Texas Food Access Study

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December 31st, 2022

Table of Contents

Executive Summary **4**
Introduction **8**
Methods **11**
Food Access Theoretical Context **13**
Conceptual Frameworks 13
USDA Food Access Measures *13*
UN FAO's Food Security Pillars *14*
Rocha and Chapelle's Five A's *15*
Relevant Definitions 16
Euclidean-Distance *17*
Food Desert *17*
Food Mirage *18*
Food Sovereignty *18*
Food Swamp *19*
Invisible Hunger *19*
Low Income, Low Access (LILA) *20*
Marginalization *23*
Price-Distance *23*
Shelter-Poverty *24*
Street-Distance *24*
Time-Distance *25*
Time-Poverty *25*
Main Underpinnings of Food Insecurity **27**
Income 27
Texas Low Income, Low Access (LILA) Data *28*
Proximity 29
Grocery Stores *30*
Transportation Issues *31*
Stability 33
Supply Chain Disruptions *33*

Climate *34*
Ad Hoc Food System 35
Disconnected Operations *35*
Distribution Issues *36*
Proposed Interventions **38**
Income-Oriented Interventions 38
Living Wage *39*
Housing Affordability and Access *40*
Tax Freezes *40*
Grocery-Oriented Interventions 41
Coops and NGOs *41*
Corner Stores *44*
Small and Rural Grocers *44*
Municipal Partnerships *45*
Dollar Store Restrictions *46*
Grocery Access Intervention Tool *46*
Education-Oriented Interventions 46
Familiarity *47*
Adoption Costs *48*
Resilience-Oriented Interventions 48
Farmer Centered Monitoring *50*
De-Centralized Food Habitats *51*
Localization *53*
Systems-Oriented Interventions 54
Texas Food Systems Office *55*
Distribution *56*
Agency-Oriented Interventions 57
Community Governance Theory *59*
Ostrom's Principles *60*
International Cooperative Principles *61*
Recommendations **62**
References **64**
Appendix **70**

Grocery Access Intervention Tool 70
Rural Grocery Initiative: Considerations for City Leaders 71
Reinvestment Fund: Barriers to Homeownership 73
Reinvestment Fund: Housing Stabilization 74
Cooperative Policy Recommendations 75
USDA Rural Development: How to Start a Cooperative 78
Previous Grocery Intervention Legislation 82

Executive Summary

In 2020, 1 in 8 Texans overall and 1 in 5 (20%) Texas children faced a daily threat of hunger (Feeding Texas 2022). There have been a number of different efforts to help improve food access for Texans across the state, including with federal and state assistance. For example, many Texas residents rely on the Supplemental Nutrition Assistance Program (SNAP) to help with daily food purchases. In 2016, SNAP was utilized by approximately 1 in 7 (14%) residents in rural areas, 1 in 6 (17%) residents in small towns, and 1 in 7.7 (13%) residents in urban households. The Center on Budget and Policy Priorities reported that in 2021 almost 79% of SNAP participants in Texas were in families with children, and more than 27% are in families with members who are older adults or are disabled (Center on Budget and Policy Priorities 2022).

This assistance, among other measures, has proven critical to help feed Texans. However, there remains a need to identify other options to improve access to healthy food, especially in areas, often referred to as "food deserts," that are currently devoid of retail providers of healthy food. Grocery retailer interventions for food deserts have been tried nationally to varying degrees of success since the 1990's, and various legislative interventions have been proposed in Texas over the past half dozen session to address food access issues for Texans across the state. Major retail grocery chains have been encouraged and incentivized to open stores in federally designated "food deserts." However, as evidenced from interviews and investigations of the literature, the poor response to these incentives from the grocery industry are rooted in high overhead, low profit margins, and projected low purchase volumes that are insufficient to keep these large stores open in these areas. To explore other possibilities, a study was commissioned to investigate both the drivers of food insecurity in Texas and options to improve food access for Texans across the state.

As such, the study began by asking a) what is defined as "lack of access" to grocery stores, produce, and healthy foods, b) what are the major barriers to access, and c) what are the best strategies for removing those barriers to access? A series of in-depth, semi-structured interviews were conducted with professionals working within the Texas food system in sectors such as industry, non-governmental and community-based organizations, municipal and state government, and academia who recommended various options listed below and detailed in this report.

A larger quantitative study is currently underway to survey Texas residents about their food access experiences and the relevance of proposed interventions. This phone-based survey is being administered by the Center for Survey Research at University of Texas Rio Grande Valley and is expected to be completed by March 1, 2023. Preliminary analysis of more than 300 responses thus far (about half of the projected responses) reveals that income and convenience remain the biggest predictor of food insecurity across the state, but further analysis is planned to examine the most appropriate interventions. Formal analysis of survey results will be distributed as a follow up to this study once it is complete. A one-page summary of the study will also be

created and published for legislative and public consumption approximately one month from now.

According to the interviewees, several different factors linked to food insecurity were identified and summarized as follows:

1. **Expendable income:** Low-income Texans must balance budgets between rising costs for housing, fuel, health care, and food. In many cases, food choices are limited to the cheapest and least nutritious options.
2. **Proximity to food:** Many Texans do not have reasonable access to healthy foods that are affordable, appropriate, or adequate. Large grocery chains have opted not to open stores in these communities, forcing many Texans to drive farther and spend more time to shop, or pay more for deliveries.
3. **Stability of the food system:** Disruptions to the food system, such as those revealed by the COVID-19 pandemic – supply chain issues, employee shortages, shipping and logistics – as well as sudden interruptions from climate-related events (freezing temperatures, hurricanes, floods) have revealed the fragility of food systems.
4. **The ad hoc nature of the Texas food system:** Counties, municipalities, and organizations across the state often have different plans for addressing food-related issues, and many times these strategies are incongruent, duplicative, or even in competition with other strategies when instead they could create synergies.

Based on these significant factors, this report details several **proposed interventions to improve food access in Texas**:

1. **Income interventions:** Low-income families in 2019 spent approximately 36% of their income on food. This is a significantly higher percentage of income spent on food than families in higher income brackets (USDA ERS[4] 2022). The goal of income-oriented solutions is to allow people's total income to go further and help balance other necessities, such as safe living conditions, housing, transportation, medical care, and education, all of which are strongly associated with improved food access. Such options include strengthened food assistance programs such as SNAP and WIC, minimum wage increases, affordable housing, and tax freezes.

2. **Grocery store interventions**: Given that efforts to expand the reach of big-box stores have proven limited, options that focus on local-scale interventions might have a more immediate impact to improve food access. Interviewees revealed successful community-based efforts that focused on targeted needs of a community (even beyond food access). Successful coop stores and neighborhood corner stores require collaborative support from government and access to sufficient financing to overcome start-up costs. One of the most important facets in these efforts centers on community involvement in planning, marketing and outreach, and ensuring sufficient opportunity for volume sales. This is perhaps part of the reason why community input works; it allows a local store to better meet the needs of the community and thereby ensures regular customers while also strengthening local economies in ways that have significant downstream implications.

3. **Educational interventions**: In addition to addressing issues related to proximity to and affordability of healthy food, several respondents suggest that targeted, appropriate efforts to improve adequacy and acceptability of food can also help improve food access. These education-oriented efforts can help improve familiarity of accessible and available foods. In other words, education may help reconcile how procurement and preparation of food can be done in ways that do not compromise the dignity or values of the eater or producer (Chappell 2018). **For example, pedagogy around local foods** in schools not only increases familiarity and accessibility with healthy foods, but potentially strengthens local economies by promoting habits to buy and procure Texas produce.

4. **Stability (resilience) interventions:** An agroecological approach has been touted as a cornerstone for a resilient food system. Such an approach includes considerations for ecological, social, and economic well-being when designing food systems, from food production to food procurement and distribution, and even in food preparation and consumption. An agroecological approach is farmer-centered, decentralized, and one that maximizes efficiency by focusing on a localized approach. It is also consistent with other studies that reveal the how vibrant, local agricultural and small-scale business networks are associated with civic engagement, social connectivity and trust, and a stronger middle class and entrepreneurial spirit (Lyson et al 2001, Obach & Tobin 2013).Texas organizations such as the Sustainable Food Center (Austin, TX), and UTRGV Center for Sustainable Agriculture and Rural Advancement (Edinburg, TX) (among others) are examples of an agroecological approach at work.

5. **Systemic interventions:** This report recommends the development of a new Texas Food Systems Office to help coordinate and facilitate cooperation among food access industry professionals and program administrators to maximize the reach and efficacy of pre-existing resources. Such an office could help to aggregate information into a single location for ease of access and application for individuals seeking assistance, entrepreneurs seeking financing & partnership, as well as municipalities seeking the resources available to them. Such an office could be paramount in addressing many of the communication breakdowns across the industry like farmers looking for markets, markets looking for local foods, buying power among smaller groups, access to and knowledge of existing funding, and agricultural resource monitoring. Perhaps most importantly, such an office could ensure that the Texas food system remains resilient and stable in the face of shocks like the global pandemic, supply chain disruptions, and climate disasters by making sure that someone has a pulse on what is happening and how to connect the matching pieces together.

6. **Personal agency interventions**: Efforts to improve access to accurate information and other aspects of food security can empower citizens to define and secure their own food security. This approach assumes that a community in charge of their own resources will build systems that include “dignity, self-respect, or basic human rights of eater [and]

producer, and allow food choices in line with moral, religious, ethical, and cultural values" (Chappell 2018). Such efforts include having venues to equitably access accurate information in appropriate formats and languages and providing support through grants and technical assistance for grassroots efforts centered on local food access.

Introduction

During the 87th legislative session, the Texas Department of Agriculture (TDA) was instructed by a rider authored by representative Jessica González to investigate:

"Methods to increase the number of grocery stores and other stores selling produce and other healthy foods in areas [of Texas] that currently lack access [to those foods]."

