



COMMUNITY
FOOD LAB
DESIGN. ADVOCACY. ENGAGEMENT.

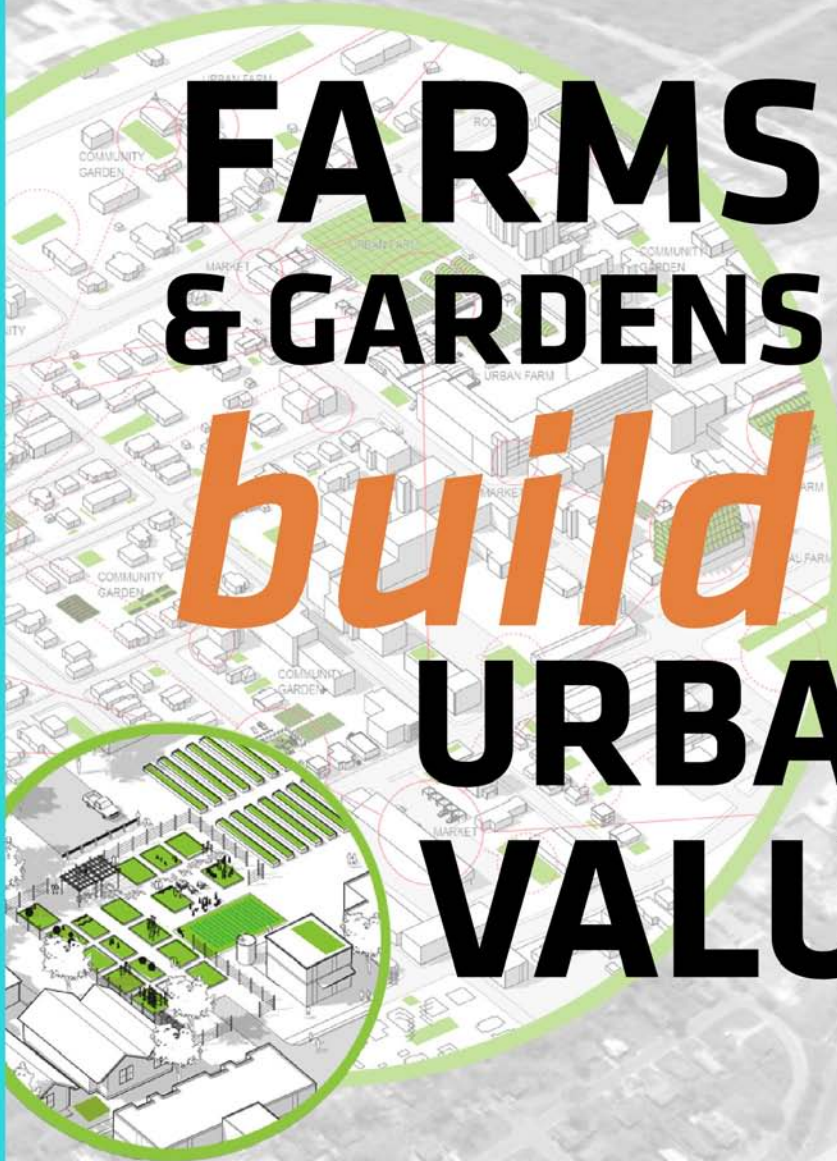
OPEN FOOD

VOLUME 1

**FARMS
& GARDENS**

build

**URBAN
VALUE**



THIS PROJECT WAS MADE POSSIBLE THROUGH A KICKSTARTER CROWDFUNDING CAMPAIGN

THANK YOU TO ALL OF OUR BACKERS! WITHOUT YOUR HELP THIS BOOKLET WOULDN'T HAVE BEEN POSSIBLE!

