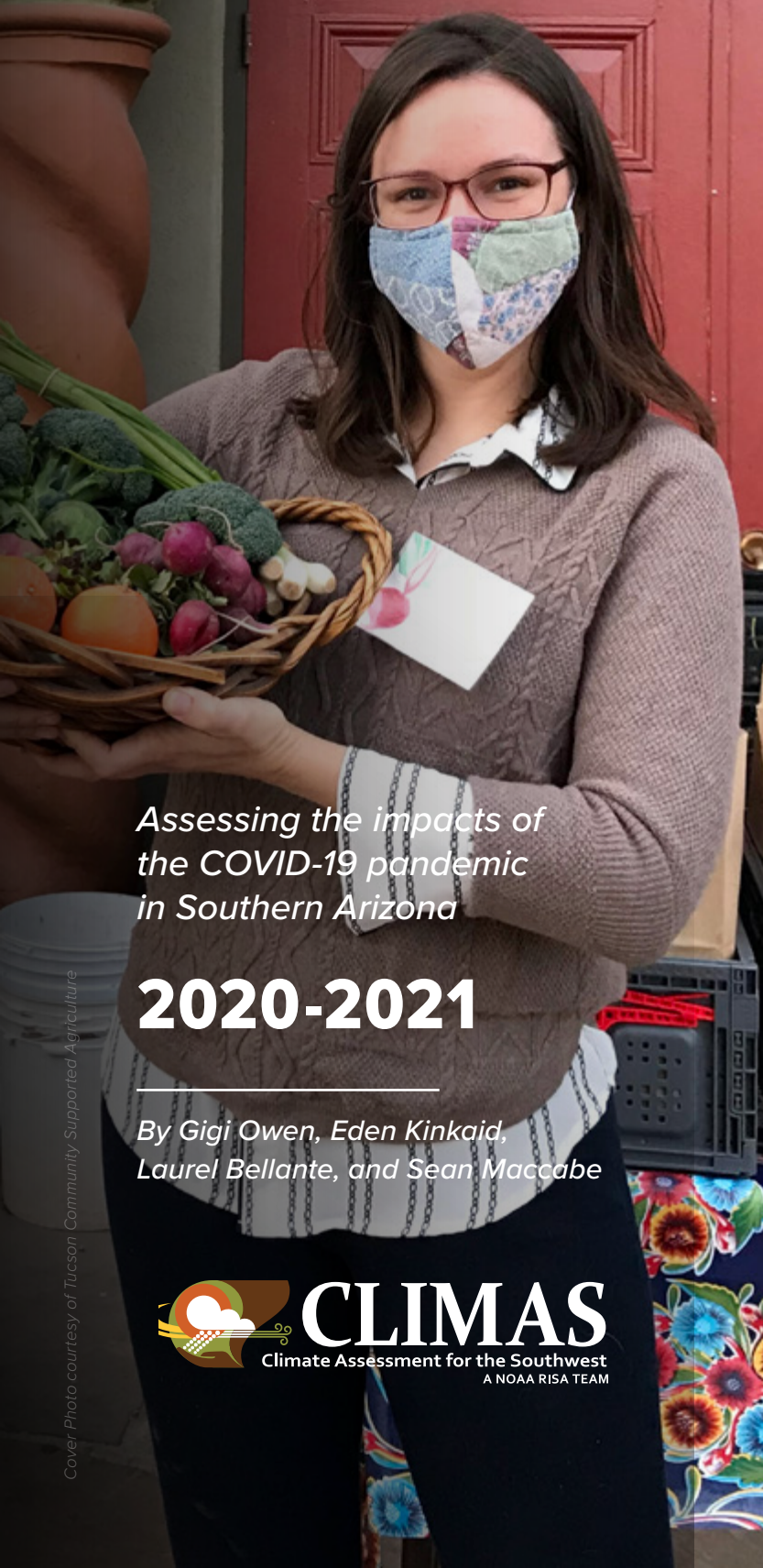




THE UNIVERSITY OF ARIZONA
COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES

Center for Regional
Food Studies



*Assessing the impacts of
the COVID-19 pandemic
in Southern Arizona*

2020-2021

*By Gigi Owen, Eden Kinkaid,
Laurel Bellante, and Sean Maccabe*



CLIMAS

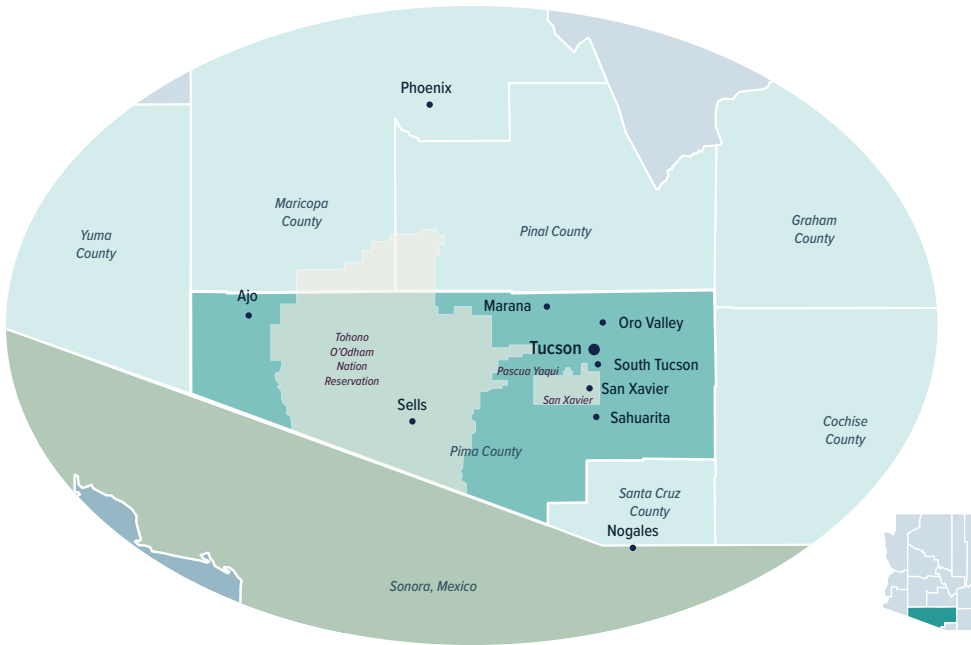
Climate Assessment for the Southwest
A NOAA RISA TEAM

THE STATE OF TUCSON FOOD SYSTEM REPORT

EXECUTIVE SUMMARY

The COVID-19 pandemic has impacted every aspect of social and economic life in Arizona since spring 2020. The *2020-2021 State of the Tucson Food System Report: Assessing the impacts of the COVID-19 pandemic in southern Arizona* provides a rapid and in-depth qualitative assessment of pandemic-related impacts and responses in the local food system centered in Pima County.

This report is a collaborative effort between the Center for Regional Food Studies and the Climate Assessment for the Southwest (CLIMAS) program at the University of Arizona. It is based on research conducted between August 2020 through February 2021, including a survey of 19 agricultural producers, 38 in-depth interviews with local food system representatives, and ongoing policy and literature analysis. The report focuses on a few nodes in the food system, including agricultural producers (farmers and ranchers), distributors, restaurant owners, and representatives from food and agriculture organizations. It synthesizes people's experiences and lessons learned over the past year, in support of building a strong and equitable food system in southern Arizona that is resilient to future environmental, climate, economic, and health risks. Ultimately, the intention of this report is to initiate further discussion and inform future actions to address long-standing issues in Pima County's local food systems in addition to those that arose during the COVID-19 crisis.