(SB 1, Article VI, Texas Department of Agriculture, Rider 27)

TDA determined that partnering with a university to conduct this research would lead to the most robust outcome. Jessie Barber, an agroecology graduate student at the University of Texas Rio Grande Valley, was selected to lead the study. Addie Stone, Policy Specialist at TDA, served as the coordinator for the report.

Grocery retailer interventions have been tried nationally to varying degrees of success since the 1990's, and various legislative interventions have been proposed in Texas over the past half dozen session to address food access issues for Texans across the state. Major retail grocery chains have been encouraged and incentivized to open stores in federally designated "food deserts" across Texas– areas where residents do not have any physical access to healthy foods. However, as evidenced from interviews and investigations of the literature, the poor response to these incentives from the grocery industry are rooted in high overhead, low profit margins, and projected low purchase volumes that are insufficient to keep these large stores open in these areas.

As such, the study began by asking a) what is defined as "lack of access" to grocery stores, produce, and healthy foods, b) what are the major barriers to access, and c) what are the best strategies for removing those barriers to access?

To learn more about the challenges facing Texans and to identify existing efforts to enhance food security throughout Texas, a series of in-depth, semi-structured interviews were conducted with professionals working within the Texas food system in sectors such as industry, non-governmental and community-based organizations, municipal and state government, and academia. During these interviews, many plausible primary causes of food insecurity were identified. These primary causes fit into **four main categories of concerns:**

1. Expendable income

2. Proximity to food

3. Stability of the food system
4. The ad hoc nature of the Texas food system

These interviews also produced **six main categories for proposed interventions:**

1. Income interventions
2. Grocery store interventions
3. Educational interventions
4. Stability (resilience) interventions
5. Systemic interventions (also referred to in some of the literature as “upstream solutions”)
6. Personal agency interventions

The data from interviews and literature reviews informed a larger quantitative study that aims to survey Texas residents about their food access experiences and the relevance of proposed interventions. This phone-based survey, underway at the time of writing and expected to be completed by March 1, 2023, is being administered by the Center for Survey Research at UTRGV. Preliminary analysis of more than 300 responses thus far (about half of the projected responses) reveal that income and convenience remain the biggest predictor of food insecurity across the state, but further analysis is planned to examine the most appropriate interventions.

Formal analysis of survey results will be distributed as a follow up to this study once it is complete. A one-page summary of the study will also be created and published for legislative and public consumption approximately one month from now.

There is much more to be said about the subject of food deserts and food access than is contained in this report. The report cannot claim to be all-encompassing, but it is the best summary of what has been learned over the last year and a half about the causes and potential solutions to food access issues in the state of Texas.

Acknowledgements

We would like to thank everyone that has taken the time to share their perspectives and expertise on the Texas food system with us. We conducted 23 hour-long interviews with a variety of organizations and individuals involved in the food system. In no particular order, we would like to thank those that explicitly gave us permission to acknowledge them:

- John Kirchhoff from USDA Rural Development
- Tommy Engelke and Christy Lewis from the Texas Agricultural Coop Council
- Leslie Provence and Mitchell Hagney from the Food Policy Council of San Antonio
- The Rural Grocery Initiative (Kansas State University Research and Extension) Staff
- Kennedy Smith from The Institute for Local Self-Reliance
- Alex Racelis from the UTRGV Agroecology Program
- Texas Academy of Nutrition and Dietetics Strategic Alliance Committee
- Julianna Bradley from For Oak Cliff
- Nick Conn from Wheatsville Food Co-op
- Linda Novick O'Keefe from Common Threads
- Rachel Cooper from Every Texan (formerly Center for Public Policy Priorities)
- Gary McLaren from McLaren Law Firm, PLLC
- Vince Leibowitz from Sen. Royce West's Office

We are equally as grateful to the organizations and individuals that did not get back to us about acknowledging them by name. Other organizations we spoke to included food banks, major grocery chains, food access nonprofits, academic institutions, and governmental organizations. We also spoke with multiple professors with expertise in related fields.

Graduate student Jessie Barber was advised by his graduate committee at the University of Texas Rio Grande Valley including Drs. Alexis Racelis, Owen Temby, and Dongkyu Kim.

Methods

The research process began with interviews conducted with professionals working in various capacities of the Texas food system, starting with recommendations from those within the researchers' network. Initial interviews focused on those working on programming addressing food security specifically. The snowball method was then used to further develop the list of potential interviewees. The advantage to this method is that it sometimes resulted in personal introductions which helped to build trust and assisted in gaining access to people that may have otherwise been too busy to respond to interview requests. The disadvantage is that it somewhat limited the pool of interviewees. Occasionally, specific interviewees were selected with no previous recommendation and instead based on expertise in a field relevant to the study. This occurred only a handful of times and mostly regarding specialized topics on which additional information was desired, such as agroforestry, cooperatives, and rural grocery operations. The majority of the interviewees operate within Texas, but four interviews required reaching beyond the Texas border to gain information on national grant & financing programs and unique extension service research.

Groups we interviewed included a) urban, rural, local, and chain grocers, b) national, local, and grass- roots non-profits working on food access within Texas, c) administrators of federal and state food access programming, d) academics and specialists in nutrition, food access, rural grocery operations, cooperative development, rural development, agroecology, and agroforestry, e) offices involved in food policy at the municipal, state, and federal levels, and f) administrators of food banks and public feeding programs.

The interview process was open ended to avoid influencing the responses received, and interviews were off the record to avoid the influence of public gaze and to elicit more honest discussion without participants worrying about the disclosure of proprietary information. Interviews typically began with an inquiry into interviewees' current projects or approaches to addressing hunger followed by questions about the successes and failures of those efforts. Interviewees were then asked about any upcoming projects and strategies they were excited about. Towards the end of the interview, interviewees were asked what they see as major obstacles to food security in their area, what legislation they would like to see addressing food security, and if they had recommendations for other groups to contact. Space was given for interviewees to discuss any topic they felt was important to the conversation to capture organic revelation of concepts. The interviews each took about an hour and with few exceptions were carried out in tandem by the Policy Specialist at the Texas Department of Agriculture and the lead researcher from the University of Texas Rio Grande Valley.

Because the interviews were off the record, no recordings were made. Instead, notes were taken, and the two interviewers would debrief together after each interview was over and the interviewee had left. During the debrief, major take aways, points of interest for follow up investigation, and a course of action for further progress and interviews would be discussed. The notes were then compiled into a chronological document and coded to determine base topics and

categories for both major concerns and proposed solutions. Literature was investigated relating to topics raised in the interviews to corroborate claims and to determine the best practices in each category. Any citation of interviews throughout the report is anonymized to reveal only the concepts and not the organization nor individual names of interviewees.

Estimated populations experiencing poverty in the Income sections were calculated using data from the USDA ERS Food Access Research Atlas (USDA ERS[2] 2022). This was done by multiplying the population of each census tract by the listed poverty rate for that same tract and summing the total of all results. The approximated poverty populations were then separated into rural and urban, LILA, LI alone, and neither LI nor LA. Parameters for LILA tracts were selected as columns LILATracts_1And10 and LILATracts_Vehicle in the ERS dataset, also known as options 2) and 4) from the LILA portion of the Additional Terms section in this report.

Methods for the UTRGV survey will be detailed in the forthcoming analysis of the survey results.

Food Access Theoretical Context

Access: ac·cess /ˈakˌses/ noun

the right or opportunity to use or benefit from something

(Oxford Languages 2022)

Conceptual Frameworks

The following three concepts are useful frameworks for understanding the basics of dialogue around food access and food security. They share many similarities, but there is nuance in their thoroughness and applicability. This report includes all three in the hope of providing a more complete picture of the many ways to assess food access.

USDA Food Access Measures

The USDA defines low access as "being far from a supermarket, supercenter, or large grocery store" (USDA ERS[1] 2022). This denotes a use of the term that is synonymous with market-access. The USDA defines food security as "access by all people at all times to enough food for an active, healthy life" (USDA ERS[1] 2022).

However, in the course of the study, many scenarios were encountered in professional interviews and in the literature in which people experiencing hunger did live near stores. In some circumstances, the introduction of a grocery store has served to improve nutritional health and alleviate hunger, but in many others, the introduction of a grocery store failed to show measurable improvements to health and hunger (Rosenberg & Cohen 2018; Archer & Belinfanti 2017; Chrisinger 2016). This is for a variety of reasons that will be explored throughout this report.

A circular logic begins to occur when comparing these facts to the USDA definitions. "Access" defined as market access does not necessarily lead to food security, but food security is defined according to market access. Both cannot be true simultaneously. For this reason, this study has sought to expand definitions of "access" and look towards other internationally accepted definitions to help explain the gap.

UN FAO's Food Security Pillars

The internationally accepted definition of food security was decided upon at the 1996 World Summit:

> ***Food Access****: Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic, and social arrangements of the community in which they live (including traditional rights such as access to common resources).*

Entitlements are defined as "having a right to" (Oxford English Dictionary Online 2022), and commodities are defined as "a useful or valuable thing, such as water or time" (Oxford English Dictionary Online 2022). Important here is the fact that commodities need not be material. **In other words, access, as defined here, is the right (access) to having rights (entitlements) to all resources needed to acquire appropriate foods and meet material & immaterial needs for a nutritious diet.** The rest of the definition points to the necessity for considering context such as the historical, cultural, and systemic conditions surrounding the individual. The specifics regarding what those needs are is held within the other three pillars. This pillar (access) is quintessential to meeting the other three. The other three pillars are:

> ***Availability****: The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports.*

> ***Utilization:*** *Utilization of food through adequate diet, clean water, sanitation, and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security.*

> ***Stability:*** *To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g., an economic or climatic crisis) or cyclical events (e.g., seasonal food insecurity). The concept of stability can therefore refer to both the availability and access dimensions of food security*

How those entitlements are shaped is left to interpretation and subject to the power dynamics and context of the region in which an individual finds themselves. That is, whether the commodity bundles are financial, social, legal-based, etc. is left to be determined by the cultural and social beliefs of the entitlement's administrators, which may or may not be in line with what the individual thinks he or she needs.