WE'D LIKE TO GIVE SPECIAL THANKS FOR GENEROUS CONTRIBUTIONS FROM THE FOLLOWING PEOPLE AND ORGANIZATIONS:

Matt Tomasulo	Jane M Farmer	Cindi Thorell	Sara Glee Queen
Jill Epner	Carolyn Ikenberry	Chad Cochran	Charlie Queen
Rosecrans Baldwin & Rachel Knowles	Thelsa Pulikkotil	Paul Dryden	Jane Norton
Leah Haile	Diana Crawford	Girl Honey	Jim and Chick White
Bruce Alexander	Emily H Chang	Jamie and Sheri White	Mark Polischak
Southside Community Garden, Youngstown OH	David & Terri Shea	catherine s. lee	Angela Salamanca
Molly De Marco	Tim Yarborough	Kelly and Corey McIntyre	Charles and India Whedbee
Urban Gardeners Republic	Sarah Yarborough	Virginia	Petesch Law
Kristen Baskin	Katherine Andrew	Kate Farthing	Dick and Debbie Samuels
Healthyactivist.com	Matthew Tulchin and Katharine Marshall	Mary Claire Lamm	Derek Ehrman and Amanda Matson
Jennifer Walker	nathaN contreraS	Elizabeth Andrews	Tracy Thomas *
Clara Hess	John Rankin	H.H. Hancock III	NC Green Industry Council *
Tania Allen	Kevin Berry	Matt and Jenny Harper	
Paige Wendland	LeAnna Cargman	CompostNow	
	Mary and Jayme Davis	David and Katherine Freeman	

* These backers are also key sponsors of the next two booklets in the OPEN FOOD series, and will help us choose the next topics.

OPEN FOOD #1 PROJECT TEAM:

Lauren DeSimone	Jennifer Peeler
Vincent Feucht	Andrew Petesch
Leah Haile	Erin White
Katherine Hoke	

FARMS and GARDENS BUILD URBAN VALUE

We are sharing a new way of thinking about farms and gardens; no longer just places to grow food, urban farms and gardens become tools for urban planning, economic development, and community revitalization.

As soon as open city spaces are recognized as opportunities to grow urban value through farms and gardens, incredible potential is tapped for remarkable benefits and value for neighborhoods and cities. Healthy urban agriculture brings social, economic, and ecological benefit to cities, with typically high returns on investment.

We want this booklet to inspire city officials, non-profits, developers, investors, and other urban influencers to add community gardens, urban farms, and all sorts of food growing spaces into our cities. Farms and gardens can be social public spaces, public health assets, crime prevention projects, municipal cost savers, air purifiers, recreation areas, and job training centers.

The following pages introduce a few starting points. Keep exploring and learning! We wish you luck in bringing the benefits of urban agriculture to your town, your city, and your neighborhood.

Enjoy!

Community Food Lab



TABLE OF CONTENTS

2: urban food production

4: community gardens + the city

6: community gardens + health

8: municipal benefits of urban agriculture

10: local food + local multipliers

12: urban farm examples

14: references

farms and gardens: part of a system

Everything that works to provide food for us to eat is part of the food system. People, farms, and trucks; refrigerators, kitchens, and supermarkets; and policies, social organizations, and companies. Everything between the planting of a seed and your dinner plate can be seen as interconnected parts of the food system.

Our global food system, which is what currently feeds most of us, allows food to literally move around the globe to our plates, involving multi-national corporations, global economies, and long-distance travels for our food. There are lots of reasons to be critical of this system, but instead of outlining how the global system is failing us, this booklet draws attention to positive outcomes of a local food system!

In contrast to the global system, food in local food systems stays within a certain distance of a consumer. The hallmarks of local food are how it builds food security, local economy, sense of place, and ecological awareness for a community.

Urban food goes a step closer, collecting as many elements of a food system into a city, where all the local food system benefits multiply for the health of the municipality and its residents.

Global, local, and urban food systems are all intertwined, and we'll need to use each's best practices to create balance among them if we are to insure safe, healthy, accessible food for everyone. Understanding the many benefits of local and urban food is the first step in good food balance for our communities.