Map of study region - Pima County and surrounding southern Arizona counties

Our work is informed by the experiences and expertise of a variety of people involved in local food in and near Pima County in southern Arizona.

In this report, we focus on the following nodes in the food system:



PRODUCERS

Small- to medium-sized farming and ranching operations that sell in Pima Co. (but are not necessarily located within the county).



DISTRIBUTORS

Farmers markets, Community Supported Agriculture programs (CSAs), local food retailers, and organizations that distribute food at low- to no-cost in southern AZ.



RESTAURANTS

Locally owned restaurants in Tucson, AZ that use local sourcing practices.



FOOD & AGRICULTURE ORGANIZATIONS

A variety of nonprofit organizations and policy groups that advocate for food systems change, hunger relief, and improved support for food system workers in Arizona.

Lessons Learned from the COVID-19 Pandemic

Understanding the types of changes and adaptations that people made amidst a crisis provide lessons for the future. The pandemic tested local and regional food systems and provided an opportunity to evaluate the strengths and weaknesses of these systems. The research findings in this report reflect emergent findings in similar research around the country including increased consumer interest in local food and the nimbleness of local systems to quickly pivot to accommodate changing local conditions and needs. The ongoing COVID-19 crisis has highlighted several long-standing issues in southern Arizona’s local food system but also revealed key factors for resilience and opportunities for growth, which are outlined below.

Local food systems play a crucial role during times of crisis. In southern Arizona, local producers, distributors, and food and agricultural organizations quickly adjusted operations to accommodate shifting conditions and meet local food needs. Flexibility, pre-established networks, sharing resources, and communication channels were vital to developing an effective local response to pandemic-related challenges.

Southern Arizona's local food system demonstrated several characteristics of resilience during the pandemic. The system is bolstered by long-term relationships, trusted partnerships across nodes of the food system, and expertise that is grounded in the unique social, cultural, and environmental context of the region. Relationships, trust, and local expertise are the building blocks of social systems that are adaptable to various forms of risk.

Dine-in restaurants and other food and drink businesses were among the hardest hit economic sectors.

Operational flexibility, creativity, online communication channels, community relationships, and financial help such as the Paycheck Protection Program (PPP) were key to sustaining local restaurants.

Restaurant and school closures led to cancelled agreements and contracts with local agricultural producers and distributors. Farm-to-restaurant and farm-to-school programs provide key markets for locally grown produce and animal products. In response to closures, local distributors shifted operations and other institutions helped local producers find new markets for their goods.

Consumer interest and participation in southern Arizona's local food system increased during the pandemic. Demand for local produce, dairy, and meat occurred through farmers markets, subscription services, and local retailers. Increased consumer demand partly compensated for losses in restaurant and farm-to-school sales. The pandemic raised questions about the capacity of local producers to meet increased demand for local food into the future in a way that is sustainable, equitable, and affordable. There is also concern that consumer demand for local food may dwindle after the pandemic subsides.

The Tohono O'odham Nation experienced several food-related challenges during COVID-19, including food shortages at the one main grocery store on the Nation, reduced sales of traditional and locally-produced foods, and increased need for emergency food assistance for tribal members. Experiences during the pandemic reignited discussions about the importance of building Native food sovereignty and local food capacity.

Existing food system inequities became more apparent during the pandemic, calling for concerted action to address these problems. The percentage of food insecure households in Arizona increased during the pandemic and was unevenly distributed across racial groups. More Hispanic/Latinx and non-white households reported being food insecure than white households. Lost or reduced employment during the pandemic also disproportionately impacted Hispanic/Latinx and non-white communities, which links to increased food insecurity in these communities. Interconnected structures of socioeconomic vulnerability and risk amplified the impacts of COVID-19 for low-income communities and communities of color.

Local mutual aid networks, conventional hunger relief programs, and food assistance benefits were crucial in providing food to people in need during the pandemic.