It is this last point that eventually led to the necessity of one more definition. Many of our professional interviews specifically named prejudice & paternalism as conditions causing food access issues in their area. In relation to prejudice & paternalism came terms like "outsider-

savior" perspectives regarding solutions that were thought up and enacted by those outside of the community who want to be heroes, but do not take time to understand the true needs of the community. We also heard discussions of what can be called "friendly paternalism" which undermines community autonomy by making decisions for them instead of with them. The opposite of prejudice & paternalism would be community empowerment and autonomy.

While the FAO definitions certainly encompass much more of the concerns encountered than the USDA definition of food access, they do not incorporate the need for empowerment and autonomy within communities and individuals.

Rocha and Chapelle's Five A's

In searching for models that account for this gap, researchers encountered terms like food justice and food sovereignty which focus heavily on rights of communities to define their own food systems. However, these concepts diverge heavily from established international definitions, have no unique delineations of access measures, and have strong political under tones. Eventually, researchers came to Rocha & Chapelle, leading scholars in the field of food access research, and their model of the Five A's as outlined in Chapelle's book "Beginning to End Hunger." The Five A's food security model includes all of the main points and even some identical language to the FAO food security model, but also expands in scope to include Appropriateness and Agency without being overtly political.

The Five A's as described in "Beginning to End Hunger" are:

1. ***Availability:*** *sufficient production and supply*
2. ***Accessibility*** *the physical, social, economic, and cultural means to actually procure suitable food. In this conception of food security, stability of access is a vital [secondary element] of accessibility.*
    a. ***Stability:*** *To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g., an economic or climatic crisis) or cyclical events (e.g., seasonal food insecurity).*
3. ***Adequacy****: food that is nutritious, suitably diverse, safe to eat, and produced using environmentally sound (sustainable and healthy) practices.*
4. ***Acceptability:*** *the requirement that the available, accessible, and adequate food also be culturally acceptable. In other words, that it is produced and obtained in ways that do not compromise the dignity, self-respect, or basic human rights of eater or producer, and allows food choices in line with moral, religious, ethical, and cultural values.*

5. ***Agency:*** *the requirement that citizens are empowered in defining and securing their own food security, and thus that there are competent sociopolitical systems wherein policies and practices may be brought forth by the will of the citizens and reflected in governance to enable the achievement of overall food security. This includes access to accurate information, the right to such information and to other aspects of food security, and the ability to secure such rights.*

(Chappell 2018) emphasis is editorial 2.a Stability added by Barber from the original definition found in the four pillars as described by Chapelle.

In the FAO model, one must rely on the "powers that be" to provide the necessary entitlements and commodity bundles. In the Five A's model, it is explicitly stated that part of the entitlements is the agency to make decisions and that the public will must be reflected in governance surrounding food practices. Furthermore, it extends this concept beyond the consumer back to the producer with the inclusion of producers in the descriptions of Availability, Adequacy, and Acceptability. Access, Availability, and Stability are essentially the same as in the FAO model, except that Stability was absorbed into Availability as a subsection. Utilization was divided and absorbed by Adequacy and Acceptability. The Five A's also adds environmental health as a part of Adequacy for both quality and safety of the eater and producer. The inclusion of environmental sustainability also addresses an additional element of general stability by encouraging long-term sustainable practices.

Acceptability and Agency are the most noteworthy changes. These two factors are what enable this model of food security to stand out from the others. This model sufficiently encompasses all of the major concerns encountered throughout the interview process while being true to the international concepts and without being overtly political in nature.

Relevant Definitions

Listed are a variety of terms relevant to food access and the strategies for monitoring and developing interventions. Some of the terms listed are more relevant to this report than others, and a few are not used in the report at all. The varying lengths of the definitions reflect a) the frequency the term was encountered in either interviews or literature review, thereby warranting more or less directed study of the concept, b) the complexity of the concept being defined, and c) the amount of literature and discussion available surrounding it. Definitions are in alphabetical order.

Euclidean-Distance

This is a common measure of distance to a grocery store in food access studies. Euclidean-distance is measured in a straight line or "as the crow flies." In one version of this metric, it is measured as "the distance from the centroid of the census tract or census block group to the nearest grocery store" (Nori- Sarma et al 2022). In another, an identified grocery store acts as a center point, a radius of estimated service area is drawn around it, and comparisons of populations found within that radius are used to determine access.

> *"[Euclidean-distance] is simple and intuitive but has very few applications in which it can yield accurate distance estimates…*
>
> *… The Euclidean distance method requires low computational effort but may introduce exposure misclassification by assuming that geometric area matches with surface streets."*
>
> *(Nori-Sarma et al 2022).*

Food Desert

In a "A Systemic Review of Food Deserts" published by the CDC, Beaulac et al lists the origin of the term food desert as Scotland during the 1990's where it "was used to describe poor access to an affordable and healthy diet." They go on to state that food deserts are "areas characterized by poor access to healthy and affordable food, [and] may contribute to social and spatial disparities in diet and diet-related health outcomes" (Beaulac et al 2009). The conception of the term food desert was one of the initial steps that helped to center conversations around food insecurity on systemic causes of low-access and away from focusing all of the blame for diet choices on the consumer.

The United States Department of Agriculture (USDA) previously defined a food desert as a "low-income [census] tract where a substantial number or substantial share of residents does not have easy access to a supermarket or large grocery store" (USDA ERS[1] 2022). The term food desert is currently in disuse by the USDA due to public disputes surrounding the term, but because it was in used for so long it is "still commonly found in policy language, grant applications, and market research among grocery store companies" (Healthy Food Policy Project 2022). These areas are now officially defined by the USDA as Low-Income, Low-Access tracts (see LILA definition below).

Food Mirage

A food mirage is an area that has an abundance of grocery stores offering healthy foods, but prices are too high for low-income accessibility which impacts marginalized communities at greater rates (Sullivan 2014). These circumstances can lead to assumed sufficient access and a lack of attention to concerns that remain hidden when using proximity as the primary determinant of access. Rather than helping improve food security, these circumstances contribute to the gentrification of neighborhoods and exportation of poverty rather than the alleviation of it.

Euclidean-distances do not account for time-poverty, street-distance, nor price-distance to food. All of which can contribute to the conditions that lead to a food mirage. This might explain why many families have been found more likely to shop near their workplace or while attending other errands via "trip chaining," (Tomer & George 2021).

> *"…transportation constraint does not affect the types of stores that SNAP participants and food-insecure households use for their primary shopping…*
>
> *…Further, most households do not necessarily shop at the supermarket that is closest to them. Even those who do not use personal vehicles tend to travel farther than the nearest supermarket or supercenter. This is [also] true for SNAP households… These findings are consistent with previous studies that find that SNAP households do not necessarily shop at the nearest supermarket."*
>
> *(Ver Ploeog et al 2015)*

Food Sovereignty

Food sovereignty is a movement that prioritizes dignity, transparency, and agency for all participants within a food system. It seeks to put full control of the food system into the hands of producers, distributors, and consumers within that food system. This includes the right to peasant agriculture and homesteading. It also favors smaller, more diverse agricultural methods over corporate controlled methods. The following excerpt is from the Declaration of Nyéléni and was agreed upon at the World Forum for Food Sovereignty in 2007 which took place in Nyéléni Village, Sélingué, Mali:

> *"Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts those who produce, distribute*

and consume food at the heart of food systems and policies rather than the demands of markets and corporations. It defends the interests and inclusion of the next generation."

(Declaration of Nyéléni 2007)

Food Swamp

Coined in 2009 by scholars looking to describe the importance of not just food access, but healthy food access, this term has inspired closer examination of how food deserts are defined and what types of interventions are appropriate. The Healthy Food Policy Project describes a food swamp as an area where "there is an imbalance in the local food environment, where unhealthy food outlets outnumber those that sell healthy food, driving poor health" (Healthy Food Policy Project 2022). The term is, in part, a challenge to the belief that food deserts and low-income neighborhoods lack the collective income to support a grocery store and to highlight the possibility that low-quality food providers target marginalized communities (Cooksey-Stowers et al 2017).

"Food swamps… [are] areas with a high-density of establishments selling high-calorie fast food and junk food, relative to healthier food options. Our results suggest that the presence of a food swamp is a stronger predictor of obesity rates than the absence of full-service grocery stores…

… Low-income and racial-ethnic minorities are more likely than Whites to live near unhealthy food retailers, which has been associated with poor diet. In a review of the research on fast food access, 10 out of 12 studies provided evidence that fast food restaurants are more likely to locate in areas where there are higher concentrations of ethnic minorities than Whites. These associations raise questions about causality…"

(Cooksey-Stowers et al 2017)

Invisible Hunger

Sometimes called hidden-hunger, invisible-hunger is when someone may have enough access to calories but is not obtaining sufficient nutrient intake with those foods. This can give the appearance of having enough to eat and is even associated with higher rates of obesity. This is a major problem relating to affordability as well as proximity to high quality foods.

"Although it may seem at first paradoxical, a growing body of evidence suggests a possible association between food insecurity and obesity… Research indicates that individuals with food insecurity consume diets of lower

quality (including fewer fruits and vegetables and more added sugars) and lower in micronutrient content than those who are food secure..."