* TO HEAR MORE ABOUT THE IMPORTANCE OF BALANCING LOCAL AND GLOBAL FOOD SYSTEMS, SEE EVEN FRASER'S VIDEO: <https://feedingninebillion.com/video/local-food>



All of our activities around food can be thought of as an interconnected system:
THE FOOD SYSTEM

GUERILLA GARDENS

Unregulated, often very small scale gardening in vacant, unoccupied, and leftover spaces in a city. Creativity and imagination are key ingredients.



* FOR A FANTASTIC + INSPIRING EXAMPLE google "Ron Finley TED talk"



HOME GARDENS

Food grown in the spaces in, on, and around a house. Primarily for the homeowner's consumption, cared for by the homeowners. Where allowed, home gardens include bees and chickens and can support small cottage industries.



* FOR MORE ABOUT HOME GARDENS google "Roger Doiron TED talk"



COMMUNITY GARDENS

An area collectively cultivated by a group of people, primarily growing food for themselves or for the use of the community. Often in or near neighborhoods, schools, institutions, or churches. Can serve social, education, environmental, and aesthetic purposes.

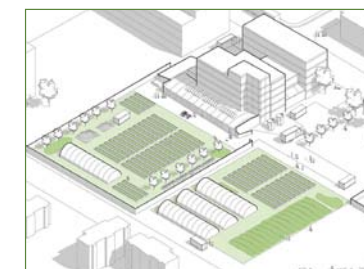


* FOR MORE ON COMMUNITY GARDENS check out: <http://vimeo.com/21818738> "A Garden in Every Neighborhood"



URBAN FARMS

A commercial farming operation in a city. Usually diversified in terms of produce and small animals raised, in growing methods used, and in revenue sources. Urban farms can produce large amounts of food and become transformational urban catalysts.



* see "cityfarmchicago.org" for an EXAMPLE OF URBAN FARMING



community is worth gardening for

In his 2008 book "Closing the Food Gap," Mark Winne states that the most important word in community garden isn't "garden." This marks an important shift in how we think about gardens as part of healthy cities.

As soon as a community garden is seen as a place that provides more than just fresh food, whole new possibilities open up. At Community Food Lab, we've been gathering information from some remarkable recent studies on community gardens, showing that they raise property value around them, reduce obesity, and can help families produce a large portion of their food needs and improve their diets at the same time.

