



Our City **in a Garden**

Toledo, Ohio

*Growing Produce, Harvesting Rewards*

# Sustainable Urban Food Production

## Transforming Toledo, Ohio, to "Our City in a Garden"



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### The Message:

"Food needs are rising for many people across our community due to economic conditions. Therefore in February 2009, with over 100 community participants, we held our first City in a Garden forum to discuss how our area could plan, organize, and begin to meet this need effectively and sustainably. We aim to explore how expanded resources and technology can meet rising local food needs and better nutrition, particularly in food-short areas. A local food system can serve as the engine that drives our economic future."

Congresswoman Marcy Kaptur  
U.S. House of Representatives, 9th District - Ohio

## Acknowledgements

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Area Office on Aging of Northwestern Ohio, Inc.  
Aurora Gonzalez Community and Family Resource Center  
Bittersweet Farms  
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Center of Hope Family Services  
Eleanor M. Kahle Senior Center  
Ella P. Stewart Academy for Girls  
Food for Thought  
Helping Hands of St. Louis  
Knights of Columbus at St. Richard Catholic Community  
Lucas County Improvement Corporation  
Lucas County Job and Family Services  
Lucas County Soil and Water District  
Maumee Watershed District United Methodist Churches  
Mercy St. Vincent Medical Center Foundation  
Neighborhood Health Association – Mayores Senior Center  
Northwest Ohio Restaurant Association  
ProMedica Health System – Flower Hospital  
Sisters of St. Francis  
Society of St. Andrew  
Stranahan Foundation  
Sunshine Communities Inc.  
The Collaborative Inc.  
Toledo Area Ministries  
Toledo Botanical Garden  
Toledo Community Development Corporation  
Toledo GROWs  
Toledo-Lucas County Health Department  
Toledo Seagate Food Bank  
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United Way  
University of Toledo Urban Affairs Center

Special thanks to numerous other organizations and community representatives that have, and continue, to play a vital role.



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## Purpose

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This paper presents a model of an urban, Toledo-based system to produce, prepare, process, preserve and distribute healthy and wholesome food products within our community, accomplishing these ends in a manner that stresses environmental sustainability.

*The goal of this effort: Meet the increasingly acute need for nutritious foods in our cities, and in doing so, promote local production by local citizens. It is a shocking fact in our community that **only two percent of the food eaten in Ohio is grown in Ohio.** In areas where family income is limited and where "food deserts" characterize the food system, diets have become increasingly unhealthy. Our scarce food dollars are being siphoned away from local communities – all of which needs to be fixed.*

By taking back control of food production, processing, and distribution, food will become an engine for creating economic benefits within the community. Most importantly it can create jobs for urban residents.

Toledo will become a model for other communities seeking to create urban-food production systems that improve the public health with ventures that are both economically and environmentally sustainable.



## Features

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The objective of this initiative is to establish an appropriately designed and sized, integrated, and comprehensive model for the production of large quantities of healthy food by and for the residents of Toledo.

The key features of the system will be:

- **Size.** The model proposed here will be more than a demonstration; it will be of sufficient magnitude to make a major impact on Toledo's unmet food needs, a major impact on the city's "food islands", and at the same time significantly increase the economic output of the inner city.
- **Level of Involvement.** Community groups, local institutions, local companies, and local citizens will be involved, truly representing food interests provided by Toledoans for Toledoans. After the successful implementation of the model, a mechanism will have been established to market and sell Toledo products to other regions, ensuring for economic sustainability for the system.
- **Replicability.** The features that will be designed in the urban production and distribution system that can be applied and reproduced in other communities throughout the nation.
- **Comprehensive.** A true systematic approach will be taken in the design of the system. All areas of our food system

will be covered. Rather than focus on one element in the food production process, Our City in a Garden will address urban food production, processing, storage, transportation, preservation, marketing, distribution, and any element required to effectively provide food where it is most needed.

- **Attention to Safety.** Any food production system, whether local, national, community based or corporately managed, must incorporate scientifically-sound food safety practices. These practices must be taught and continually stressed to any and all participants in the system. No one's interests are served by producing and distributing unsafe food, particularly to those groups in our community who because of age, lifestyle, or other factors, are especially susceptible to food borne illnesses. As Toledo products are taken to other markets, it will become evident that "food safety sells."
- **Economic Sustainability.** Our design will generate revenues to support continuing operations, and eventually will be sufficient to sustain continuing operations. By incorporating the production of value-added products and adopting novel methods of production, processing, distribution, and marketing, sustaining revenue streams will be generated.

- **Economic.** The production, processing, preparation, and marketing of food represent a viable, stable, and substantial source of employment for many in our community. Food expenditures represent the largest share of many families' disposable income.
- **Educational.** Our project will educate young people in a number of career possibilities. It will expose young entrepreneurs to opportunities to establish small businesses in value added agriculture and the food processing industry. Finally it will educate our community to the importance of consuming healthy, local food.
- **Innovative.** The production of fresh, healthy foods in an urban setting requires creativity, technical expertise, and high levels of knowledge to succeed. All of these elements are present in the Toledo community, and will be deployed in this initiative.
- **Measurable Contributions.** Since funding from one or more external sources will most likely be used to establish the program, it will be critical that the positive impacts of the system will be documented and quantified. Both the output of product and the generation of revenues will be carefully tracked. The most likely method for achieving this would be the

establishment of a not-for-profit entity to manage the system and all of its components.

- **Environmentally Responsible.** The practices used at all stages of the production, processing, storage, and distribution of food will incorporate only those practices and procedures that place the highest premium on the stewardship of the land and environmental sustainability.
- **Transformational.** The ultimate objective of this endeavor is to move Toledo's food system toward local control, and to improve the physical and economic health of the region and its citizens.