Effective emergency food distribution services required little paperwork and offered flexible models for pick-up or delivery. Requests for financial food assistance like SNAP (Supplemental Nutrition Assistance Program) and EBT (Electronic Benefits Transfer) increased during the pandemic, indicating a rise in food insecurity. Statewide changes to food assistance programs allowed more people to access food, including locally-grown and raised products. If supported and sustained beyond the pandemic, these changes could help address long-standing food security issues in Arizona.

Although the local food system responded quickly to pandemic impacts, these shifts were costly in time, labor, energy, and money. Local food businesses and organizations had to navigate ever-changing health and safety protocols, solicit various forms of financial support, and adjust to a variety of city, county, state, and federal declarations and executive orders.

While COVID-19 caused many disruptions and hardships, other challenges present greater threats to the long-term stability and capacity of the local food system. Major obstacles include increased heat and extreme drought in the Southwest, lack of access to affordable land and water resources, lack of support for new and/or small-scale farming and ranching operations, inadequate local infrastructure such as processing facilities, cold storage, and transportation, and the need for skilled laborers and living wages for food system workers.

Recommended Actions and Next Steps

To expand capacity in the local food system, and better prepare for food-related crisis response, sustained investment in the local food economy is essential. Moving forward, a coordinated plan will help local food and agriculture grow in ways that:

- Account for the unique arid environment, current and future limitations of land and water resources, demographic changes and development, and future climate projections;
- Diversify who shapes the narratives, policies, and practices in the local food system and increase local food access and affordability; and
- Create secure and just livelihoods for those working throughout the food system.

A coordinated contingency plan for local food procurement and distribution, informed by lessons learned during the pandemic, should be developed in preparation for future public health, environmental, or economic crises. National, state, and county food security initiatives should incorporate and support local and small-to-medium scale food and agriculture operations in their planning efforts.

A long-term food plan will help guide expansion of local food efforts in southern Arizona. The Arizona Food Systems Network is currently developing a 3-year, statewide food plan based on knowledge and experiences across the state. Southern Arizona should coordinate with and support these statewide planning efforts while also developing a local plan that incorporates the unique societal, economic, environmental, and political contexts of the southern region. Local and state planning efforts must work to identify, investigate, and address long standing inequities in the food system. State and local planning efforts must support ongoing efforts for Indigenous food sovereignty. In southern Arizona, plans should support Indigenous-led efforts by the Tohono O’odham Nation and Pascua Yaqui.

The local food system needs sustained investment at local, state, and national scales. Sustained investment in the local food system can: stimulate the local economy by supporting locally-owned food and agriculture businesses; build local food system capacity, create jobs, and stable livelihoods; and increase the accessibility and affordability of local food. Investment opportunities could include: developing grants and loans tailored to small food and agriculture businesses; providing access to technological and online marketing support; political and financial support for food and agricultural workforce development; increasing access to land, water, and other resources needed for local agricultural production.

Local institutions, businesses, and individual consumers can invest in the local system by switching a percentage of their annual food budget to source locally grown or raised food. Resources such as the Good Food Purchasing Program can provide a roadmap for developing local government and institutional purchasing goals that can create sustained investment in the local food system and significant material change over time.¹

¹ The Good Food Purchasing Program: A roadmap for the post-pandemic food system we need. <https://goodfoodpurchasing.org/>

Southern Arizona is well poised to take advantage of federal programs to build regional food system capacity. The current federal administration has initiated several national plans, policies, and funding opportunities that seek to support local, small-scale food and agriculture businesses and operations. These opportunities are included in the American Rescue Plan Act of 2021; President Biden’s Executive Order on Tackling the Climate Crisis at Home and Abroad; and the USDA’s current funding support for socially disadvantaged farmers.

Several state and local opportunities to expand food system capacity and accessibility exist and need continued support. These opportunities include the Arizona Fruit and Vegetable Incentive Bill; the Agricultural Workforce Development Bill; the Friends of the Farm (farm-to-foodbank) pilot program; farm-to-institution and farm-to-school contracts; building cooperative farms and farm incubators; and coordinating local food planning and purchasing across restaurants and institutions.