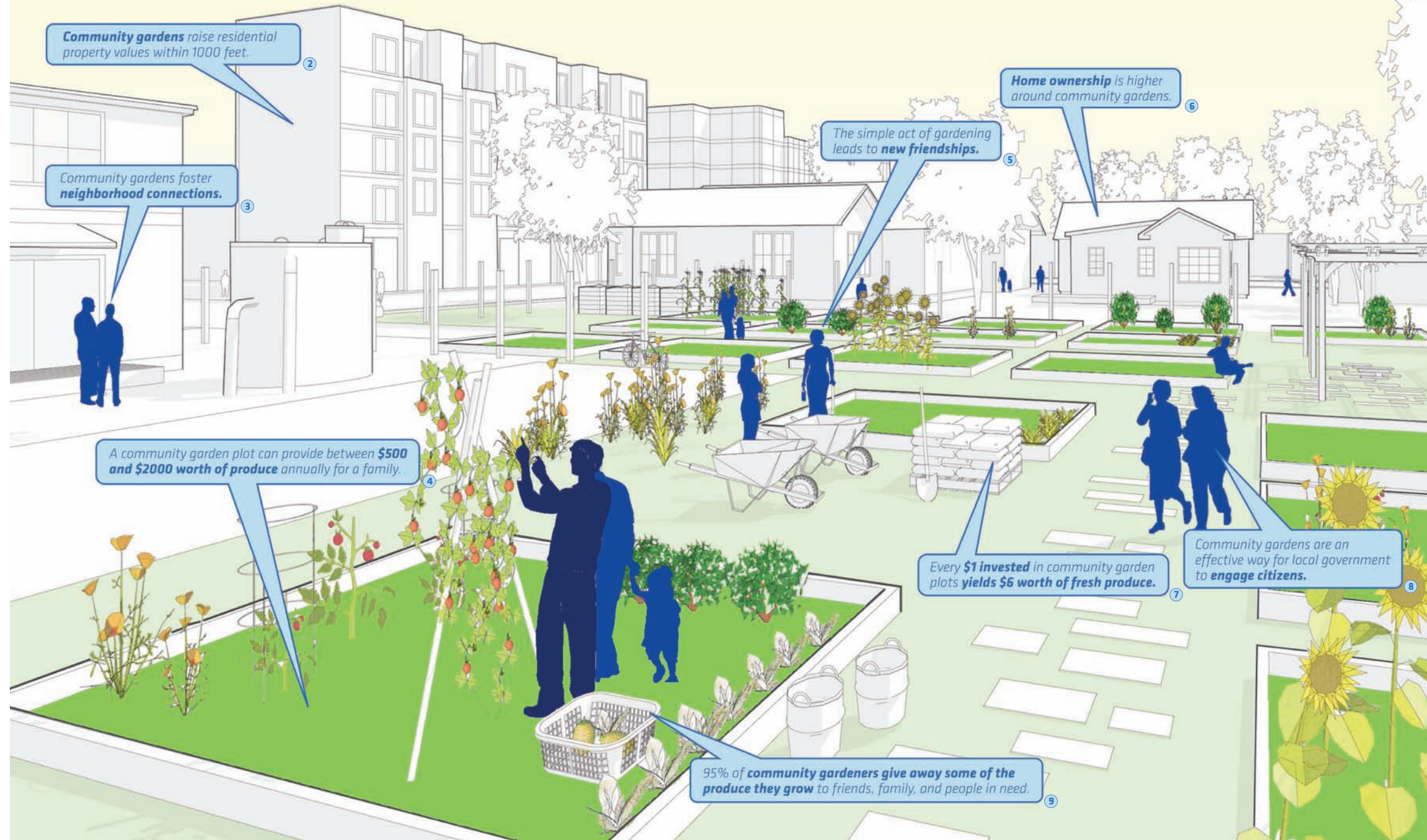
"Community gardening is:

50% gardening and
100% grassroots organizing"

- Adam Honigman

Starting a community garden isn't an easy undertaking, but support from municipalities, non-profits, and institutions can make a big difference for successful launches. Once the many diverse benefits are taken into account, community gardens become amazing low-cost, high impact community projects that, along with all their other benefits, also happen to provide fresh, healthy food!

* FOR A COMPREHENSIVE LOOK AT THE EFFECTS OF GARDENS, CHECK OUT "MULTIPLE BENEFITS OF COMMUNITY GARDENING" BY GARDENING MATTERS. www.gardeningmatters.org/community-resources



gardens are low-cost public health tools

The medical and human costs of obesity facing our country are staggering. Overweight and obese adults, rising childhood obesity, and obesity's associated negative health outcomes are decreasing our life spans and lowering our quality of life. The trends towards healthy food in schools (1) and the growing awareness of food deserts (2) are helping dial the obesity epidemic down, but what about community gardens?



obesity-related annual medical costs in US: **\$147 BILLION** ¹¹

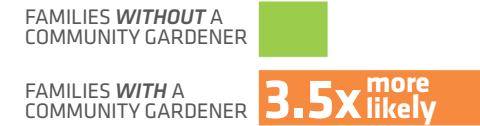
It's not hard to imagine the connections between gardening and good health. The physical activity of gardening and the ability to grow your own fresh fruits and vegetables are obvious contributors to healthy lifestyles. What is not obvious is the huge impact community gardens can have on obesity.