## Executive Summary

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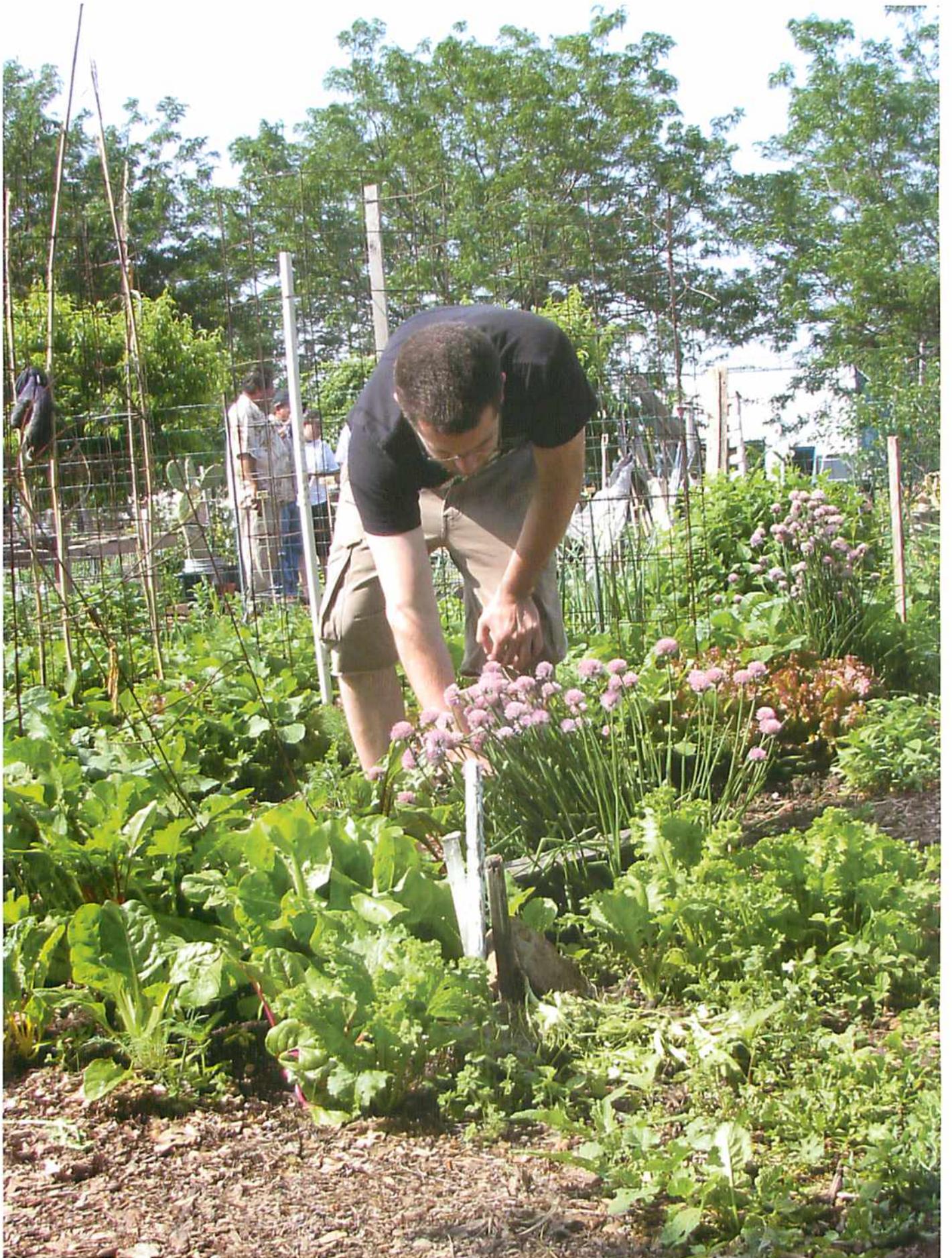
A vibrant food system will be comprised of three types of growing platforms as well as other components necessary to:

- Produce
- Process
- Preserve, and
- Move to Market.

Descriptions for each of these components follow in the next several pages.

In addition to the entities that are direct steps in the supply chain, descriptions also follow for a number of ancillary or support components that will also be necessary elements in an integrated, sustainable effort.





# THE VISION



## Strategic Steps

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### **Production (Growing) Systems.**

The key component in the system from several perspectives is the growing component. The ability to produce both large and small quantities of healthy foods in an innovative, environmentally responsible manner will be the key variable in the success of this project. We envision that there will be three major threshold-sized efforts in the growing system. These efforts are (the order is not a reflection of their relative importance):

### **Expansion of “Toledo GROWS” Community Garden Program.**

A key component of this initiative will be the establishment of many more community gardens, which provide economic, public health, aesthetic, community involvement, and other types of benefits far beyond their minimal costs. They constitute foundational training programs for the community that help to educate citizens in food production techniques. Currently, there are more than ninety such gardens within the City of Toledo, comprising around 20 acres. This number could be tripled, both in number

and in acreage. The availability of resources for operating these gardens should be increased by the program to: prepare the land, provide inputs (seeds, nutrients, etc), provide training (by a number of means including mentoring programs) in small scale farming, provide equipment (cultivating equipment, trellises), and overall garden management.

### **Garden Challenge.**

A program, and a method to monitor it, was established to provide for donations of excess produce to feeding programs. The output from community gardens reduces the demand on these programs for food, so the net contribution is positive and very beneficial. The gardens provide very significant social, community, and public health benefits, including increasing awareness in the community of local and sustainable food systems, so their expansion is critical.

A detailed plan for the expansion and operation of the gardens will be developed.

*“The benefits from our hoop houses are amazing – the residents and day participants reap the benefits of gardening and using the fresh produce, while the bottom line continues to improve as a result of sales.”*

Julie Horns  
Bittersweet Farms

Expansion renderings of how Toledo could look as a City in a Garden

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BEFORE  
Vacant lot in Toledo, OH

Renderings provided by  the COLLABORATIVE inc



AFTER  
Toledo's City in a Garden

Expansion renderings of how Toledo could look as a City in a Garden

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BEFORE  
Dorr Street in Toledo, OH

Renderings provided by  the COLLABORATIVE inc



AFTER  
Toledo's City in a Garden

## Strategic Steps

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### Use of Alternate Growing Systems.

A number of community groups are planning to establish "hoop house" facilities (see pictures below, and defined in greater detail on pg. 27) in Toledo. Among the groups using alternate growing systems are:

- Bittersweet Farms
- Toledo Seagate Food Bank
- Sunshine Children's Foundation
- Aurora Gonzalez Family Resource Center
- Mayores Senior Center
- ProMedica - Flower Hospital
- Lucas County Job and Family Services
- Toledo Area Ministries
- Toledo-Lucas County Health Department
- Eleanor Kahle Senior Center
- "Food for Thought"/ Clay High School
- Ella P. Stewart Academy



*Example of standard hoop house structure used in northwest Ohio*



*Inside a flourishing hoop house used yearlong*

Provision for at least 30 of these systems should be made in the program. These will provide several tangible, immediate benefits. First, they will extend the growing season, thereby increasing the availability of fresh produce to the community. Second, they can be used to grow products prior to and after the traditional season, increasing their value and potential revenue to the community.

A model could be developed through which groups within the community can receive a hoop house and assistance in its construction provided their business plan includes a means for providing excess product or revenue to feeding programs.

## Strategic Steps

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Another arrangement that will be pursued would involve community or faith-based groups agreeing to become certified to accept food stamps from those in the community. This model will provide an efficient and effective conduit for keeping food stamp dollars in the community to promote both economic and environmental sustainability.

As sites for hoop houses are selected, attention will be paid to those locations that have access to waste heat which can easily be diverted to the growing systems. Where this is not possible, emergency auxiliary heating systems will be provided. Hoop houses do not require heat in many years, but substantial crop damage can occur with exceedingly cold temperatures.



*Tina Skeldon Wozniak, Lucas County (Ohio) Commissioner, marvels at plants grown at Clay High School's high density vertical hydroponic garden in Oregon, OH*



*Interior of hoop house at Bittersweet Farms in Whitehouse, OH, in late January*

High density vertical hydroponic gardens are also well suited for urban settings. Although not capable of extending the growing season unless combined with a greenhouse, they do allow for increased production per unit of land, and also for accelerated growth of many vegetables. The key strength of this technique lies in the types of locations where they can be utilized. Their relatively small footprint, the absence of any detrimental impact on the environment, and low cost makes them an attractive component of an urban system. Vertical systems can be up to eight times more efficient in the use of space than conventional systems, and require less physical effort to maintain, which can provide therapeutic benefits to seniors, or to those with physical handicaps (additional details on pg. 28).