Further research can support the development of plans, policies, and other efforts to expand capacity of southern Arizona’s local food system.

Potential avenues for research include:

- Investigate and document issues of inequity in local food systems in the region.
- Understand how compounding forms of risk, including environmental, climatic, economic, and societal risk, interact within southern Arizona’s local food system over time.
- Evaluate the effectiveness of local food system policies, plans, and strategies in meeting their objectives.
- Conduct pilot studies to test ‘climate smart’ agricultural techniques that are adapted to the arid Southwest.



Photo courtesy of Tucson Community Supported Agriculture



Photo courtesy of Mission Gardens

Impacts & Responses to the Pandemic

Key Findings



Agricultural Producers

The ripple effects of the COVID-19 pandemic created several challenges for agricultural producers in southern Arizona and producers' capacity to effectively respond varied. These challenges indicate the need for sustained investment in regional food production and strategic planning oriented around the needs of local farmers.

A majority of survey respondents (68%) were greatly to moderately impacted by the pandemic. Common impacts included a reduced ability to sell products, loss of demand for products, and implementing physical distancing and other safety measures in the workplace. Producers who sold to restaurants and school districts faced greater challenges than producers who did not use these market channels. After initial disruptions to farmers market operations in March and April 2020, many market vendors experienced an uptick in sales as public attendance grew. Sales of locally grown meat rose throughout the pandemic.

Social media and online newsletters helped producers connect directly with customers to coordinate sales throughout the pandemic. Many survey respondents (63%) created or expanded online markets and sales platforms during the pandemic. Reliable access to internet services, online sales platforms, and social media or other forms of online communications were necessary to pursue online marketing.

Inadequate infrastructure, need for increased labor, and other logistical issues limited local food production capacity during the pandemic. Dependable vehicles for deliveries and transport to various pick-up locations or markets and access to refrigeration and other storage were integral to producers' abilities to shift market channels. Producers often had to acquire new packaging materials to accommodate delivery services or CSA boxes. More labor was necessary to help clean, sort, and package items. A lack of local infrastructure and financial capacity continues to limit local meat production and processing.

Half of the survey respondents (53%) said they could have benefited from COVID-19 relief funding for agriculture, but faced barriers in the application process, were not eligible, or did not know about these opportunities. Federally funded relief programs administered through the USDA were primarily designed for large-scale growers and did not incorporate the needs of small-scale, organic, or farmers with diversified agricultural production. Some issues about inclusion of diversified and organic growers were addressed in subsequent rounds of federal relief funding.

Producers reported that heat waves, drought, changes in seasonal temperatures, and access to water resources are of greater concern than the impacts of the pandemic. Natural resource constraints and environmental risks affecting food production in southern Arizona continue to represent significant challenges to sustaining or expanding food systems in this region.



Distributors

Food distributors, markets, subscription services, and other retailers faced numerous impacts stemming from the pandemic. In response, they instituted new protocols in day-to-day operations, and in some cases, shifted entire business models.

Closures of schools and restaurants due to COVID-19 led to cancelled agreements and contracts with local agricultural producers and distributors. Farm-to-restaurant and farm-to-institution sales are crucial market channels for locally grown food. Local distributors like the Tucson CSA, Pivot Produce, and Heirloom Farmers Markets helped farmers, ranchers, and other producers capitalize on increased individual consumer demand, particularly for producers whose other market channels, like restaurants, had closed.

Distributors experienced heightened consumer demand for local products as a result of disruptions to national supply chains and product availability at grocery stores.

Accommodating increased demand and heightened safety protocols required operational and logistical adjustments. Some farmers markets reduced the number of vendors at markets and others switched to drive-through models. Retail stores adjusted hours and protocols and enforced stricter rules on customers and employees. Changes in distribution models took time, labor, materials, and creativity when frontline workers in the food industry were already stretched thin and putting themselves at risk.