Community gardens not only bring all the benefits seen on the previous page, they're also public health assets that build the physical health of our communities. Recent research suggests that community gardens can act as public health interventions that cities and towns should add to their toolbox of effective urban planning and obesity prevention.

“ Community gardeners...
eat more **VEGETABLES**
EXERCISE more
WEIGH less
and feel **HEALTHIER**
than non-gardeners. ”
based on a Denver CO study by Jill Litt ¹²



Of 766 adults surveyed in a Flint, Michigan study, how likely were families to eat 5 or more fruits and vegetables a day? ¹³



How many people in an Oregon garden study reported eating vegetables "several times a day"? ¹⁴



People in the Oregon study who reported frequently worrying that monthly food money would run out? ¹⁵



FEMALE COMMUNITY GARDENERS
on average, weigh

11 POUNDS LESS
than their neighbors.

MALE COMMUNITY GARDENERS
on average, weigh

16 POUNDS LESS
than their neighbors. ¹⁶



agriculture adds value across the city

Imagine farms and gardens as urban planning tools, to be prescribed for city health like new parks, or schools, or mixed-use developments. Imagine hip, photogenic projects that develop the economic, ecological, and social fabric of the city: reducing crime, raising property values, saving money for the city, and making vibrant, lively places.

Allowing urban farmers and gardeners to use and maintain vacant spaces saves city costs in mowing, policing, and maintaining while at the same time adding productive uses to unused or underutilized space in the city. By promoting food production of all shapes and sizes, the city can increase its urban health and support its fiscal bottom line in one stroke.

ecological benefits



Urban agriculture projects can have a major impact in diverting compostable waste from landfills, reducing stormwater runoff, increasing biodiversity, and mitigating urban heat islands.

A Cleveland study of vacant land found significant **ecological benefits** in urban agriculture

maintenance savings

A Philadelphia study found that turning **10 vacant lots** each 1 acre or less, into **urban farms** would save the city **\$50,000** per year in mowing costs!

crime reduction

Urban farms and gardens are open green spaces that can fight urban crime, and police departments are recognizing community gardening as an effective community crime prevention strategy.

Philadelphia "burglaries and thefts in one precinct dropped by **90%** after police helped residents clean up vacant lots and plant gardens"

property values

Community gardens raise surrounding property value. Recent studies in New York, Cleveland, and St Louis have detailed this effect, and show that the closer a residential property is to a new community garden, the greater its increase in value.



A NYC study of **636 community gardens** and **517,791 property sales** found residential property values to increase as much as 9.4% if a community garden opens within 1000ft, with this effect strongest in poorer neighborhoods.

buy local food, build local economies

The economic impacts of local food systems have been studied closely in recent years, and one measure of local economic impact is known as the multiplier effect. When dollars are spent locally instead of at non-local businesses, a greater percent of those dollars are re-circulated through the local economy - hence the 'multiplier effect,' or how much additional spending occurs as a multiple of the original spending. Studies in states such as Oregon, Illinois, Michigan, Maine, and Florida have shown that even modest increases in local food production, processing, sales, and purchasing can generate millions - if not billions - of dollars in additional economic activity.

Research consistently shows local food system multipliers of up to 1.85 for dollars spent and 1.70 for employment impacts are not uncommon. The resulting direct, indirect, and induced impacts to the local economy mean the entire community, including local governments, developers, growers, and retailers benefits from a sound return on local food spending and local investment.

the SEATTLE study:

a shift of **20%** of the region's food dollars into **locally directed spending** would result in a **\$1BILLION** annual income increase in the Central Puget Sound region. ²¹

* THE AMERICAN INDEPENDENT BUSINESS ALLIANCE HAS AN EXCELLENT ARTICLE ON LOCAL MULTIPLIERS: "The Multiplier Effect of Local Independent Business Ownership" Find it here: <http://www.amiba.net/resources/multiplier-effect>