## Strategic Steps

### Purpose of Systems.

The goal is to see the equivalent of 50 systems, each capable of growing 2,000 plants located at community centers, faith-based organizations, schools, senior centers, and other organizations. Implementation of a business plan that provides careful selection of plants, efficient timing of production, measurement of the garden's output, and provision for donation of excess production to feeding programs is encouraged. Authorization to redeem food stamps in exchange for garden output will also be explored. As above, detailed plans for the establishment, location, operation, and management of these systems will be developed.

Other innovative technologies well suited to urban growing systems, and those that can potentially extend the growing season or increase product yields are being evaluated and demonstrated. Several high density gardening and growing techniques, the use of wavelength specific reflective ground coverings, roof top gardens, wall gardens, and other techniques will be evaluated, demonstrated, and adopted as the program grows.

The continuing development, testing, and implementation of innovative urban growing technologies and systems are understood to be an essential and key element of this effort. A component of the program will be the establishment and continued operation of an **Urban Growing System Help Center**, which will provide Toledo an ongoing link to developments in urban growing technologies.



*Clay High School;  
Oregon, OH*



*Eleanor Kahle Senior Center;  
Toledo, OH*



*Toledo-Lucas County Health Department;  
Toledo, OH*



*Flower Hospital;  
Sylvania, OH*

## Strategic Steps

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### **Involvement of Toledo area greenhouses.**

Northwest Ohio has a long heritage of greenhouse production. As the greenhouse industry evolves, there is a significant opportunity to engage many of these greenhouses in the production of food. Technology (much of which is available from the University of Toledo and the USDA Agricultural Research Service), growing expertise (from current members of the Maumee Valley Growers Association) can be used to assist greenhouse operations with the production of food, both seasonally and on a year round basis. New business models, marketing methods, ownership models, and business relationships should be developed to accelerate this on a timely basis.

### **Establishment of Urban Farms.**

At least two parcels of in-city tillable land, each of approximately 100 acres in size will eventually be purchased or leased. Other large parcels can be enrolled voluntarily in programs with community partner who own and agree to make the land available for tillage and production.

These will be used to establish specialty crop farms within the city. Provision will be made within the program budget to purchase equipment to prepare and fertilize the soil, and to plant and harvest crops. Where possible, equipment will be shared by the groups, or will be temporarily rented from existing operations.

Models for the use of this land will be developed and implemented. Each model that will be adapted will include provision for generating revenue to sustain the



program, as well as a means for donating a portion of the farms' output for feeding programs.

A feature that will be integrated into the urban farms will be the establishment of a "farm incubator" or "Growing Urban Farmers" program.

### **Business Development.**

A recent survey of feeding programs demonstrated that one of the most acute shortages for them is protein, due primarily to a decrease in the donations of meat products. Many dry bean varieties are high in protein. These can be easily stored, and formulated into products that can partially fill dietary needs for protein.

## Strategic Steps

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### Expansion of Gleaning and "Grow A Row" Programs.

Various organizations in the Toledo region have established successful programs to engage existing growers in initiatives to support feeding programs. Programs to gather produce left in the field have grown slowly over the past several years, and make significant contributions to feeding programs. Efforts will be made within this program to better organize, recruit, and expand gleaning efforts.

An informational clearinghouse, possibly that includes internet-based notification of product availability, and matching with labor and transportation, will be established. Budget may also be needed for

the acquisition of storage containers, bins, and other equipment. Gleaning programs involving the Toledo Hunger Task Force and the Toledo Seagate Food Bank will be the foundation for expanded community efforts.

Efforts will also be increased to expand the "Grow a Row" project. Through increased promotional activity, and increased organizational efforts, a goal of increasing the amount of produce donated to local feeding programs each year by 25 percent.

During 2008, more than 200,000 pounds of cabbage, sweet corn, apples, tomatoes, and other items were gleaned.





## Strategic Steps – Future Logistics

### Transportation System.

Provisions for equipment to deliver inputs and pick up product from the various locations – community gardens, alternate growing systems, urban farms, gleaning sites, or possibly Grow-a-Row farms, and deliver it to a central processing facility or to various feeding program sites. This can be accomplished either through the purchase and operation of new rolling stock by the program, or by contracting with local companies and organizations such as not for profit organizations with trucks that are already involved in the produce delivery business. Models through which produce can be sold from mobile operations can be used to offset the paucity of retail establishments in the city. If equipped with redemption systems for “SNAP” coupons, an additional source of revenue can be accessed.

### Central Receiving Facility.

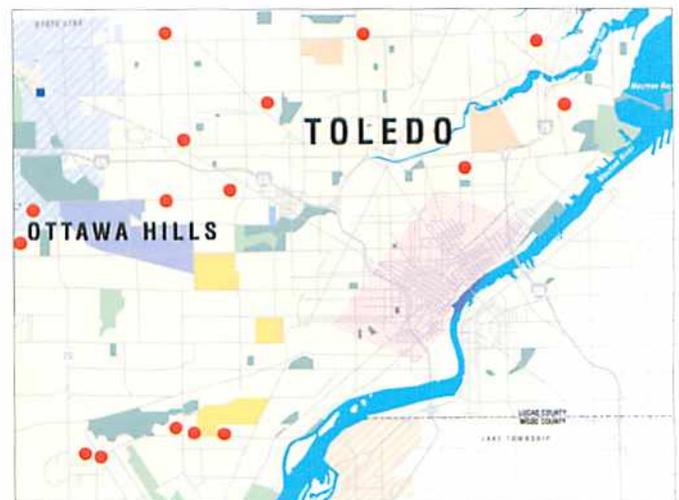
The volumes of produce that are envisioned in this program are very large. Additionally, many of the organizations that will receive the product are not equipped to prepare product, either for sale or for use. For these reasons, a central processing facility that is capable of receiving product, sorting for defects and foreign material, washing, trimming, and packaging will be required. A detailed design of the facility will need to be prepared, but something on the order of a 20,000 sq. ft. facility with several loading docks, that is wash down capable, and which includes high ceiling refrigerated storage will most likely be required. One

business model which needs examined is the sale of excess fresh product to local institutions or retail outlets. This model would most likely require additional packaging equipment.