(Dhurandhar 2016)

Low Income, Low Access (LILA)

This USDA defines food security as "access by all people at all times to enough food for an active, healthy life" (USDA ERS[1] 2022). This is clearly parallel to the internationally accepted definition of food security. The USDA, however, diverges when it comes to defining access. Whereas the international definition of food access relates to the contextualized rights to all resources necessary to obtain and utilize food, the USDA simply defines access as proximity to an appropriate retailer.

Originally referred to as food deserts, the USDA Economic Research Service (ERS) publishes data for Low-Income, Low-Access (LILA) census tracts. LILA tracts are cross-referenced based on criteria for low- income (LI) and criteria for low-access (LA) tracts to identify areas of highest needs for food security interventions (USDA ERS[2] 2022).

The parameters below are taken directly from the USDA ERS Food Access Research Atlas supporting documentation:

Low Income

The criteria for identifying a census tract as low income are from the Department of Treasury's New Markets Tax Credit (NMTC) program. This program defines a low- income census tract as any tract where:

- *The tract's poverty rate is 20 percent or greater; or*
- *The tract's median family income is less than or equal to 80 percent of the State- wide median family income; or*
- *The tract is in a metropolitan area and has a median family income less than or equal to 80 percent of the metropolitan area's median family income.*

Low Access

In the Food Access Research Atlas, low access to healthy food is defined [by

the USDA] as being far from a supermarket, supercenter, or large grocery store. A census tract is considered to have low access if a significant number or share of individuals in the tract is far from a supermarket. Three measures of food access based on distance to a supermarket are provided in the Atlas:

1) *Low-income census tracts where a significant number (at least 500 people) or share (at least 33 percent) of the population is greater than one-half mile from the nearest supermarket, supercenter, or large grocery store for an urban area or greater than 10 miles for a rural area. Using this measure, an estimated 53.6 million people, or 17.4 percent of the U.S. population, live in tracts that are low- income and low access and are more than one-half mile or 10 miles from the nearest supermarket.*

2) *Low-income census tracts where a significant number (at least 500 people) or share (at least 33 percent) of the population is greater than 1 mile from the nearest supermarket, supercenter, or large grocery store for an urban area or greater than 10 miles for a rural area. This measure shows that an estimated 18.8 million people, or 6.1 percent of the U.S. population, live in low-income and low access tracts and are more than 1 mile or 10 miles from a supermarket.*

3) *Low-income census tracts where a significant number (at least 500 people) or share (at least 33 percent) of the population is greater than 1 mile from the nearest supermarket, supercenter, or large grocery store for an urban area or greater than 20 miles for a rural area. Under this measure, an estimated 17.1 million people, or 5.6 percent of the U.S. population, live in low-income and low access tracts and are more than 1 mile or 20 miles from a supermarket.*

A fourth and slightly more complex measure incorporates vehicle access directly into the measure, delineating low-income tracts where a significant number of households are located far from a supermarket and do not have access to a vehicle. This measure also includes census tracts with populations that are so remote, that even with a vehicle, driving to a supermarket may be considered a burden because of the great distance.

4) *Under this measure, a tract is considered low access if at least 100 households are more than one-half mile from the nearest supermarket and have no access to a vehicle; or at least 500 people or 33 percent of the population live more than 20 miles from the nearest supermarket, regardless of vehicle access…*

It is important for later discussion to note that in this data set "a census tract is considered rural if the population-weighted centroid of that tract is in an area with a population of less than 2,500; all other tracts are considered urban." (USDA ERS[1] 2022). We utilize LA measures 2) and 4) for the study. If a tract qualifies under either definition, it is included in the calculations.

Some researchers encountered throughout the study expressed concern with the LA metric. This is because to be recognized as a legitimate source of groceries a store must a) be a "brick-and-mortar grocery" operation, meaning it must have a permanent physical location, b) gross over $2 million per year, and c) contain all the major food departments including fresh meat, dairy, dry and packaged foods, and frozen foods. This criterion excludes many establishments where people may obtain groceries such as independent grocery operations that don't gross over $2 million annually, farm-stands and farmers markets that do not have a permanent location, producer coops that frequently operate through delivery or pick-up, and butchers which do not carry all grocery options. "Healthy corner stores," which are a type of targeted food access intervention are themselves also excluded in this metric. In other words, the reality of access measured by this standard alone may be better (or worse) than is represented in current ERS data.

Similar concerns have been raised about the LI metrics. Even though the ERS uses a Relative Poverty Measure (RPM) when comparing the overall census tract median incomes as a percent of the state or metropolitan median income, they still use the Official Poverty Measures to calculate poverty rates. The United States Official Poverty Measures (OPM) are calculated nationally and are based on relatively static (absolute) calculations from the 1960's that are only adjusted for inflation over time. An article provided on the Census Bureau's own website from 1995 calls for updates to the OPM and states that the OPM "was originally set for 1963 [and]… it no longer represents a current estimate of the cost of the food budget." They go on saying that this "becomes increasingly problematic as living standards change over time" (Constance & Michaels 1995).

The LI tracts in the data are determined both by relative measures of income, represented as a percentage of the regional median income, and by OPM-T poverty rates calculated using the static OPM threshold. There is an approximate $11k difference between a localized, dynamic Texas RPM calculated at the international standard as 50% of the state median income and the baseline national static OPM for a three-person household (the state average household size).

Despite these flaws, these measures have been extremely helpful to researchers and policymakers and have been very impactful for residents living in these areas. These measures have inspired and enabled a multitude of food access interventions and programming over the years.

Marginalization

Because the term is used in many ways and has different connotations to different groups, and also because it comes up frequently in certain sections of this report, it is essential to clarify the use of the term in this context.

Marginalization - treatment of a person, group, or concept as insignificant or peripheral

(Oxford Languages 2022)

When marginalization is discussed here, it refers to neither a single nor homogenous group, but a layered and complex issue within American history and social science. A person may experience degrees of marginalization for a variety of reasons and at varying levels of intensity. Most notable in American history are race, class, gender, sexual orientation, disability, and age. An individual may experience one or all of these in combination, and each layer of marginalization experienced by an individual or group can change depending on the present circumstance of the individual.

Specifically, this report refers to marginalization from (or peripheral to) the locus of power in a variety of contexts; social, cultural, legal, political, and economic. This use of the term can help us understand the nuance of layered contexts when discussing rural & urban disparities, class disparities, racial-ethnic disparities, gender disparities, and disparities of physical, mental, and age-related disability. Most people face some type of marginalization, usually based on some type of conscious or unconscious prejudice, from rural discrimination to class discrimination to racial discrimination, etc. Some people, however, face multiple compounding types of marginalization simultaneously; these people are the most likely to encounter food access challenges. The circumstance and history of varying types and layerings of marginalization is often the hallmark of what makes certain populations "vulnerable" or "at-risk."

Price-Distance

Price-distance measures the gap between the cost of travelling further for affordable healthy food versus buying food that is more expensive and/or of lower quality but closer to home. This is used to capture how elements such as time-distance, street-distance, and cost of transportation can interact to alter food choices and shopping patterns. This is particularly important for concepts of material-poverty, time-poverty, food deserts, food swamps, and food mirages as they relate to food access.

"As the distance to a food retailer rises, the total cost in terms of transportation and lost time rises also. [In food swamps] the neighborhood small food retailer or fast food outlet is likely to offer high-priced, low-

nutrition foods, but the overall "price" is the same or lower than that offered by a distant supermarket that involves public transportation and a significant commitment of time..."

(LeClair & Aksan 2014)

One study on various distance measures found that:

"... [the] cost-distance method is the most computationally intensive… However, our results found that cost-distance provided more conservative estimates of low and high-access areas... Cost-Distance analysis is limited to relative comparisons as opposed to providing absolute distances.

(Nori-Sarma et al 2022)

Shelter-Poverty

"Michael Stone of the University of Massachusetts Boston coined the term 'shelter-poverty' to describe the condition of people who are forced to cut back on basic needs because of the cost of housing" (US HUD n.d.). Shelter-poverty is synonymous with the term rent-burdened as used by the Department of Housing and Urban Development (HUD) with the advantage that shelter-poverty is more general and can include non-renters.

"Evidence shows that people spending more on housing spend less on education, health care and on pensions, insurance, and savings. This imposes greater strains on the health care system, reduces workforce productivity, increases reliance on social security payments, and leaves more households vulnerable to even temporary disruptions in income."

(Belsky, Goodman, & Drew 2005)

Street-Distance

The measure of the real distance required to travel to the store. Street-distance metrics are a response to the inaccuracy of Euclidean-distance as a food access metric to describe consumer experience of the food system.

"The service area [or street-distance] method, which we consider to be more accurate because it takes into consideration pedestrian footpaths and nonlinear transportation routes, [but] is more computationally intensive and

requires either specialized software and/or access to data that is not freely accessible to all researchers."

(Nori-Sarma et al 2022)

Time-Distance

The measure of time required to travel to the store. Time-distance is a response to the inadequacy of Euclidean-distance and street-distance to explain consumer experience of the food system. The miles one must travel to the store are not experienced equally i.e., 20 miles in a rural setting may only take 15 minutes to travel, whereas 1 mile in an urban setting may take the same amount of travel time.

"...integrating travel time and public transit options into research on food access reveals both a broader set of options available to potentially food insecure populations but that these options [may] require a greater expenditure of time… long travel times over transit could be an additional barrier imposed upon low-income residents who lack access to a car and who may have multiple jobs and caregiving responsibilities."