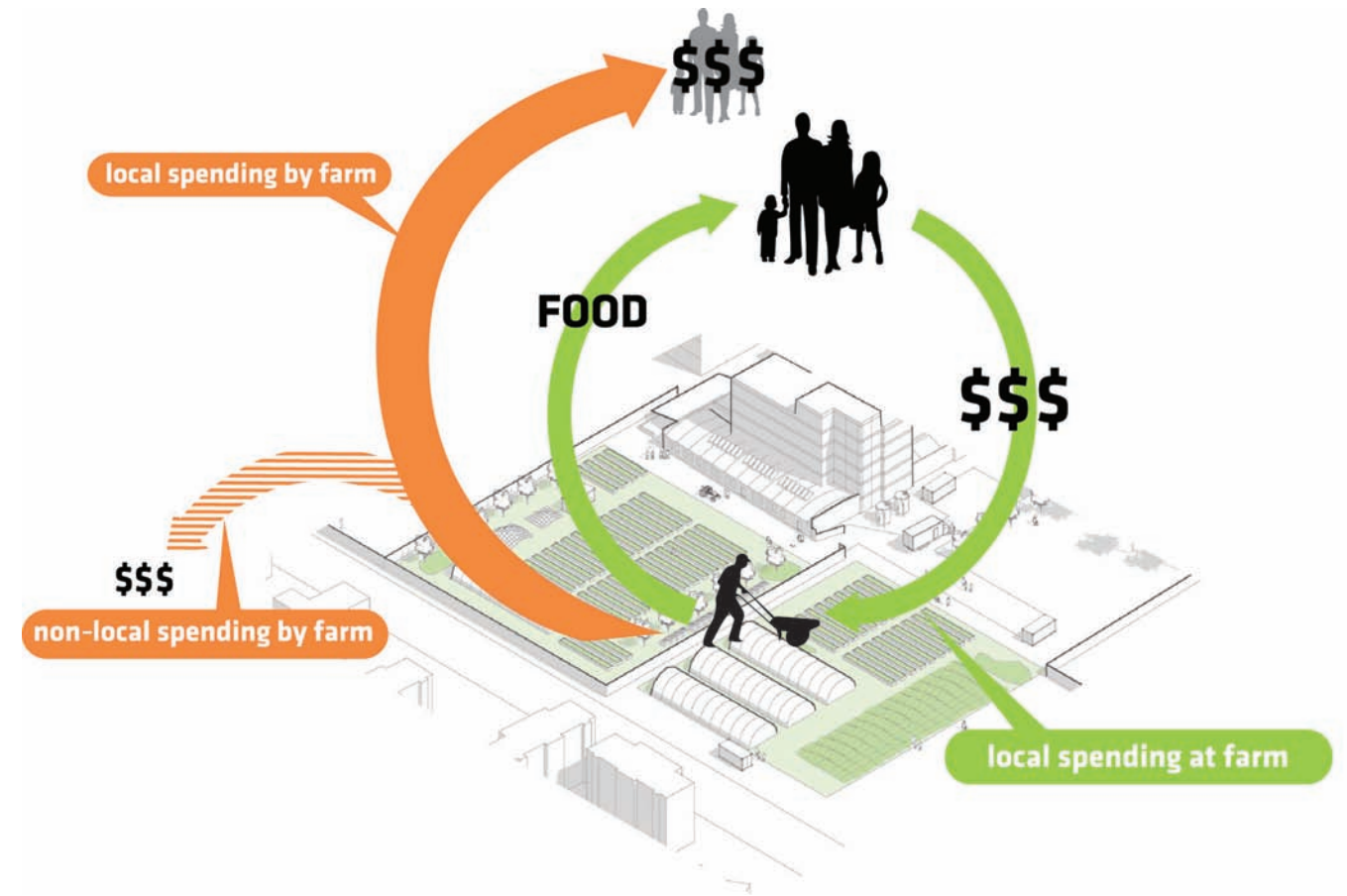
Where dollars spent at local and non-local businesses go:



A dollar spent at a **non-local business** has low local return



A dollar spent at a **local business** has high local return, up to three times greater than non-local spending



Buying food from local and urban farms means more food dollars stay in the local economy

the viable business of urban farming: what can a vacant lot grow?