### Storage Facility.

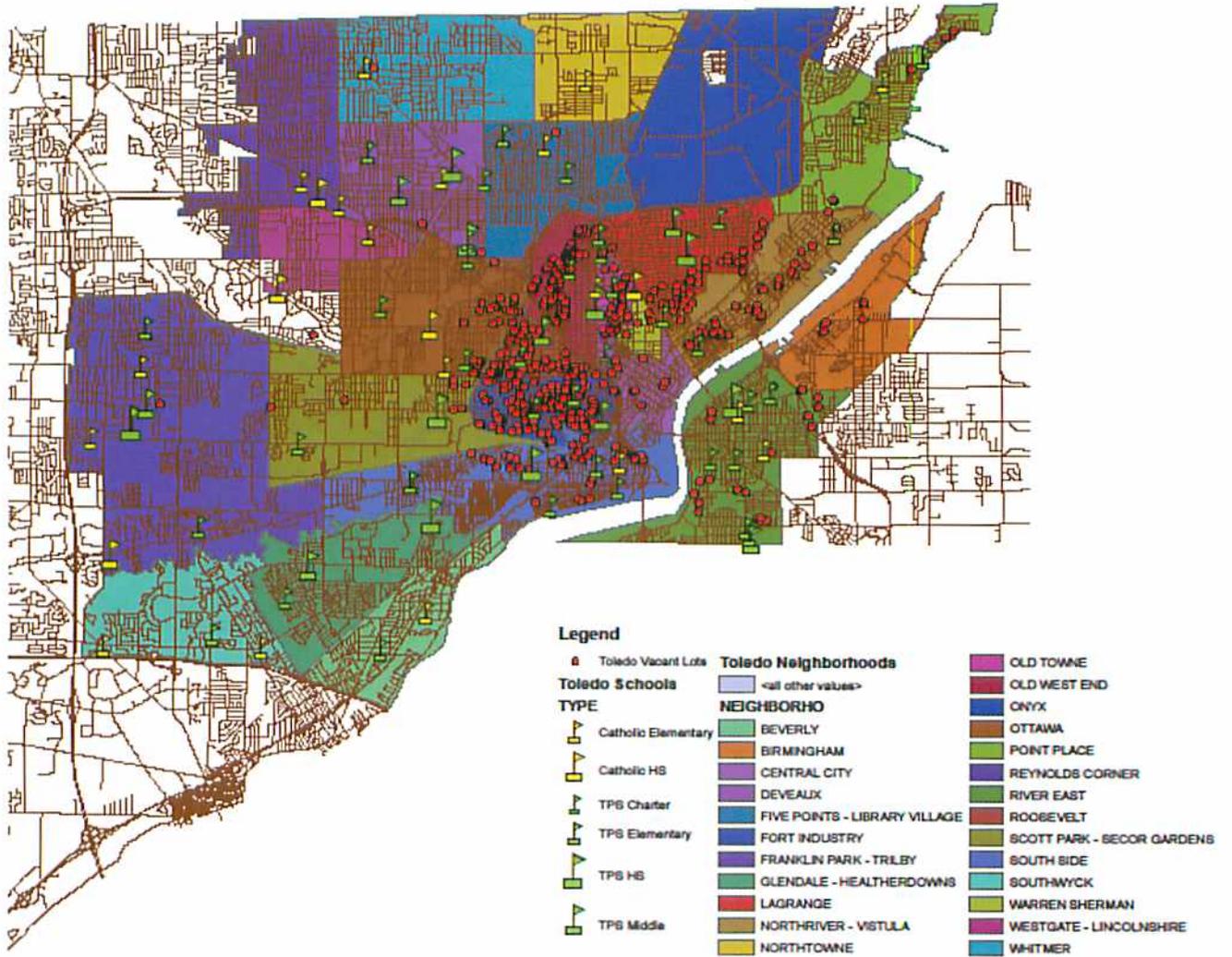
Some of the products that are under consideration for inclusion in the program would be candidates for long term storage. For example, carrots, cabbage, and potatoes can be stored for a number of months with a minimum of special care. If dried beans are included in some of the growing systems, they would likewise need to be stored. If, as seems possible, some product is frozen, there will obviously be a need for freezer storage. The various types of storage can be contracted, rented, or provided through new construction.

*Locations of grocery stores throughout Toledo area*



Downtown Toledo area lightly shaded

# Strategic Steps – Vacant Properties



Prepared by the University of Toledo Urban Affairs Center

## Strategic Steps – Future Logistics

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### Information Clearinghouse.

The complexity of the system that is envisioned will require significant effort to efficiently coordinate product availability of various items with demand. Coordination between harvesting, transportation, processing, and user sites will require that an internet-based system be established and managed to coordinate product movement. This could be done either with a new facility or by one of the partnering organizations. CIFT (the Center for Innovative Food Technology) has the in house electronic communication expertise required to construct and maintain such a system, as do regional educational institutions.



### Central Processing Facility.

A number of models have been suggested to preserve produce, to use it for shelf stable products, or convert it for sale. Any or all of these can be incorporated. Depending on the mix of products, several of the following (or possibly others) might be viable. Freezing products through an IQF (Individually Quick Frozen) process tends to produce the highest quality preserved

product. If crops such as berries, sweet corn, or sweet peas are included in growing or gleaning programs, they can be cleaned and frozen, or for later use at feeding programs, for sale to generate revenue, or both. Work is underway at a local freezing facility to develop processing parameters to maximize product quality. Given the high levels of demand for local product, it would seem that sale may be attractive. It has been suggested that certain types of produce could be canned, or formulated into soups and canned for later use.



An additional possibility would be the creation of high value products such as vegetable stock that could be processed with high temperature processing techniques and variable compositions. These could be stored in dry (unrefrigerated) facilities and combined at later dates with other protein sources to generate nutrition rich products.

Each potentially has a place in a central facility. A new facility (or refurbished one), with 40-60,000 sq. ft. of washable floor space, shipping and receiving docks, some refrigerated floor space and high ceilings would probably be required.

## Strategic Steps – Future Logistics

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### Product Marketing and Sale.

The dual goals of the program are filling our region's unmet food needs while generating income to sustain the program will require the development and adoption of several business models. Potential sources of revenue that has been discussed involves:

- Redemption of food stamps for fresh produce.
- Sale of products at retail, or through local church or religious group partners.

- Sold through local farmer's markets.
- Develop and produce value-added products.

Options include the following items:

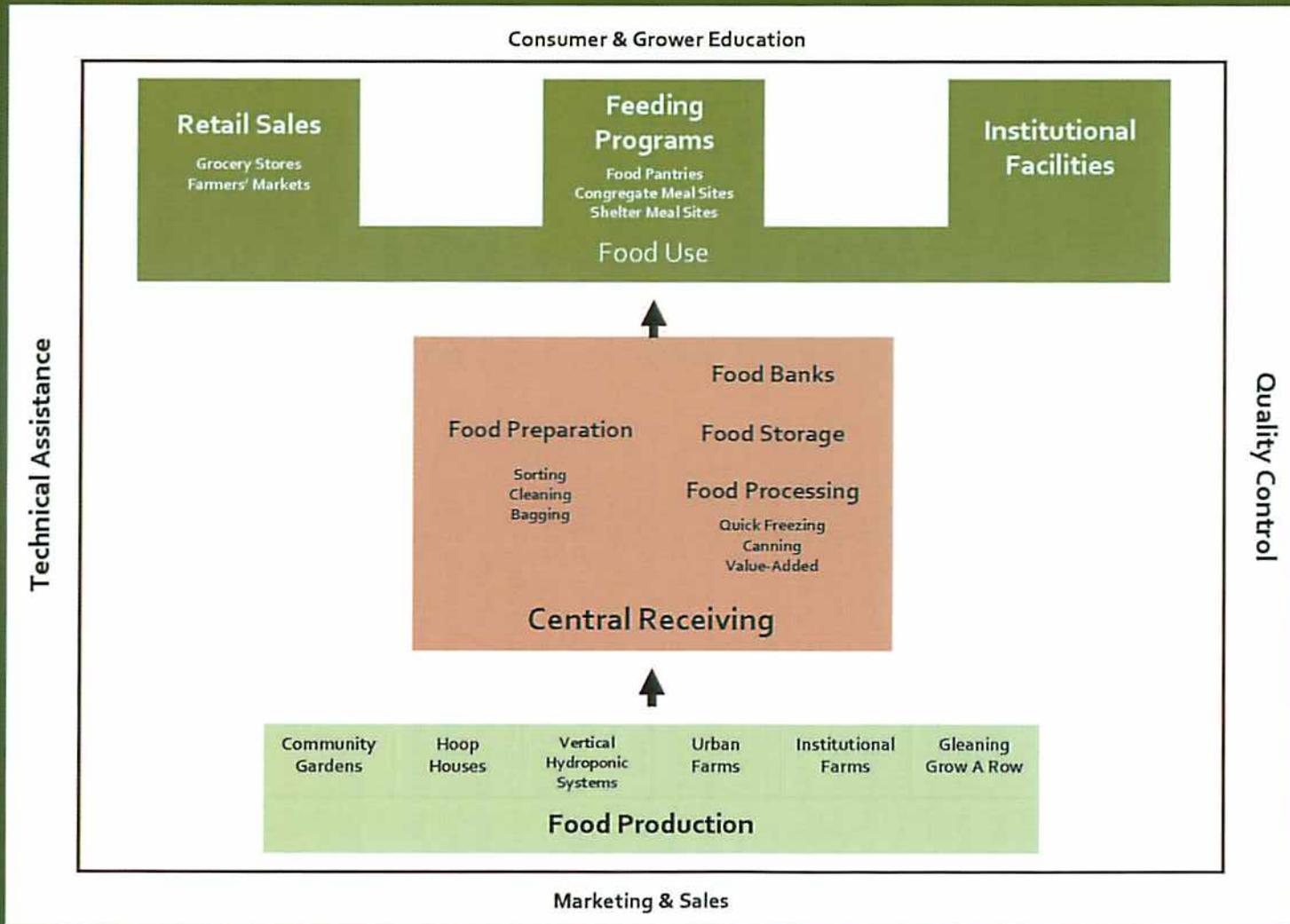
- Toledo has one of the highest concentrations of restaurants in the nation.
- Sales of "signature" vegetables can be identified and promoted, processed and sold at potentially high margins.



*"Our City in a Garden is the design of a system that is 'transformational,' that will be economically and environmentally sustainable, will move Toledo's food system toward local control, and will dramatically improve the physical and economic health of the region and its citizens."*

*Rep. Marcy Kaptur  
U.S. Congresswoman  
Ohio 9<sup>th</sup> Congressional District*

# Information Coordination



Data Collection • Labor Needs & Availability • Produce Needs & Availability



## Additional Features

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### Technical Support.

To ensure the efficient operation of the various growing platforms within this system, a technical and training support infrastructure will need to be in place. Given the proliferation of alternate growing systems being considered, an individual group, or organization will be engaged to provide the horticultural and engineering assistance needed to install and operate these systems. Likewise, technical support will need to be provided for those operating community gardens. The increase in these operations that is envisioned here will require that additional support be provided. The Toledo Botanical Gardens (TBG) and CIFT can create a center that will coordinate the appropriate levels of technical support to the Toledo project. By drawing on the expertise of the two organizations, and by involving network partners and other private consultants and engineering companies, CIFT and TBG will ensure that technical support needs are addressed.

### Marketing Support.

Care will be taken to not merely duplicate the marketing channels that already exist. Local retailers can (and are) providing support to this initiative in several different areas. First, a group of Toledo retailers have agreed to provide guidance to prospective urban growers on quality, pricing, delivery, and all other facets of supplying produce to their establishments. Second, many of the same retailers are willing to market local produce in their stores provided their conditions are met. A similar initiative is underway with local and regional restaurants.

### Quality Control.

When food is being prepared for sale for human consumption, testing for the presence of food borne pathogens must be performed to ensure that all food distributed, fresh and processed, is pathogen free. HACCP (Hazard Analysis and Critical Control Point) programs must be established and monitored, and testing protocols established. The Processing Facility discussed above needs to be equipped or have access to a laboratory capable of collecting and preparing samples for routine pathogen testing. Sampling procedure need to be established, and samples sent to testing laboratories for evaluation. This is a normal model for small companies, and is relatively inexpensive.

### Technology Enhancement.

With the requirement for technical support come opportunities to engage local technical resources. As the use of urban growing systems becomes widespread, opportunities to integrate the technical and scientific expertise of the region into their design will increase. For instance, there will be opportunities for engineering and scientific innovation that will advance these systems for Toledo's greenhouse supply industry to develop and market improved components for hoop houses, flexible photovoltaic systems for all greenhouses, opportunities to develop new varieties of seeds tailored to urban growing, and opportunities to engineer and develop more robust systems for the feeding of traditional growing and hydroponic systems over 12 month cycles.



## Additional Features

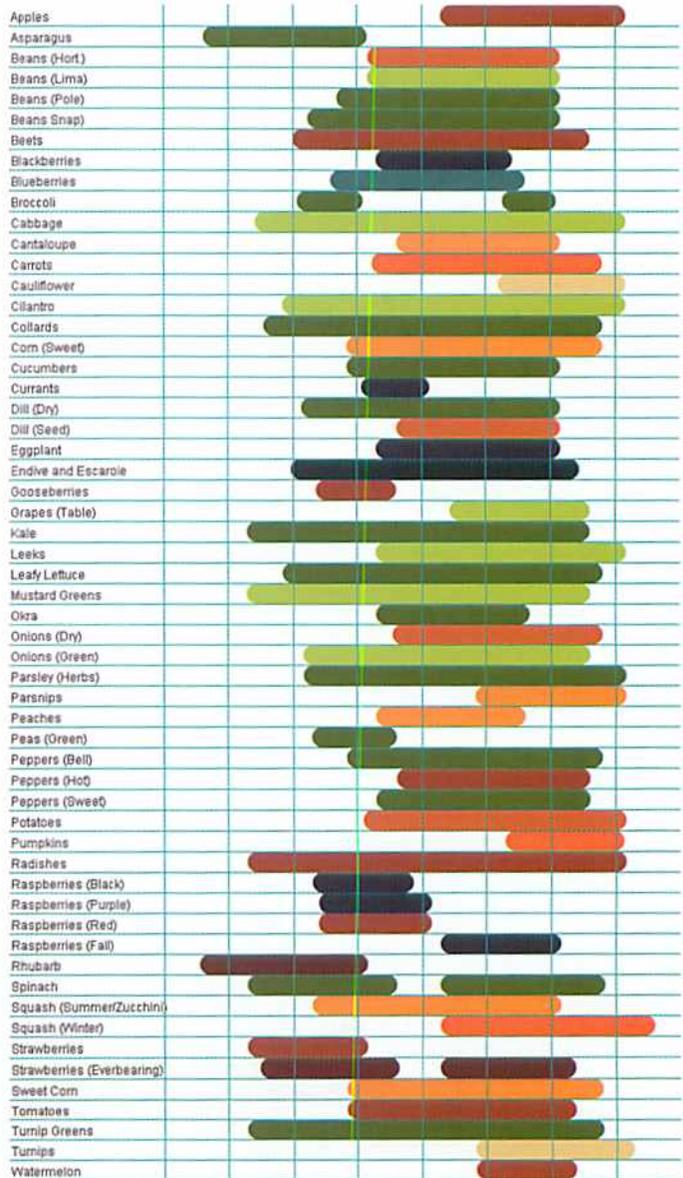
### Educational Support.

