

Food Production in an Age of Change

Lessons from the Phoenix growing community



Joseph Rossell
City of Phoenix Program Manager
2020 ASU Knowledge Exchange for Resilience Fellow



Contents

- Introduction..... [2](#)
- Methodology..... [3](#)
- Overview of findings..... [4](#)
 - Local growing landscape..... [5](#), [6](#)
 - How can the City help? [6](#)
 - Impact of COVID-19..... [7](#), [8](#)
 - Growing food in a changing environment..... [9](#)
- Resilient solutions..... [10](#)
- Supporting food, energy, and water resilience..... [11](#)
- Conclusion and next steps..... [12](#)
- Acknowledgements..... [13](#)

Introduction



Photo credit: Eric Elmore

Arizona State University Knowledge Exchange for Resilience (KER) Fellowship

KER's mission is to support Maricopa County in *advancing social, environmental, and economic resilience*. Through its mission, KER selects representatives from both the community and university for a fellowship program to share knowledge, discover opportunities, and respond to challenges. Fellows are provided with a \$30,000 stipend to support a research project. Joseph Rossell, Program Manager at the City of Phoenix Community and Economic Development Department, was one of 20 fellows selected to participate in the 2020 year-long fellowship .

Problem

Before COVID-19, food producers in the City of Phoenix faced a *variety of stressors*, threatening economic viability and the overall health of the local food system. As the effects of the pandemic rippled across society and the economy, an already vulnerable local growing community experienced a *new shock* as shelter-in-place orders, restaurant closures, and shuttered schools impacted segments of their customer base.

Project

The KER sponsored community resilience research project focused on the food, water, and energy resilience theme and was designed to rethink how the largest community and economic development department within the Greater Phoenix region engages and supports the local growing community in becoming more resilient.

Methodology



A four-part survey was created to learn more about the needs and challenges food producers face. Information gathered from the survey was key to the department's effort to find new approaches to engage and support local growers.

The survey was designed to increase the City's knowledge of the local growing community, identify opportunities to provide greater support to growers, assess the impact of COVID-19 on operations, and understand how food producers are growing food in a changing environment.

Due to the uncertainty of COVID-19 over the spring and summer of 2020, interviews were postponed until Fall 2020. Recruitment emails were sent to 39 local growers in the Phoenix area to participate in an hour-long interview. Over the course of four months from September 29, 2020 to January 27, 2021, 21 local growers were interviewed, and their answers catalogued. To recognize the value of their time and insights, participants were provided with a \$100 gift card incentive to complete the survey.



Photo by Eric Elmore
@ec77_mono
www.ericelmorephotography.com



Photo credit: Eric Elmore

Overview of findings



Pages 5 through 11 highlight key findings from the four main parts of the survey, which include:

- Understanding the local growing landscape
- How can the City better support food producers
- Impact of COVID-19 on operations
- Growing food in a changing environment

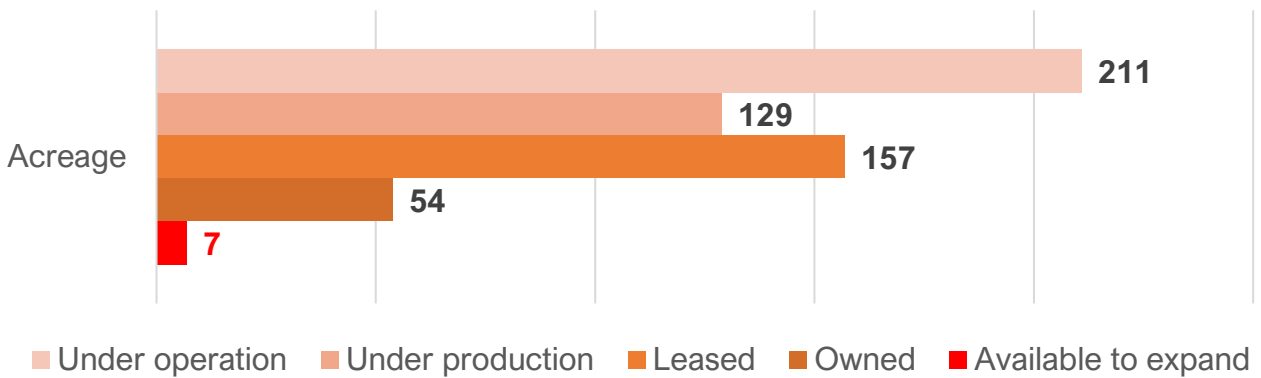
These surveys also aimed to determine how the current pandemic has influenced how farms are preparing for future shocks and whether local growers have interest in partnering with the City to implement specific climate action measures to build greater resilience. Pages 12 and 13 discuss two deliverables central to the KER Fellowship with the Call for Proposals representing the second major piece of the KER community resilience project.

“When you give up your ability to feed your community, you give up your security.”

Local growing landscape



The 21 local growers who participated in the survey operate on a total of 211 acres. Approximately two thirds of growers currently lease their land, with over half operating on a year-to-year lease. The inability to negotiate a long-term lease increases the risk of displacement. Of the 211 acres, only 7 acres are currently available to expand production.



67%

Of local growers lease their land

57%

Operate on year-to-year lease agreements

Local growing landscape

Participants were asked about the unique challenges they face as growers in the Phoenix area. Five overarching themes emerged:

Land Availability/Accessibility

Difficulty in identifying suitable land to lease or purchase for agriculture. There are limited opportunities for expansion of growing operations, as land is becoming increasingly cost-prohibitive.

Zoning

Overbearing land use regulations place an undue burden on small farm operations.

Lack of Understanding

Municipal and community understanding of local food system, particularly food production, is lacking.

Access to Resources and Markets

Funding, infrastructure, and expanding to new markets.