An important question for any urban food initiative is whether the projects will be self-sustaining. In the case of urban farming, there are plenty of success stories and profitable enterprises out there to use as models. As with any small business, failures are sure to happen, but by understanding the conditions for urban farm success, risk of failure can be mitigated.

For planners, policy makers, and investors interested in building urban farming into their work, the first step requires a clear understanding of the urban farm as a productive unit. That is, for any given urban acre, how much revenue, how many jobs, and how much food can be produced? Confidence in these basic metrics will give urban decision-makers the ability to include urban farms into many different kinds of short- and long-term plans.

“ Commercial urban farms
in the US . . . get
13 times
more revenue per acre
than non-urban farms ”

23

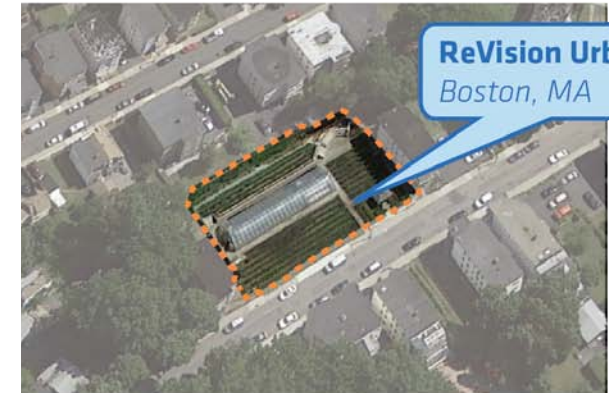
FARM	LOCATION	SIZE	FOOD PRODUCTION	REVENUE	JOBS
City Farm	Chicago, IL	1 acre	20,000 lbs/yr		3-4 FTE/acre
Gibbs Road Farm	Kansas City, KS	2 acre	25,000 lbs/yr	\$100,000 gross/yr	
<i>Using SPIN methods:</i>					
Somerton Tanks	Philadelphia, PA	0.5 acre		\$68,000 gross/yr	
Wally's Market Garden	Saskatoon, SK	0.5 acre total		\$50,000 gross/yr	
<i>Using hydroponic methods:</i>					
Green City Growers Coop	Cleveland, OH	3.5 acre	3 million heads lettuce + 300,000 lbs herbs/yr		30 to 40 FTE
Bright Farms	New York, NY	1 acre	750,000 lbs/yr	\$1.3 million gross/yr	

FTE = full-time equivalent

The above table gathers **available** data for a few urban farms, to give a rough idea of what a vacant lot can grow. Growing method, farmer experience, climate, and business structure can lead to wide variability in productivity.

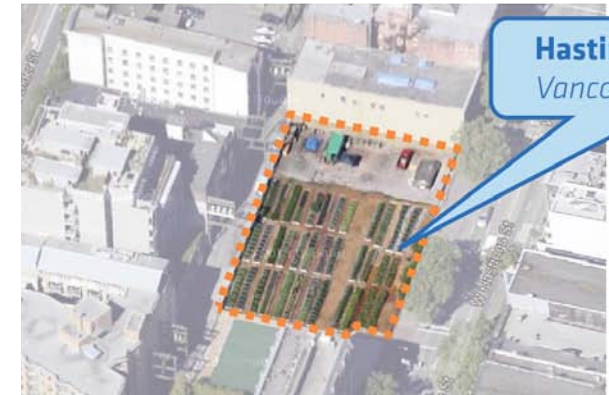
Urban farming in context

Using Google maps, we've identified and highlighted three examples of urban farms to show how these productive spaces fit into their neighborhoods and urban context.