Throughout the process, there are a number of areas where training and education will be required for participants in the Our City in a Garden. First and foremost, there must be strong training programs available that will ensure a thorough and adequate knowledge of food safety. All organizations and individuals that are involved in the growing components of the program must be trained in Good Agricultural Practices (GAPS) to ensure that there are incidences of contamination, and that all appropriate safeguards are being followed. Training in all phases of vegetable production, including plant selection, soil preparation, planting techniques, garden/system maintenance, weeding and watering, sanitation, harvesting techniques, and post harvest handling will be required.

Special courses and seminars for those involved with any of the preservation techniques and development efforts will also be made available.

Equally significant should be the development of nutritional education programs, and home preparation educational programs. These will enable the residents of the city to better understand the role of fresh, wholesome produce in promoting good health, and will also enable citizens to incorporate the preparation of local produce into their family meals, maximizing the health benefits of the produce.

### Ohio's Fresh Fruit and Vegetable Harvest Calendar



## Success Story

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### **Toledo Seagate Food Bank now relies on Food from the Outside and Within.**

Toledo, like many other cities in the nation, has been impacted by the ongoing economic challenges. The impact is realized directly when the most basic of needs – in particular, food – is in jeopardy. One urban based food bank has merged the need with an advanced growing technology, a vertical hydroponic growing system, to achieve its own productive garden. The Toledo Seagate Food Bank collaborated with the Center for Innovative Food Technology to install, operate, grow and disseminate fresh produce directly to those who are hungry in the community.

The Toledo Seagate Food Bank collects donated food as it becomes available from individuals, manufacturers, processors, wholesale and retail grocers and distributes more than 15 million pounds of food annually.

Through the inclusion of a high density vertical hydroponic growing system, the food bank has grown more than 254 pounds of fresh produce in two months. Twice a week the produce was harvested and provided to those picking up processed foods through the standard services offered. The inclusion of the fresh items was unique and likely the only time a food bank has been able to grow produce for the benefit of their clientele.

Increased consumption of fresh produce by the audience served was achieved upon the first harvest. Each week as more produce became available, clients were informed of

production practices, simple growing season awareness, and methods of incorporating the items into meals. Many have no access to fresh or are unaware of when and how produce becomes available. Toledo Seagate Food Bank conducted information sessions and distributed valuable information on all the items grown to further educate and increase awareness of the crops. Success was tracked on an operational standpoint by the production yields. From an educational stand point, success was measured by the increased enthusiasm for the items and the direct feedback from the people benefitting daily from this effort.

Toledo Seagate Food Bank will expand their educational efforts in 2010 with the inclusion of a classroom and classes designed for mothers with newborns. The goal is to demonstrate healthy eating economically while instilling proper habits at an early age.



# THE PROGRESS

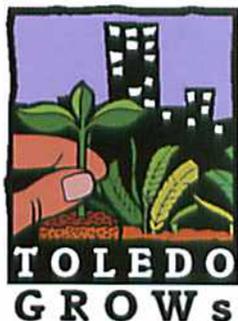


## The Fruits of the Labor – A Summary of Activities

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### Community Gardens.

Community gardens are safe, beautiful outdoor spaces on public or private lands, where neighbors meet to grow and care for vegetables, flowers and native plant species. The gardeners take initiative and responsibility for organizing, maintaining and managing the garden area. This participation builds skills and creates positive community development that is widely accessible. Partnerships between Toledo GROWs, Metroparks of the Toledo Area, City of Toledo, and community organizations have already created additional community benefits, through fostering youth employment, volunteer activity, and the restoration of natural areas.



Toledo GROWs is the community gardening outreach program of Toledo Botanical Garden - a grassroots nonprofit organization dedicated to the continued success of community-based gardens. As a statewide and regional leader in gardening, they offer resources and technical assistance to support the development of sustainable garden projects that serve people of diverse ages and abilities – currently serving nearly 90 gardens. Throughout the seasons, the organization helps create vibrant community gardens.

Here is just a sampling of these unique urban havens for horticulture:

The **Mercy Garden at Ten Eyck** is almost 10 years old. This garden began as a small patch of land and has grown larger each year. In addition to the residents of Ten Eyck Towers, gardeners come from the Youth Treatment Center, Treatment Alternatives to Street Crime, and the downtown area. In fact, youth volunteers built pathways and planted the perennial border that can be noticed blooming along Jefferson. The young gardeners have also planted fruit trees and perennials, and soon others will be lending a green thumb as well.

**Ms. Kidd's Garden** is named after Ms. Kidd herself, a 92-year young gardening enthusiast. She has helped volunteers with advice and by donating water. Toledo GROWs helps home gardeners like Ms. Kidd with seeds, plants and support through a grant from the Catholic Campaign for Human Development.

Members of the Latino community express their art and culture through the **Sofia Quintero Center** community garden. Filled with brilliant colors and artworks, the garden has brightened the intersection of Broadway and Crittenden for nearly a decade.

Possibly northwest Ohio's best school garden, the **Washington Junior High** community garden is a model for handicap accessibility and student engagement in volunteerism. The garden impacts students through a variety of classes and features a butterfly garden, with much effort by dedicated teacher Scott Michaelis.

## The Fruits of the Labor – A Summary of Activities

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### Hoop Houses or High Tunnels.

Building upon work conducted at Michigan State University, hoop houses have demonstrated the ability to grow produce year round with minimal energy and no heat applied.

To validate this concept, the Center for Innovative Food Technology and Bittersweet Farms (Whitehouse, OH), partnered in 2008 to operate a structure and determine the feasibility given the typical fall/winter weather conditions for northwest Ohio.

Crops were successfully produced during the traditional “off season” enabling a harvest in February. The benefits are two fold in that product can be more readily available and the potential economic impact when managed effectively surpasses other growing practices.

If crop selection and timing is maximized, product can be harvested upwards of a month or two months prior to any local available item; therefore, has the ability for premium pricing. An additional hoop house structure has been incorporated at Sunshine Children’s Foundation (Maumee, OH) wherein product will be for the benefit of the community.



*Adam Montri of Michigan State University, and Rebecca Singer of Center for Innovative Food Technology, discuss the bright future for crop production year round*

## The Fruits of the Labor – A Summary of Activities

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### High Density Vertical Growing Systems.

Often times space limitations or soil content minimize the ability for vegetable production. A hydroponic vertical system assists in eliminating the challenges and has proven to be a viable and valuable method of production. In what would generally take eight acres, can be accomplished in just one. The crop selection is robust and is only limited by root crops, while the labor and operational aspects are minimal compared to traditional growing. A demonstration at ProMedica Health System's Flower Hospital (Sylvania, OH) depicted the possibilities for growth in non-traditional locations impacting numerous consumers. Since that time, additional units have been constructed around Toledo to continue to educate and provide access to fresh produce.