Many distributors and other organizations responded to increased food insecurity by providing low-cost and no-cost distribution of produce and food items.

Some of the more effective food distribution services during the pandemic offered flexible models via multiple pick-up locations or delivery. Local distribution sites can tailor operations to better fit specific community needs.

Mutual aid projects offered crucial support for undocumented people, unhoused people, and other populations facing food insecurity. Investing in a broader network of distribution sites, especially during a crisis, could serve more people in an efficient manner.



Photo courtesy of San Xavier Coop Farm

Tohono O'odham Nation

While the Tohono O'odham experienced many of the aforementioned impacts of the pandemic, they also faced impacts specific to the Nation and Tohono O'odham community.

Supply-chain disruptions led to acute food insecurity on the Tohono O'odham Nation. There is only one grocery store on the Nation, located in Sells. Non-Indigenous people came from outside of the Nation to buy groceries, thus exacerbating food shortages for the Tohono O'odham living on the Nation.

O'odham-led food distribution helped address food shortages on the Nation. Ajo Center for Sustainable Agriculture led food distribution efforts in the western part of the Nation. San Xavier Co-op Farm distributed hot meals during the pandemic.

The pandemic renewed and reinvigorated community discussions about Native food sovereignty. Members of the Nation observed a need for O'odham-led food production, seed saving, and more robust local food economies.



Restaurants

Food and drink businesses were among the economic sectors most affected by the COVID-19 pandemic. Restaurants represent a key market for local food. Reduced restaurant demand for locally sourced foods during COVID-19 caused upstream impacts in the food system leaving many food producers without this market channel.

Tucson dine-in restaurants suffered significant income loss due to stay-at-home orders, distancing requirements, and public health guidelines restricting indoor gatherings and public access to restaurants.

Local restaurants in Tucson responded by reducing hours of operations, reducing staff (some up to 50-75%), closing for short periods or in some cases closing permanently. Restaurant workers faced layoffs, reduced hours, lost tips, erratic work schedules, increased workloads due to expanded cleaning protocols, hostile behavior from customers unwilling to abide by COVID-19 safety protocols, and risk of exposure to the virus itself.

Restaurants that remained open quickly transformed their business models to facilitate online ordering, take-out, curbside pickup, and delivery. Several restaurateurs expanded outdoor dining areas, added retail and online sales, created special take-out menus, and even hosted remote events such as online wine tastings or cooking classes.

Pre-established connections with the Tucson community were vital for local restaurants. These connections allowed restaurants to remain open, communicate changes to their customer base, and request support for crowdfunding campaigns and other creative initiatives to support staff and feed frontline workers.

Restaurants relied on the federal Paycheck Protection Program (PPP) to pay rent, utilities, and staff wages during COVID-19. However, there was widespread confusion regarding the terms for participating in this program and in some cases the support was insufficient.

Local advocacy helped reduce impacts. Tucson's Restaurant Advisory Council (RAC) and other groups were instrumental in advocating for policies to support local restaurants during the pandemic, including allowance of alcohol-to-go sales, caps on third party food delivery fees, and sensible curfews during peaks in COVID-19 community spread.



Photo courtesy of Tucson Community Supported Agriculture



Food and Agricultural Organizations

Through policy work, advocacy, and communication, food and agricultural organizations worked to address pandemic impacts and develop visions for more resilient and equitable food systems in southern Arizona.

Local and state organizations were key players in developing and implementing a coordinated pandemic response. The Community Food Bank of Southern Arizona, International Indian Treaty Council, and other organizations helped to distribute relief funds and small grants to other organizations and community groups addressing hunger. Advocacy work ensured that farmers markets in Pima County could remain open for business.