Water

Identifying land with existing irrigation infrastructure, high cost of City water services, and future water scarcity.

How can the City help?

Participants outlined how the City can address these challenges and support the local growing community more effectively. The following four key categories were identified:



Land

Preservation and accessibility



Zoning

Update restrictive regulations



Support

Incentives and resources



Strategies

Prioritize food production within city strategies

“ If we are going to grow food in the City, we have to think about how to cram food into any spaces we can. ”



Impact of COVID-19

“ COVID is showing us the importance of being hyper local. ”

An already vulnerable growing community was further impacted by the COVID-19 global health pandemic. Shelter-in-place orders, restaurant closures, and shuttered schools cut off certain sales channels, forcing them to adapt to a new reality. Through the survey, the City inquired into how the COVID-19 pandemic directly affected their operations, and the following impacts were identified:



Increased demand and interest



Operational and labor impacts



Loss of business



New opportunities



Impact of COVID-19

Of the local farms surveyed:

62%

Reported loss of key sales channels

52%

Pivoted to new market opportunities

67%

Are preparing for general future shocks and disruptions as a result of COVID-19

14%

Only a small number of growers are preparing for specific shocks such as climate change, economic collapse and the rise of white nationalism.

“ COVID freaked a lot of people out when they recognized that certain folks went from being food insecure to food destabilized. During that moment, people wanted to begin to learn to grow food. ”

Growing food in a changing environment



“ Our whole model is based on climate change, which is an impending shock. We are thinking about what Phoenix looks like ten years from now. COVID is not dramatically different from what we expect to be the case going forward. ”

Local growers are intimately familiar with the impacts of climate change, particularly extreme heat and drought. As the Greater Phoenix population expands and the demands for land and water increase, these same local growers will need to adopt sustainable agriculture and climate resilience measures to continue to grow food in an increasingly hot and arid environment. Of the growers surveyed:

- **76%** are taking measures that will help grow food during a hotter, drier future.
- Measures include:
 - Water conservation
 - New infrastructure
 - Growing seasonally appropriate food
 - Weather resistant seeds
- **95%** are interested in partnering with City to adopt or expand new measures.

Resilient solutions inspired by KER



Food System

Entrepreneurship and Innovation

With COVID raging and only five months into the 2020 KER Fellowship, the importance of crafting an economic development strategy focused on food producers became apparent. In May 2020, the *Food System Entrepreneurship & Innovation* strategy was born. The new focus area is designed to support, promote, and enhance entrepreneurship, innovation, and community resilience across the local food system. The system's-based strategy was adopted and included into the department's 2020-2021 Economic Development Strategic Action Plan.

Sustainable Agriculture and

Climate Resilience on South Phoenix Farms

Call for Proposals

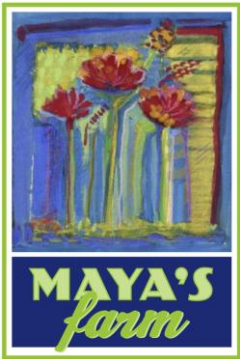
The City of Phoenix Community and Economic Development Department (CEDD), invited proposals from South Phoenix farms and community gardens to adopt or expand innovative, sustainable food production practices and/or climate resilient infrastructure.

The City sought proposals that:

- *Adopt or expand above measures*
- *Enhance economic viability of the farm*
- *Increase access to healthy food for people living in food deserts*

Supporting Food, Energy, and Water Resilience on South Phoenix Farms

The City received eight submittals in response to its Call for Proposals. The following three local growing entities were awarded grants to implement their projects:



Maya's Farm

Amount awarded: \$8,558.00

Purpose: Extend growing season by 6 to 8 weeks and increase growing capacity 25% by covering ¼ of cultivated area with shade structures.



Project Roots

Amount awarded: \$9,000.00

Purpose: Increase food production capabilities, expand food distribution to food insecure families, and decrease energy demand by installing solar shade structures.



The Orchard Community Learning Foundation

Amount awarded: \$10,000.00

Purpose: Design and install water delivery infrastructure to conserve and distribute water efficiently to a food forest.

Conclusion and next steps

Participating in the 2020 ASU KER Community Resilience Fellowship created an ideal opportunity for the Community and Economic Development Department to elevate the critical importance of a healthy, equitable, sustainable, and resilient food system into its strategic plans and priorities.

Surveying 21 local growers yielded invaluable insights and helped the City develop a deeper knowledge of the local growing community, identify opportunities to provide greater support to growers, assess the impact of COVID-19 on operations, and understand how food producers are growing food in a changing environment.

The ASU KER Fellowship also resulted in the development of the Food System Entrepreneurship & Innovation strategic focus area, a Call for Proposals to Support Sustainable Agriculture and Climate Resilience on South Phoenix Farms and Community Gardens, and three grant awards for local growers to boost food, water, and energy resilience within South Phoenix.

The fellowship generated momentum to further refine the Food System Entrepreneurship & Innovation program for the 2021-2022 Economic Development Strategic Action Plan. The Community and Economic Development will work closely with the City's Office of Environmental Programs to achieve the Food Action Plan goals and Climate Action Plan Framework. City staff will also explore grant opportunities for new, small farms to expand or implement additional sustainable agriculture and climate resilience measures.



Acknowledgements

All the Local Growers who participated in the survey

Arizona State University Knowledge Exchange for Resilience (KER)

Rosanne Albright

Office of Environmental Programs, City of Phoenix

Karen Ibarra

Office of Environmental Programs, City of Phoenix

Christine Mackay

Community and Economic Development, City of Phoenix

Nathan Wright

Community and Economic Development, City of Phoenix

Dionne Washington

Project Roots

Maya Dailey

Maya's Farm

John Wann

The Orchard Community Foundation



City of Phoenix