(Swayne & Lowry 2021)

Time-Poverty

Researchers Giurge, Whilans, & West define time-poverty as "the amount of discretionary time, such as time available for personal care, market work, household work, child and adult care" (Giurge et al. 2020). Individuals experiencing time-poverty may not have enough time nor energy to shop, cook, and eat nutritious food which impacts health and well-being. Giurge et al show that, not only has time- poverty gotten worse in wealthier nations, but that the intense focus on the alleviation of material- poverty may be a driver of the phenomenon:

"Over the last two decades, global wealth has risen. Yet material affluence has not translated into time affluence... Time poverty is linked to lower well-being, physical health, and productivity... Billions of dollars are spent each year to alleviate material poverty, while time poverty is often ignored or exacerbated…

(Giurge et al. 2020)

Researchers Kenhove and De Wulf have identified four grocery-shopping consumer types relating to the "time pressure" that they are experiencing:

1. *'money-poor, time-rich',*
2. *'money-poor, time-poor',*
3. *'money-rich, time-rich'*
4. *'money-rich, time-poor'*

In their study they found that "significant differences existed between these [four] segments in several demographic, behavioral and attitudinal characteristics" (Kenhove & De Wulf 2000). For example:

> *... Low-income workers' experience of time poverty is often driven by working multiple jobs with unpredictable work schedules that make it difficult to manage family responsibilities. High-income workers have greater control over when and where they work and feel time poor because they need to conform to the 'ideal worker' norm of overtime. Yet, high-income workers can pay for childcare or take vacation. Thus, time poverty might be more detrimental for low-income workers who are unable to pay their way out of such constraints"*
>
> *(Giurge et al 2020)*

Main Underpinnings of Food Insecurity

The USDA Economic Research Service (ERS) Food Access Research Atlas data shows that 48% of Texas census tracts are considered low-income (USDA ERS[3] 2022). Feeding Texas indicates that 1 in 8 Texans overall and 1 in 5 (20%) Texas children are facing the threat of hunger in 2020 (Gonzalez 2022) The Center on Budget Policy Priorities reported that in 1 in 9 (12%) of Texas residents needed help buying food from the Supplemental Nutrition Assistance Program (SNAP) in 2021.

Historically marginalized populations are impacted disproportionately, with data showing that while 1 in 4 (25%) Black Texans and 1 in 5 (20%) Latino Texans faced the threat of hunger, only 1 in 14 (7%) of White Texans faced the same threat (Gonzalez 2022). The Center on Budget and Policy Priorities shows that in 2021 almost 79% of SNAP participants in Texas were in families with children, and more than 27% are in families with members who are older adults or are disabled (Center on Budget and Policy Priorities 2022). SNAP use in 2016 was higher in rural areas with 1 in 7 (14%) rural Texas households and 1 in 6 (17%) small-town Texas households benefitting from SNAP compared to 13% of urban Texas households.

The causes of these food security concerns go deeper than surface level, and the rest of this section is dedicated to investigating potential choke points that can be leveraged to increase food access throughout Texas.

Income

Affordability, mentioned by nearly all interviewees and confirmed by two thirds of the preliminary respondents in our phone-based survey of Texans, is a major barrier to food security. According to the interviewees, income related factors such as wage disparity, inflation, cost of living, cost of housing, cost of healthcare, cost of food, and gentrification all impact the affordability of food. For example, location selection of various types of stores, *affordability of transit* to a store (proximity), and food industry stability are directly associated with income related factors, such as neighborhood stability (personal housing and food stability and industry stability) and prejudicial influences (interruptions in economic development and prohibitions on lending/sales).

Income disparities can affect each of the tenants of food security, and thereby threaten food access both directly and indirectly. Without sufficient income, it is difficult to afford adequate and stable housing, access to transportation, and quality and quantity of food. It can make it more challenging to access clean water, maintain sanitary conditions, and keep proper health to utilize food. Many of these factors can compound as permanent addresses, cell phones, access to transportation, and proper sanitation are prerequisites to finding work to sustain an income.

Time-poverty is also included in this section because time-poverty is essentially an invisible form of material-poverty as it primarily occurs as a result of the total efforts required to obtain sufficient material affluence (see time-poverty definition). If one had more expendable income either via higher wages or via a lower cost of living (that still ensures safety and sufficient quality of life) or both, then time-poverty would not be a concern. Time-poverty can severely impact psychological & physical health, productivity, and the ability to utilize resources.

Some have pointed to wages as a source of inflation. However, Erroll Schweizer, former V.P. of Austin based Whole Foods wrote an article in Forbes saying, "there is little evidence of labor dynamics causing inflation." The article goes on to state that:

> *"75% of middle-income families have seen their wage growth fall behind inflation and 71% are cutting back on spending…* ***Over 60% of Americans are living paycheck to paycheck*** *and 1 in 10 households are struggling to feed their families, while millions more are buying less meat, produce and alcohol...*
>
> *... Meanwhile, the average* ***CEO to worker pay ratio was 324 to 1, up 23% from 2019, or nearly twice the rate of inflation.*** *CEO earnings grew 18%, 4 times the rate of wage growth…*
>
> *... Companies have 3 choices when they receive cost increases. They can absorb and take a hit on their margins. They can pass through and share the pain with customers. Or they can put an additional mark-up above and beyond the rate of cost increase, padding their margins at the expense of customers. Up and down the value chain,* ***this profit-driven model is responsible for over 50% of consumer price inflation.*** *And without profit inflation, price increases would be tracking more closely with wage growth."*
>
> *(Schweizer 2022)*

Texas Low Income, Low Access (LILA) Data

What is the income situation in Texas?

According to the data behind the 2019 ERS Food Access Research Atlas, 2503 (48%) out of the total 5238 Texas census tracts are considered low-income (LI). These LI tracts were 84% urban and 16% rural. This means that approximately 11.4 million (45%) of Texans are living in low-income areas.

An estimated 4 million Texans (16%) are impoverished (below the federal poverty line), of which 3.3 million (82%) live in urban tracts and 700,000 (17%) live in rural tracts. The poverty rates within these groups are comparable to the state poverty rate (16%) at approximately 17% for urban tracts and approximately 14% for rural tracts.

Many programs and researchers determine high priority areas via LILA criteria, but some arguments presented suggest LI alone is a better indicator of low access than proximity. According to county level research for 2016, Texas "follows a national trend of higher [SNAP] participation rates in rural and small-town counties compared to urban" (Lewis 2017, Food Research and Action Center 2017). According to them, "1 in 7 (14%) rural [Texas] households and 1 in 6 (17%) small-town [Texas] households benefit from SNAP compared to 13% of urban [Texas] households. They also noted that "more than 80% of SNAP families had at least one working adult in the past 12 months" (Food Research and Action Center 2017).

Investigations during the course of this study into the ERS Food Research Atlas data for Texas showed that LILA criteria only captured approximately 45% of the urban poor and 25% of the rural poor, and only 42% of the total approximated population in poverty. LI alone captures 75% of the urban poor, accounts for 72% of the total population in poverty, but still only 54% of the rural poor. This means that LILA targeted programs do not account for over half (55%) of the estimated total Texas population experiencing poverty, and they exclude 75% of the rural poor even though they require assistance at higher rates. Although the LI-alone metrics increase the overall target audience for interventions, they still do not account for nearly half (46%) of the rural poor. LILA interventions do, however, theoretically target populations experiencing the compounding issues of insufficient expendable income AND proximity to quality foods. The later portion of this concern is addressed in the next section.

Proximity

The second most common category of concern in interviews was proximity. Most of the studies that were reviewed discuss proximity issues *as a physical measure of distance to the store*. However, professionals interviewed in this study suggest that proximity is not only the physical distance to a store, but also the different experience of distances traveled by residents or the ability to receive deliveries from a store. This finding is supported by calls for improved distance research in the literature for metrics that go above and beyond the Euclidean-distances (measured distances) typically used. This can include the actual distance needed to travel to the grocery store (street-distance), length of time to travel to the grocery store (time-distance), cost of travelling to the grocery store (price-distance), and delivery ranges and costs (service area). It must also include considerations to what types of food are measured in those distances. Food in proximity must be adequately affordable, diverse, and appropriate (price-distance) to be utilizable. Failure to take the types and affordability of food into account can result in food access getting worse in some areas, which is the case with food swamps and food mirages.

Grocery Stores

What is preventing grocery stores from locating in areas of need?

Interviews were held with several grocery retailers around the state of Texas to learn more about why incentives may not be working. Jessie Barber also learned from rural grocers across the nation at the Rural Grocery Summit, held by the Kansas Rural Grocery Initiative in June 2021. The main take away was that, despite any assistance provided to cover start-up costs of a grocery store in a low-income area, the cost of operations can be prohibitive from maintaining a full-service grocery store long-term.

The **main prohibitive cost listed among the urban grocers and chain grocers we spoke with was refrigeration**, followed by costs associated with feasibility studies, finding a suitable location, and the development or leasing of the store structure itself. Only one store we interviewed mentioned costs relating to wages for employees. The majority of hesitation comes from the notion that the high cost of finding a location, developing a store, and installing expensive refrigeration would not pay off with the low margins of profitability associated with the grocery industry.

Most of the representatives at these grocery stores expressed deep concern for food security and food access. Some stores even had entire offices dedicated to food access, but ultimately if a store is not profitable, it cannot be sustained by a private company. For-profit companies cannot reasonably be expected to continually operate a store at a loss. **Because of the low margins of profitability in the grocery industry, stores must make up the difference with volume of sales.** This dependency on volume to make a profit is the primary reason cited by many grocers for not wanting to risk developing a store in a low-income area even when incentives are offered. Whether justified or not, grocers often fear that the purchasing power to drive volume sales is not present.