As a result of the systems throughout Toledo, and beyond, 8,384 plants complemented other growing endeavors. Product was donated to local programs, used internally, shared with the community, or supplied to consumers directly. Regardless of the outlet, the overall intentions of increasing production capacity within the city limits and providing renewed interest in eating healthy was achieved.

### Hunger Task Force.

There are many Toledo-area groups and individuals working to address the problem of food insecurity. Toledo Area Ministries (TAM) works with food banks and other organizations to ensure people have food to eat. With that concept TAM Pastor Kevin Perrine signed a lease and received financial help to renovate the warehouse and rehab it



*Volunteers from Toledo Area Ministries load food for distribution*

for a Wholesale Food Club. Many volunteers have spent countless hours working to make this a successful project. The food club is not to be confused, nor was it formed to take the place of local food banks, rather it is a place where small organizations can come to buy items in the quantities at a great discount. As an alternative to buying or receiving donations from several different merchants to stock food pantry shelves, the Wholesale Food Club reduces the tedious work of finding good food prices. Co-op workers compare prices from all the major suppliers, find the best retail value for each item, and buy it in bulk to be resold to various Toledo area food pantries.

Humane Ohio is also working closely with TAM to make sure everyone that has a pet and needs help in feeding that pet, gets food. Donations of bulk pet food are taken in at the Food Club where volunteers bag the food in smaller containers, and take it along with food deliveries.

# The Fruits of the Labor – A Summary of Activities

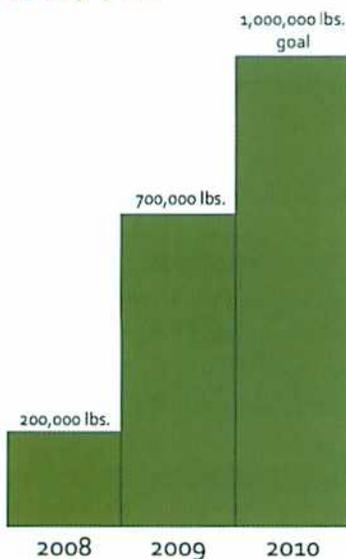
## Gleaning Project.

Farmers who grow fruits and vegetables for sale at their farm stand or farmers markets may contact the gleaning project to let them know that they have excess fruits or vegetables that they would like to donate. These donations can be:

- 1) leftovers from a day at the market,
- 2) items left in the field after the mechanical harvester,
- 3) a field or area that is ready for harvest and will not bring the farmer any revenue, or
- 4) the extra field from a food manufacturer contract.

All donations can be handled by the numerous volunteers who not only help harvest, but work getting the donations to the food banks for distribution to the hungry in the 18 counties that comprise northwest Ohio.

## Gleaning Project continues to rise every year



## Grow a Row.

At the start of the growing season many farmers find they have extra vegetable plants. Some farmers will donate the plants to the Toledo Seagate Food Bank for families to plant in their own gardens, but many now plant these extras donation. They cultivate, hoe, water, fertilize and even harvest these plants which can range from a couple of extras in a side yard to a half acre of assorted plants. Many volunteers assist during the growing season and pick for the food bank. The harvest times are staggered which ensures fresh fruits and vegetables during the growing season. The harvest goes directly to the food banks where it can go out literally the same day as picked. The start of the Grow a Row project was small with nine farmers joining the project in 2007. Just two years later, there were more than 60 farmers/producers who joined ranks to help feed the hungry. No donation was too small, and for the hungry, anything fresh is a blessing.



*The Society of St. Andrew remains an avid supporter of the Grow a Row initiative*

## The Fruits of the Labor – A Summary of Activities

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### Lecture Series.

In September 2008, as part of a visit arranged by Toledo GROWs, Dr. Wayne Roberts presented his work as manager of the Toronto Food Policy Council (TFPC), a citizen body of 30 food activists and experts that is recognized for its innovative approach to food security.



*Dr. Wayne Roberts of the Toronto Food Policy Council*

As a part of his visit, Dr. Roberts toured many community gardens and met with a range of private and public sector leaders in Toledo. A large audience including area food activists enjoyed a presentation by Dr. Roberts at Toledo's Main Library. The Urban Affairs Center also displayed photos of area farmers and growers, whose stories were captured in a summer 2009 Oral Histories project funded by the Ohio Humanities Council. Dr. Roberts' discussion of the economic and public health benefits of the many projects of the TFPC, including support for community gardens as well as a myriad of other food system projects, provided inspiration for Toledo's efforts.

A committee later determined that a *Lecture Series* would assist in maintaining enthusiasm and continue to engage the community in the local food efforts. Just months after Dr. Roberts visit, Dr. Mike

Hamm, C.S. Mott Sustainable Agriculture Chair at Michigan State University, spoke on the topic of "Locally Integrated Food Systems, Opportunities for our Future." Dr. Hamm defines food system building as a "wicked problem," i.e., one that is "impossible to solve ... what we strive to do is improve the situation rather than solve the wicked problem. This does not mean that we cannot move a long way toward resolving the problem but simply that there is no clean endpoint."



*Dr. Mike Hamm of Michigan State University*

He goes on to outline principles that can be used in moving us toward a healthy food system within the framework of it presenting as a wicked problem – The system should insure community food security for all residents, be community based and locally integrated, and be reasonably seasonal in nature. It should connect "healthy" across the layers of the system from our soil to our people. These principles and examples Dr. Hamm used to illustrate them, left most listeners eager for future opportunities to hear about the best practices which can strengthen efforts to build a strong food system in northwest Ohio.

# THE FUTURE



## Next Steps – Future Efforts

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### Hope for All.

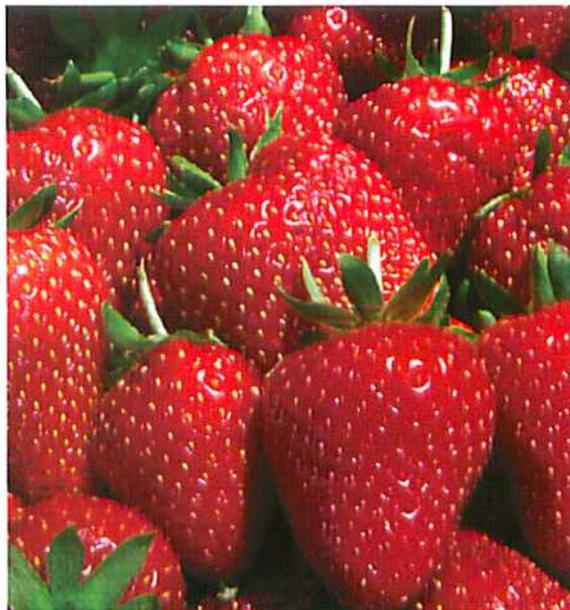
Center for Hope Family Services Inc. (COHFS) a 501(c)(3) organization, operates under the mission to provide access to produce or nutritionally-rich foods otherwise unavailable to low-income families and individuals. In addition, COHFS is involved in teaching and engaging people in the health, economic, and social benefits associated with consumption of fresh produce. This mission will be further emphasized by the inclusion of a hoop house during this growing season. It is the desire of COHFS to engage the community in the growing of fresh produce while also enabling them to enjoy the harvest. Equally, creating a self-sustaining and economically-viable environment is desirable and will continue to exemplify the Our City in a Garden mission while enhancing the community overall.