ReVision Urban Farm
Boston, MA

size: 1/2 acre
website: vpi.org/revision



Hastings Urban Farm
Vancouver, BC

size: 2/3 acre
website: hastingsurbanfarm.org



Boggy Creek Farm
Austin, TX

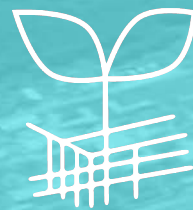
size: 3 acres
website: boggycreekfarm.com

* WORTH CHECKING OUT: MARC SCHUTZBANK'S MASTER'S THESIS, ON URBAN FARMS IN VANCOUVER, BC: "Growing vegetables in Metro Vancouver: an urban farming census" Find it here: <http://www.cityfarmer.org/UF2011.pdf>

REFERENCES

1. Openlands Community Greening Division. Community Garden Guidebook for Chicago, 2011.
2. Voicu, Ioan and Been, Vicki, The Effect of Community Gardens on Neighboring Property Values. *Real Estate Economics*, Vol. 36, Issue 2, pp. 241-283, Summer 2008.
3. Teig et al. Collective Efficacy in Denver, Colorado: Strengthening neighborhoods and health through community gardens. *Health and Place*. 15 (2009)
4. Hagey et al. *Growing Urban Agriculture: Equitable Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities* (2012)
5. *Growing Success: The impact of Capital Growth on community food growing in London*. 2008 <http://www.sustainweb.org/publications/?id=264>
6. Voicu and Been
7. Hagey et al.
8. Henderson, B.R. and Hartsfield, K. Is getting into the community garden business a good way to engage citizens in local government. *National Civic Review*. 98 (2009)
9. Litt, JS et al., *Community Gardens in the City: A characterization of Denver's garden infrastructure, awareness, use, and practices* (manuscript in preparation 2012)
10. <http://www.cdc.gov/obesity/data/adult.html>
11. <http://www.cdc.gov/obesity/data/adult.html>
12. <http://artsandsciences.colorado.edu/magazine/2011/08/gardens-improve-personal-and-neighborhood-health-team-finds/>
13. Alaimo et al., Fruit and Vegetable Intake among Urban Community Gardeners. *Journal of Nutrition Education and Behavior* (2008).
14. Carney et al., Impact of a Community Gardening Project on Vegetable Intake Food Security, and Family Relationships: a community-based research study. *Journal of Community Health* (2012).
15. Carney et al.
16. Zick et al., Harvesting More than Vegetables: The potential weight control benefits of community gardening. *American Journal of Public Health* (2013).
17. The Freshwater Society. *Urban Agriculture as a Green Stormwater Management Strategy* (2013) <http://www.arboretum.umn.edu/UserFiles/File/2012%20Clean%20Water%20Summit/Freshwater%20Urban%20Ag%20White%20Paper%20Final.pdf>
18. Ladner, Peter. *The Urban Food Revolution: Changing the way we feed cities*. New Society Publishers, Gabriola Island, Canada. (2011)
19. Englander, D. *New York's community gardens – A resource at risk*. (2001)
20. Voicu and Been.
21. Sustainable Seattle: The Local Food Multiplier Study. <http://www.sustainableseattle.org/component/content/article/45-neighborhood-projects/170-local-food-multiplier-study>
22. Milchen, Jeff. The Multiplier Effect of Local Independent Business Ownership <http://www.amiba.net/resources/multiplier-effect>
23. Ladner, Peter.





OPEN FOOD is a Community Food Lab project to build participation in local food. This series of single topic booklets introduces, explains and shares various parts of local food systems, and offers everyone an invitation to get involved. Meant to make local food open and accessible, the OPEN FOOD series will be distributed widely in print and digital form.

Order more booklets and find free pdf downloads at communityfoodlab.org