Research from the University of California on grocery store interventions in food deserts across the nation between 2000-2016 supports the unease of grocers to take the incentives. The study revealed that 43% of commercial-driven, 26% of government-driven, and 43% of blended community-&-government-driven grocery interventions failed to remain open once established (Brinkley et al 2018). It is understandable with these odds why grocers are hesitant; a nearly 50/50 chance of failure is a gamble. And while a 74% chance of success seems encouraging with government-driven projects, the inverse 26% chance of failure still feels high when you are investing millions of dollars in the project.

Rural grocers spoken with also lamented the prohibitive costs of refrigeration for start-up. However, rural grocers were generally more concerned about food sourcing costs and distribution disruptions. This difference in focus could be because interviews were primarily held with rural grocers that were already in operation, as well as the fact that majority of them were local, independently owned operations not interested in expanding into new locations. Instead, these independent grocers were largely focused on how to stay open and maintain services within

their communities. Rural stores also tend to be smaller with less initial overhead but also with lower populations to cover volume of purchasing. Their fears were more central to losing their own livelihoods and that their communities would face food insecurity without their services. Due to the often remote locations of rural stores, many operators reported distributors dropping them from the distribution route and/or charging very high delivery premiums which impact the quantity, quality, diversity, and affordability of food in their stores.

The rural grocer scenario as described to us:

> *Even if residents prefer to buy from the local grocer, and it is inconvenient and expensive to travel long distances for groceries, it may be more cost-effective to drive 50 miles to the nearest large retailer. This may lead those who have the resources to travel the necessary distance to do their main shopping at a large retailer once or twice per month and to buy a few items at the local grocer only when needed. According to grocers this starts a negative feedback loop. Fewer local shoppers equate to smaller orders from the distributor and less diversity of products purchased. Smaller orders result in higher delivery costs from suppliers and therefore higher food costs at the store. Less diversity of products and higher food costs results in less shoppers and so on.*

One of the biggest concerns is that lower-income families may not have access to the resources to travel these longer distances to get cheaper groceries, thus local poverty and food insecurity are exasperated by higher prices and the threat of reduced availability.

Efforts to source from local producers were a common discussion among rural grocers to both reduce costs and increase quality & diversity of food offerings. However, like others working with small to medium-sized farmers, it was reported that dealing with so many farmers individually can become burdensome.

Mentioned several times during the professional interviews in both rural and urban areas was the issue of **long-term leases for stores that have failed** after opening and stores that failed to open in the first place. **These long-term leases prevent other stores from opening in the area even if they are interested in (and capable of) doing so.** This can leave a community worse off than before the intervention was attempted.

Transportation Issues

What aspects of proximity are determinants of food access?

Rather than physical distance, the main determinants of adequate proximity to a store are frequently related to the experience of mobility and costs. One family in a rural area living 20 miles from a store may have access to a working vehicle and not have any difficulty obtaining groceries. Another family living 2 miles from a store may have no access to a vehicle,

insufficient public transit, and be comprised of family members that are physically disabled. In this scenario, one family is far from a store by some standards and another family is nearly next door. Yet, the one living closest to the store is the one experiencing the highest mobility related concerns.

It is not enough to be in proximity to sufficient calories, especially if those calories are unaffordable and/or devoid of nutrition. The term food mirage brings into focus communities that have sufficient market access, but still lack sufficient food access due to affordability concerns. It may not seem like it at first, but this is a proximity issue because the foods that are nearby are not affordable and additional travel to an appropriate source of groceries is still necessary.

On the other hand, food swamps point to those areas that have market access to an abundance of low-quality foods at a better price-distance than more distant nutritious and appropriate foods. Both scenarios represent circumstances when sufficient market access is present, but inadequate household food access persists. These areas can be indicative of underestimated purchasing power in low-income communities and are ripe with opportunities for food access-oriented grocery interventions (see Grocery-Oriented Interventions: Coops & NGO's)

Both scenarios also represent circumstances that can lead to invisible hunger where obesity rates are higher, but nutritional deficits and internal hunger are still present as a result of overall food insecurity. This is also part of the reason some researchers have argued in favor of LI-alone food access measures over LILA food access measures.

Physical mobility challenges denote the physical inability to cook or shop for food for reasons related to disability, age (old & young), or illness. **In these circumstances, interventions can primarily focus on delivery as means to alleviate availability concerns**. Sufficient resources for caregiving and structural accommodations in infrastructure also have substantial effects on food access for individuals experiencing physical mobility challenges. Structural accommodations are largely covered by Americans with Disabilities Act regulations and did not come up as a primary concern during the study.

Transportation mobility challenges are more commonly discussed in relationship to food access proximity concerns. These include considerations of transit distances, times, and costs. If the cost of travel is prohibitive, then a store is out of reach regardless of the physical distance. This may involve the cost of fuel for personal vehicles (price-distance), the cost of public transportation (price-distance), and/or the cost and availability of delivery options (service area/price-distance). What some consider a normal distance can also be made unreachable due to time poverty – if the cost of living is so high it drives households into working several jobs to keep pace.

Stability

Other interviewees listed supply chain stability and climate-related stability as primary concerns. On this matter the Texas comptroller says, "severe weather and natural disasters have long posed risks to our food supply, and – more recently – the COVID-19 pandemic… have increased this essential sector's vulnerability" (Texas Comptroller 2021).

Supply Chain Disruptions

Concerns for the supply chain were exacerbated by the COVID-19 pandemic and encompassed the experiences of seeing less food on the shelves at the grocery store, hoarding of certain goods by consumers, difficulty finding sourcing for certain programs, and an extreme uptick in public assistance program use by program administrators. As the study proceeded, the war in Ukraine added additional pressure to these concerns.

> *"The specialty crop sector — consisting primarily of fruits and vegetables — was among the hardest hit in Texas. Demand for these highly perishable crops decreased overall with the closure of* ***schools and restaurants****. Demand remained strong, however, at grocery stores, and many producers had to adapt to different packaging requirements and changes in volume demanded….*
>
> *…In some cases, empty grocery shelves were not due to product shortages but to product packaging. For example,* ***when schools closed****, the demand for milk in small, single-serving containers virtually disappeared; a corresponding growth in demand for quarts and gallons of milk in grocery stores led to some temporary shortages as dairy processors switched their packaging operations accordingly.*
>
> *(Texas Comptroller 2021)*

It is unclear, however, whether these disruptions to demand and packaging were related to schools within or without Texas borders. A memo released by the USDA Food and Nutrition Service indicates that localized distribution to schools was associated with an increased resilience during these disruptions:

> *School food authorities and State agencies with strong Farm to School practices already in place were better able to adapt to [supply chain] disruptions [related to the COVID-19 pandemic]…*
>
> *(USDA FNS 2022)*

Climate

The U.S. Drought Monitor (USDM 2022), which is monitored by the U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), currently shows that 74% of Texas is experiencing abnormally dry conditions, 52% of the state is experiencing moderate drought, and 29% of the state is experiencing severe drought. A further 9.2% of Texas is experiencing extreme drought in which "dust and sandstorms occur… Row and forage crops fail to germinate," and there are "decreased yields even for irrigated crops." Exceptional drought is impacting 1.4% of the state in which "exceptional and widespread crop loss is reported, rangeland is dead, and producers are not planting fields." (USDM 2022). The same tool informs us that this year was the 10th driest year on record in the last 128 years. As a result, 245 Texas counties currently hold USDA disaster designations and 7.4 million Texans, or 25% of the state population, are affected by drought (USDM 2022).

Climate instability is strongly associated with soil loss, poor water quality, droughts, floods, hurricanes, fires, and migration. Climate instability was mentioned mostly by operations in or near Houston or the southern border of Texas and by agricultural specialists. The public assistance administrators discussed climate in relation to climate-related migrants like those from hurricanes Katrina (incoming migrants) and Harvey (outgoing migrants). From the agricultural perspective, concerns were expressed regarding droughts, drying up of artisanal wells, water use restrictions, fire threats, and dangerous conditions for farm workers. Nevertheless, some interviewees indicated that farmers also had some issues with flooding and water quality. This seeming paradox is because droughts can change soil structure which reduces absorption rates and because as plant roots become scarcer so do the pathways for water to penetrate deeper into the soil. This leads to more soil runoff and more pooling of water.

According to a 2021 report from the Office of the Texas State Climatologist at Texas A&M:

> *The average annual Texas surface temperature in 2036 is expected to be 3.0 °F warmer than the 1950-1999 average and 1.8 °F warmer than the 1991-2020 average.* ***The number of 100-degree days at typical stations is expected to nearly double by 2036 compared to 2001-2020****… Meanwhile, extreme monthly wintertime temperatures are expected to continue to increase at an even faster rate, and the coolest days of the summer are expected to continue becoming warmer…*
>
> *…****Extreme precipitation is expected to increase in intensity*** *on average statewide by 6%-10% relative to 1950-1999 and 2%-3% relative to 2001-2020. This translates to an increase in the frequency of extreme rain of 30%-50% relative to the climatological expected frequency in 1950-1999 and 10%-15% relative to 2001-2020…*

*... **Drought will continue to be driven largely by multidecadal precipitation variability**, with long-term precipitation trends expected to be relatively small.*

These are factors that the Department of Defense (DoD), Department of Homeland Security (DHS), and the USDA have begun to take seriously in recent years, with the DoD declaring climate instability to be a threat to national security (US DoD 2022). DoD and DHS have both put forward plans to increase their focus on adaptation, resiliency, and supply chains to overcome this threat. The USDA also announced an increased focus on planning for climate adaptation (USDA 2021). The DHS report states that climate instability is a "threat multiplier," citing "a mix of direct and indirect threats including risks to the economy, heightened political volatility, human displacement, and new venues of geopolitical competition." They go on to say, "To adapt, focused solutions are needed. Investing in action now saves lives, conserves resources, and provides long-term cost savings" (US DHS 2021).