Food and agricultural organizations like Pinnacle Prevention and the Community Food Bank of Southern Arizona advocated for and provided increased food assistance benefits. Redemptions of SNAP and Double-Up Food Bucks at Pima County farmers markets rose significantly, pointing to the importance of these programs for addressing food insecurity and supporting Arizona farmers during the pandemic.

Existing networks and relationships were crucial to a coordinated response. Various organizations and networks set up channels of communication that helped to develop best practices in response to pandemic impacts.

Structural inequalities in the local food system, including who has access to and who participates in the system, became more apparent during the pandemic. Understanding and addressing these issues will likely shape the future work of many food and agricultural organizations in Arizona.



Photo courtesy of Mission Gardens



Photo courtesy of Heirloom Farmers Market

Challenges to southern Arizona's food system beyond COVID-19

Strengthening and expanding the capacity of southern Arizona's local food system requires addressing multiple barriers. While the pandemic prompted increased interest in and demand for local food, it also raised issues about local production capacity, which are further described below.

Access to land for existing and new producers in

Arizona: Small-scale growers selling through local markets need to be close to larger cities to access markets and labor, yet this land is increasingly being sold for urban, commercial, and residential development. Given the central role of real estate in Arizona's economy, it is often not feasible for small- or medium-sized farms to compete with developers for land. New and underrepresented farmers face additional hurdles, as they cannot access land through generational transfer and may lack the institutional support or capital needed to purchase land.

Agricultural Workforce Development: In Arizona, producers older than 65 outnumber producers younger than 35 by a ratio of 5:1, making Arizona's replacement rate of retiring farmers among the worst in the country. People interested in farming lack feasible pathways to gain training and access to farmland. The lack of agricultural workforce development programs in the state presents a serious obstacle to the survival of small-scale farming in Arizona.

Increasing Temperatures, Decreasing Water Availability, and Climate Change:

Climate change and decreasing water availability present major challenges for local food and agricultural systems in Arizona. Pima County has been in constant drought since 2002 and has experienced above average temperatures since 1999. By 2030, annual average temperatures could increase another 2° F above average temperatures from 2000. Summer monsoon storms, which bring southern Arizona half of its annual precipitation, have changed. Because of increased heat, monsoon storms have become more intense, but also less frequent, and the average amount of precipitation they bring has decreased. These trends suggest that southern Arizona will become hotter and drier in the years to come, putting pressure on local agricultural production.

Need for Strategic Investment to Build Local Food System Capacity:

The challenges facing small and medium-sized agriculture in Arizona require significant and sustained investment. Small-scale agriculture and local food provide regional and statewide benefits, yet small farmers lack adequate support to sustain their livelihoods. Major investments throughout the local food system will be required if small-scale food production is to continue in the region. Investing in farmers' skill development and access to land is crucial for sustaining agricultural livelihoods. Developing reliable and stable funding for institutions (e.g., schools and food banks) seeking to procure food directly from farmers will also lead to more efficient and effective partnerships going forward. State-level investments in food assistance programs that benefit consumers and farmers is also a key issue. Investing in local food systems at multiple nodes can work to build local production capacity, address food insecurity, and bolster the local economy.

Further Information

The State of the Tucson Food System Report is the major publication of the Center for Regional Food Studies at the University of Arizona. Each edition of the report documents the successes, challenges, and barriers to building a more resilient and equitable food system in the Sonora-Arizona borderlands. The report seeks to support the efforts of diverse social actors and institutions working for positive food systems change in this region.

To read the full *State of the Tucson Food System Report 2020-21*, visit: <https://crfs.arizona.edu/publications>

CONTACT INFORMATION

Dr. Gigi Owen, Research Scientist, Climate Assessment for the Southwest (CLIMAS) gigi@arizona.edu

Dr. Laurel Bellante, Assistant Director of the Center for Regional Food Studies bellante@arizona.edu

Dr. Megan A. Carney, Director of the Center for Regional Food Studies mcarney@arizona.edu

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