### Safe Food.

Regardless of the goals for production or the methods of which to accomplish the desirable outcomes, proper food safety and handling is essential not only for the immediate safety of those consuming the items but for the overall vision of the region. The Center for Innovative Food Technology continues to conduct food safety training sessions focusing on Good Agricultural Practices (GAPs) for any community gardeners, to growing system managers and volunteers. GAPs are standard within the food and agricultural industry and provide insights on how to minimize risks. Despite the end consumer, food safety is critical to the advancement of production.

### Strawberry Showcase.

The Toledo Community Development Corporation has created a roadmap for expansion of all the previously mentioned components into a single location. Known as the Fernwood Project, a compilation of growing systems and educational components are being investigated. As a starting point, a 2,000 plant vertical system will be managed for the production of strawberries. This will enable evaluation of the crop within the growing environment while also investigating and establishing a market outlet for future expanded products.



## Next Steps – Future Efforts

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### Grocery/ Restaurant Project.

If urban food production is to achieve commercial viability, a variety of retail chains, both traditional and non-traditional must be involved. An expansion of farmer's markets and the development of "mobile markets" is a part of the Our City in a Garden plan, but the involvement of existing retail establishments will accelerate the growth and support the sustainability of the local system. Fortunately, the Toledo area includes a number of independent grocers who have a commitment to their community and its agricultural sector.

Operators such as Monnette's Market, Claudia's Natural Food Market, Churchill's, Sofo Foods, Bassett's Health Foods, and Sautter's all are interested in growing the local food economy, and in participating in the growth. These and several others are offering their support and advice to the Our City in a Garden initiative.

This support is important in two respects. First, many of these have offered to counsel growers and potential growers to provide them with the knowledge of products, product quality, logistics, and other variables involved with selling their products. Second, and possibly more important, they have all expressed interest in selling the products of local urban growers, and in increasing the quantities of donations to the needy in hard economic times.

The Center for Innovative Food Technology is completing a study to document all that a potential grower must know before he can effectively and profitably sell his products in the Toledo retail market. When this study is published, it will provide our community with an important piece of the sustainability puzzle for new growers.



## Next Steps – Future Efforts

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### Farm Incubator.

Several cities around the country have developed or are investigating a method in which to “grow new farmers.” One method demonstrating promise is through the use of a farm incubator. The concept evolves around a track of land within an urban setting that is partitioned into small plots. Potential growers are recruited to participate in a curriculum that will incorporate components from how-to-grow products, to marketing and sales of the crop. This process typically involves three years of planning and training prior to branching toward individual properties for business development. The farm incubator would serve as a shared use location with equipment, resources, and expertise readily available. The Center for Innovative Food Technology is investigating a location for such a program and evaluating curriculum applicable for the interests of the region.

### Freezer Project.

To extend the season for locally grown produce, the Agricultural Incubator Foundation (AIF) and Center for Innovative Food Technology have established an area at the AIF to “quick freeze” local fruits and vegetables. The equipment used in the operation was provided by corporate donations, a grant from the Ohio Department of Agriculture, and a Rural Business Enterprise Grant from the United States Department of Agriculture, Rural Development.

The freezing system is being used initially to freeze berries, green beans, and sweet peas, but other crops including apple slices, carrot “coins”, various greens, and shelled sweet corn will be explored. Business models that

generate incremental income for rural growers, which provide safe wholesome food to the needy, or both, are being considered. For instance, a model is being developed whereby growers can have their products frozen in return for a significant donation. Also, a catering company has utilized the facility to connect rural growers with several feeding programs. Local and regional restaurants have also expressed interest in utilizing this facility to extend the length when they can offer local produce. In the fall, operators of the program will develop a program to take in unused product from farmers markets, clean, blanch, and freeze it, and store it for later use – located at the Bowling Green based Northwest Ohio Cooperative Kitchen (NOCK). Other communities have taken notice, and anticipate developing similar facilities to serve their regions.



*Northwest Ohio Cooperative Kitchen, known throughout the area as simply, NOCK.*

## Next Steps – Future Efforts

### Community Gardens.

Toledo GROWs plans to work with Owens Community College to create an urban agriculture program – offering classes in late 2010. In addition, an urban farm will be associated with this effort, as well as the construction of a training center. This entity will provide job training for at-risk youth, and the proper facilities for fabricating greenhouses, chicken coops, beehives (a pilot bee keeping program has already started, with 12 hives) and anything else needed for urban agriculture.

Toledo GROWs also continues efforts with the Lucas Soil and Water, City of Toledo, and other partners on a Green Corps – which will result in tree planting (including fruit and nut trees), and beautification of community gardens (through the planting of rain gardens).

### Safe Soils Project.

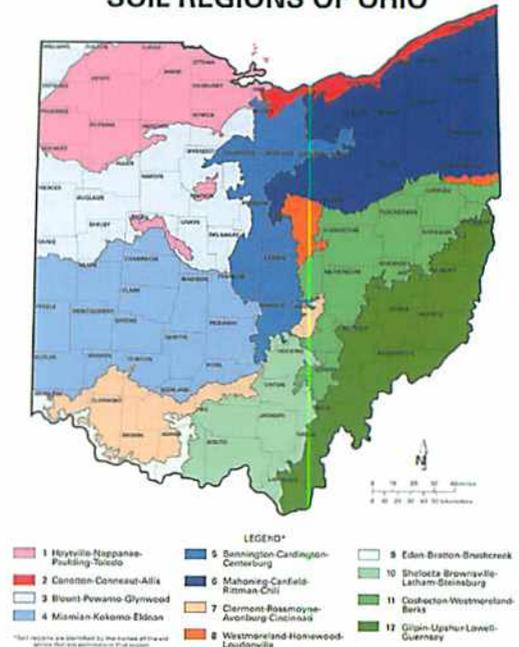
The United States Department of Agriculture – Agricultural Research Service (USDA-ARS), Center for Innovative Food Technology, Lucas County Improvement Corporation, and Lucas Soil and Water Conservation District have initiated “Project Safe Soil” to determine the suitability and safety of urban soils for commercially sustainable agriculture. Approximately 30 sites throughout Toledo have been selected for the project. Using National Resources Conservation Service (NRCS) soil data, the sites were selected on the basis of their agricultural potential.

Samples will be taken from these sites, then tested for heavy metal content and

potential contaminants. On the basis of the results, the project participants will select a smaller number of test plots, and use larger samples of the soil to conduct plant growth studies to determine the rate of inorganic material uptake in various fruit and vegetable crops. This data will be used to determine what crops can best be grown on various types and qualities of soils in our cities.

“Data such as that generated by this project will be invaluable in determining one of the first questions asked by consumers: will vegetables grown in the city be safe?” Dr. Charles Krause, USDA-ARS Research Leaders and project leader for Project Safe Soil. “Unless data can be provided to demonstrate safety, neither retailers nor the ultimate consumers will be interested in the product.”

SOIL REGIONS OF OHIO



## Next Steps – Future Efforts

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All community members, service organizations, and local businesses are encouraged to become involved in our local food system and “Our City in a Garden.”





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Our City **in a Garden**