The major concerns do not stop at agricultural, supply chain, and geopolitical threats. The Texas Medical Association expressed serious concern for pressures that climate related illnesses will put on the Texas public healthcare system, which can create substantial costs in the state budget. On the matter, they explain that rises in instances in the need for treatment have already begun for respiratory ailments, heat-related illness, vector borne diseases, water quality related illness, and other food-related illness (Price 2020).

Ad Hoc Food System

Throughout the course of the interview process, it became clear that the piecemeal nature of the Texas food system has far reaching impacts on the economy, environment, health, and food security of the state. These issues are not atypical and exclusive to Texas. Most states in the United States have a piecemeal food system built through the independent, individualistic, and enterprising nature of development, city establishment, and the formation and reformation of state lines. As a result, most states have disconnected operations and issues with distribution. However, it seems evident that we have reached a point in Texas history where coordinated efforts and collaboration are required to maximize the potential of resources at our disposal, strengthen the local economy, and reduce the incidence of hunger throughout the state.

Disconnected Operations

Many issues we encountered in interviews with various organizations were complimentary to the resources available to other organizations we interviewed. It was noted frequently that one organization was inadvertently holding the keys to another organization's success, but they were unaware of each other's complimentary goals, resources, and concerns. For example:

1. Certain grocers have an interest in expanding delivery reach further for low-access markets and even possibly into rural markets where it is not feasible for them to build a profitable physical store.
2. Several Texas foodbanks have acquired and operate small fleets of refrigerated semi-trucks and do semi-regular deliveries to some of these same areas but are struggling with the capacity to do so as frequently as they would like.
3. USDA Rural Development has already established community food drop-off sites to consolidate food delivery pickups for some of their programs in at-risk communities but can struggle to find regular suppliers.

There is currently no mechanism by which these groups can easily learn about and communicate with one another on collaborative efforts. If such a mechanism were in place, perhaps semi-regular rural delivery loops could be established where a single refrigerated truck could pick up scheduled deliveries from a grocer as well as food bank items for distribution and make a loop through multiple USDA rural grocery drop-off sites over the span of a week or more. This could feasibly be accomplished without requiring significant increases in budget for any one group. Further it would increase profits for participating grocers, increase access for rural communities, reduce the costs of programming & delivery for each participating organization (as well as consumers), and help each of them to accomplish their goals more effectively (and efficiently). More will be discussed on this topic in the Systems Orientation portion of the Proposed Interventions section of this report.

Distribution Issues

Distribution was listed as the major choke point for many retail and education-oriented strategies. Grocers, corner stores, and public feeding programs (such as school meal programs) all reported an interest in and challenges with sourcing from local (state) producers. Some regional grocers are large enough to handle local sourcing internally with a separate department, but smaller stores do not have this capacity and many larger stores do not have the interest. School procurement operations often have the same limitations. One historical solution throughout Texas history is our strong presence of agricultural cooperatives. These have been used to meet a variety of challenges, including aggregated selling and distribution among smaller farms.

One agricultural specialist observed that “the current model [of commerce] favors farmers who can export,” and asked the essential question “who’s responsibility is it to make sure people have access to food?” Right now, they said, it seems like “the onus is on the consumer to get access to their own food” and “as a farmer if you want to make your food available locally it is on you to do that.” Furthermore, changes in zoning laws may make it difficult for urban farmers to operate and distribute their goods locally.

The Food Policy Council of San Antonio has a very successful healthy corner store program, while other attempts at similar programs throughout Texas have not fared as well. They attribute their success to their facilitation of aggregated purchasing among participating stores across the city and to distribution of the goods among themselves with fewer deliveries (Food Policy Council of San Antonio[1] 2022). Like concerns faced by the rural grocers, this speaks to the **essential nature of distribution in systemic planning around strengthening the Texas food system and increasing the success of smaller Texas businesses**.

Proposed Interventions

The proposed solutions listed here are collected from our professional interviews. They follow a related but not identical thread to the Main Concerns that were identified in the previous section. We have organized these various intervention orientations from the most common and generally familiar approaches requiring less descriptive prose to less common and possibly unfamiliar approaches requiring more descriptive prose.

Income-Oriented Interventions

Low-income families in 2019 spent approximately 36% of their income on food. This is a significantly higher percentage of income spent on food than families in higher income brackets (USDA ERS[4] 2020). Income oriented solutions tend to focus mostly on improving affordability of food. The goal is to allow people's total income to go further and help balance other necessities, such as safe living conditions, housing, transportation, medical care, and education, all of which are strongly associated with improved food access.

There are already many programs out there that serve to keep people afloat, fed, and housed. Examples include the USDA Food & Nutrition Service's (FNS) Supplemental Nutrition Assistance Program (SNAP) and their Women, Infants, and Children (WIC) specific programming. The United States Department of Housing and Urban Development (HUD) has programs like section 8 and rental assistance. The United States Department of Health and Human Services (HHS) provides Medicaid, Medicare, the Children's Health Insurance Program (CHIP), and Temporary Assistance for Needy Families (TANF), while the Social Security Administration (SSA) provides Social Security & Disability. The Texas Department of Agriculture provides grants for increasing the capacity of food banks and home delivered meal programs as well as administers many child and adult feeding programs.

This study does not focus on critical analysis of these programs because a) there are already many researchers and professionals that focus on monitoring and improving these programs and b) it is beyond the capacity of the study to analyze any of these programs. Suffice to say these programs exist to help millions of people in poverty survive and to help them out of poverty. This goal serves to strengthen the middle class and thereby strengthen the overall economy, stability, and quality of life for a given region of focus.

> *The presence of a strong and prosperous middle class supports healthy economies and societies. Through their consumption, investment in education, health, and housing, their support for good quality public services, their intolerance of corruption, and their trust in others and in democratic institutions, they are the very foundations of inclusive growth.*

(OECD 2019).

There was some consistency in feedback from interviewees regarding user experience and local access. First, professionals encouraged the expansion of online and delivery options for SNAP & WIC. Specifically, they expressed a desire for more stores, and especially smaller local stores, to be permitted to accept online SNAP & WIC purchases and for allowing these benefits to be used for delivery fees. These interventions could be particularly beneficial when populations are experiencing time-poverty, mobility challenges, and/or proximity issues. We did learn however, that the user experience for many of these programs has been challenging and difficult to navigate, even for the professionals that work in the field.

Living Wage

The current minimum wage in Texas is $7.25/hr, or $15,080/yr. According to an MIT study, the living wage in Texas in 2021 was $16.41/hr or $34,133/yr for a single adult (Glasmeier 2022). Given that the average household size in Texas is three persons (U.S. Census Bureau 2022), one can assume that a household is typically comprised of two adults and one child. The living wage each adult needs to make in this circumstance according to the MIT calculations would be $17.44/hr, or $36,275/yr (MIT n.d.). According to the supporting documentation for the study:

> *"The living wage model is a 'step up' from poverty as measured by the poverty thresholds but it is a small 'step up', one that accounts for only the basic needs of a family…. The living wage is the basic income standard that, if met, draws a very fine line between the financial independence of the working poor and the need to seek out public assistance or suffer consistent and severe housing and food insecurity."*
>
> *(Glasmeier 2022)*

There are many arguments for and against wage increases, and it is a very energized and politicized topic. The researchers are not economists and do not offer an opinion as to the long-term effectiveness or impact of wage increases as an overall strategy. The important take-away here is that there are significant gaps that need to be addressed between what researchers calculate to be a living wage in Texas, the wages that Texans are actually receiving, and many of the poverty thresholds that determine eligibility for assistance programs.

Housing Affordability and Access

Housing is the number one expense for low-income families aside from food. According to HUD's Hud User magazine, **HUD considers low-income households paying more than 30% of their income for housing to be cost-burdened where they "may have difficulty affording necessities such as food, clothing, transportation, and medical care."** Severe cost-burden is defined as paying more than 50% of one's income on rent (US HUD n.d.).

For example, the median rent in Texas in 2020 was $1080/mo (U.S. Census Bureau 2022). If we go by the MIT living wage of $36,275 for a family of two adults and one child, the Texas median rental cost uses 36% of their annual income. According to the TX-RPM, rent would use 41% of annual income, and for OPM-G, it would use 60% of annual income. For a single parent working full time for minimum wage, median rent would use 86% of their annual income.

One can clearly see how low-income Texans are facing the duality of challenges that include shelter- poverty and food insecurity. They are also more prone to volatility of housing markets. In 2021, 28% of all housing purchases in Texas were by investors, not families. In some areas of Texas this number is over 50% (National Association of Realtors 2022).

As a result, low-income Texans with barriers to purchasing their own home pay mortgages and profits for landlords instead of building wealth and a way out of poverty for themselves and their families. These investor-centric markets also make it more difficult for low-income, marginalized, and first-time buyers to purchase a home because they are competing with buyers that already have significant resources at their disposal (National Association of Realtors 2022). Support for low-income & marginalized families to purchase homes could help to stabilize struggling communities and reduce the cost of housing drastically (see Reinvestment Fund Appendices). A reduction in housing costs can greatly decrease the amount of public assistance needed by families by increasing their expendable income for food and other necessities.

The Reinvestment Fund has two relevant reports to this effect. Some of their recommendations include lender advocates, assistance programs, improved industry training standards, government insured credit, and including home purchasing education in high school curriculum. They also outline recommendations for neighborhood stabilization such as site rehabilitation for vacant homes, land banks, emergency bridge loans, and programs to ensure aspiring private homeowners get priority over investors for home purchasing. More detailed information can be found in the Reinvestment Fund Appendices at the end of this document.

