Network's 2011 Regional Food System Assessment is dedicated to the 5,328 farms in our region and the businesses that process and distribute locally grown food. We also recognize and express sorrow for the tragic loss of farms, crops, livestock, farm infrastructure, and fertile topsoil during Hurricane Irene and Tropical Storm Lee in 2011, as well as the many Food and Health Network's members and partners affected by these natural disasters. We celebrate the strength and resilience of our local farms and communities as they work together to recover from these disasters.

Food and Health Network's 2011 Food Systems Assessment Task Force

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Key Informants who provided input in development of the 2011 Food Systems Assessment

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The Food & Health Network is a coalition of stakeholders that works to create food-secure communities and improve the quality of life in South Central New York by supporting practices, policies, and programs leading to increased use of locally produced foods. We serve Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Tioga, and Tompkins Counties.