Tax Freezes

Gentrification is another term we encountered frequently throughout the study that brings up controversy. How can the development and improvement of neighborhoods be reconciled without pricing out long-term residents and effectively exporting poverty instead of alleviating

it? One suggestion was **tax-freezes for long-term residents either statically by simply locking in the price at a point in history or dynamically by freezing increases based on household income.**

Grocery-Oriented Interventions

An undercurrent for successful grocery store interventions revolves around the need to involve the community to be served in the planning process. This community investment and attentiveness to community needs beyond food access seem to be the primary factor for success and failure. This was true for urban and rural success stories in interviews and in the literature.

Other key factors seem to be collaborative support from government and access to sufficient financing to overcome start-up costs. Lastly, and just as essential as community input in planning, is ensuring sufficient opportunity for volume sales. This is perhaps part of why community input works; it allows a store to better meet the needs of the community and thereby ensure regular customers. Cooperatives are able to accomplish this through community-ownership and benefits sharing. Therefore, they are able to maintain ongoing community interest, input, and loyalty.

Coops and NGOs

Coops are THE most successful grocery intervention type that has been encountered during this study and present a huge opportunity as both a grocery store-oriented intervention and an agency-oriented intervention (Brinkley et al. 2018, Molk 2014). They **meet community needs more successfully, reduce the need for regulation from government agencies, unionizing, and anti-trust oversight, and are shown to be more resilient (and profitable) business models during economic shocks like COVID-19** (Molk 2014, Billiet et al 2021, USDA RD[1] 2022).

The most important and prescient fact to know about cooperatives is that historically they have primarily arisen as a response to adversity (Reese 2019). When communities are shut out from necessary resources, cooperatives are one strategy for them to band together and provide those resources for themselves. As one cooperative specialist we spoke with stated, many cooperatives are created when people are angry at the conditions cutting them off from needed resources. The USDA Rural Development website describes cooperatives as:

> *"a world-class business development tool for creating robust, sustainable communities. Organized to meet the economic needs of its member-owners, a cooperative is a particularly resilient business form. It* ***embodies the concept of self-help: members use the cooperative, own it, and control it.***

Cooperatives are essential to the U.S. economy, especially in… communities where they often fill market gaps."

(USDA RD² 2022)

Texas has a rich history of agricultural cooperatives for this very reason. Small and mid-sized farmers had to band together over time to stay in business by pooling resources for purchasing large processing equipment to compete with large industrial style farms and markets. For examples, one need not look any further than the Texas Agricultural Cooperative Council (TACC) which was created in 1934.

Many who are familiar with cooperative grocers outside of the agricultural sector may only be familiar with high-end grocery cooperatives associated with middle-class and upper-class clientele. Food access cooperatives, however, are a different breed. By focusing on increasing food accessibility to the community and increasing community agency over local resources, food access coops play an important role in helping certain communities overcome food insecurity.

The same UCA study that found high rates of failure among commercially driven, government-driven, and blended community-&-government-driven grocery store interventions showed that **100% of community-driven and non-profit-driven grocery store interventions succeeded. The community-driven interventions resulted in 89% cooperatively managed stores**, 5.5% non-profit managed stores and 5.5% local retailers. The non-profit-driven interventions resulted in 9% cooperatively managed stores, 25% non-profit managed stores, 17% local retail stores, 17% regional retail stores, and 33% national retail stores.

Below are some key factors outlining exactly how and why cooperative models are able to accomplish this if their goals remain focused on community food access. The three main principles for cooperative businesses are outlined by the USDA in their guide, "Co-ops 101":

The User-Benefits Principle: *Members unite in a cooperative to get services otherwise not available, to get quality supplies at the right time, to have access to markets or for other mutually beneficial reasons. Acting together gives members the advantage of economies of size and bargaining power. They benefit from having these services available, in proportion to the use they make of them. Members also benefit by sharing the earnings on business conducted on a cooperative basis.*

The User-Owner Principle: *The people who use a cooperative own it. As they own the assets, the members have the obligation to provide financing in accordance with use to keep the cooperative in business and permit it to grow.*

The User-Control Principle: *Only members can vote to elect directors and to approve proposed major legal and structural changes to the organization. The member-users select leaders and have the authority to make sure the*

cooperative provides the services they want. This keeps the cooperative focused on serving the members, rather than earning profits for outside investors or other objectives.

(Frederick 1997)

Additional practices considered important to the function of cooperatives according to the same USDA "Co-ops 101" guide are:

The Patronage Refund System: *After the fiscal year is over, a cooperative computes its earnings on business conducted on a cooperative basis. Those earnings are returned to the patrons — as cash and/or equity allocations — on the basis of how much business each patron did with the cooperative during the year. These distributions are called patronage refunds.*

Limited Return on Equity Capital: *Limiting returns on equity supports the principle of distributing benefits proportional to use. It also discourages outsiders from trying to wrest control of a cooperative from its members and operate it as a profit-generating concern for the benefit of stockholders.*

Cooperation Among Cooperatives: *Many cooperatives, especially local associations, are too small to gather the resources needed to provide all the services their members want. By working with other cooperatives—through federated cooperatives, joint ventures, marketing agencies in common, and informal networks— they pool personnel and other assets to provide such services and programs on a collaborative basis at lower cost.*

(Frederick 1997)

Cooperatives in general have the capacity to serve similar community resilience functions in most industries we have found related to food access: housing cooperatives, distribution cooperatives, retail cooperatives, and producer cooperatives.

"their member-centered mission and their self-help values, democracy and solidarity, might prove vital in the local and global sustainability of the challenges our societies are facing. In this vein, ***policymakers are recommended to create a conducive institutional, legal, and administrative ecosystem for cooperatives****."*

(Billiet al 2021)

For specific policy recommendations see Cooperative Policy Recommendations Appendix.

Corner Stores

The Food Policy Council of San Antonio (FPCSA) has a successful city-wide corner store program in place. Beginning in 2018 with a grant and the intention to start two pilot stores to test the feasibility of the project, it now has 30 participating stores and plans to expand to 50 by 2026. While other similar programs have not fared as well, FPSCA attributes much of the success of their program to assistance with aggregated sourcing and distribution to help keep the cost of food down.

> *"The program provides display options like shelving and fridges to stores, reduces their wholesale cost of produce from distributors, and markets the program to potential customers. Through these strategies, a sustainable sales model for affordable produce emerges in long-standing food deserts"*
>
> *(Food Policy Council of San Antonio[1] 2022)*

Another impressive healthy corner store program beyond the Texas border is Kanbe's Markets in Kansas City, Missouri. **Kanbe's Markets is a private business that supplies fresh foods to corner stores in low-income neighborhoods.** Initial awareness of this business came from one of the federal funding organizations we interviewed who expressed strong admiration for Kanbe's business model, success, and impact. Unfortunately, we did not have the opportunity to speak with anyone from the company.

According to their, website Kanbe's Markets started in 2017 by servicing a single store with fresh foods on consignment. In 2020 they started the year with 12 stores, and now they are servicing 43 healthy corner stores around Kansas City, Missouri, impacting the lives of over 250,000 residents (Kanbe's Markets 2022).

The model as described in their educational resources is to **provide produce coolers to independent corner stores free of cost and to sell fresh healthy foods out of the store on consignment.** This means no risk to the store owner, and the only cost for them is some floor space. Kanbe's Markets sources the produce from local farmers and wholesalers, restocks the coolers regularly at no fee, and returns unused produce to farmers as compost. This is essentially a private model that acts as its own purchasing aggregation and distribution assistance program much like the San Antonio Food Policy Council.

Small and Rural Grocers

Whether large or small, chain or independent, rural or urban - community input has been shown to be essential to the success of a grocery intervention. In the University of California Study, projects that were driven by community interests directly or by NGO's representing community interests were the only ones with high success rates (Brinkley et al 2018).

One small town chain grocer, encountered at the Rural Grocery Summit, had high success in areas where other small grocers were failing. After buying out failed smaller grocery locations in rural areas, the company would revitalize the stores with community involvement in the decision-making process from the beginning. The community was involved in the store layout, food choices, remodeling, and even color selection for painting. Employees were hired before opening to assist with many of these tasks, engendering personal ownership and accomplishment in the store workforce. This fostered community buy-in and a sense of community ownership even though the store was investor-owned. The company now owns a dozen of these type stores across a rural region of the Midwest and has plans to continue expanding.

The Kansas Rural Grocery Initiative (KRGI), a research project housed in the Kansas State Extension, recommend that rural groceries **keep costs down by partnering with other small businesses in the area**. Some successful case studies they presented involved local grocers, mechanics, florists, etc., which were all failing (or not) on their own, pooling resources to afford a single lease and single utility bill. This practice can also increase traffic, because a person coming in for one type of service may stop and spend money on another. Though not required in all circumstances, it may be advantageous for such a partnership to be a profit-sharing partnership so that complimentary seasonal profit cycles can ensure more reliable business. Grocery stores already tend to be anchor points for community services like banks and drug stores, so leveraging this benefit to keep many smaller businesses afloat can be a lifeline for rural economies.

If other interventions fail, the KRGI offers suggestions for municipal partnerships.

Municipal Partnerships

Sometimes, when other options are off the table, communities have elected to vote for municipal ownership or partnership of a local grocer rather than lose it. Food as a utility is not a new concept, and municipalities can work it into their budget the same as water, trash, and other municipal services. In other circumstances, it may be beneficial to have a municipal partnership to help start a grocer in an area. Municipalities have access to different funding sources than private or cooperative stores do. Some areas have empty government buildings that could be refurbished and leased at a lower cost to the new store operator. Additionally, according to several grant writers we have spoken with, collaborative projects among various organizations have a higher chance of getting funded in the first place. Sometimes, municipal funding for a local feasibility study is enough of an investment to give an entrepreneur the boost they need to get started. The full list of municipal partnership suggestions from KRGI can be found in the How Cities Can Get Involved Appendix.

Dollar Store Restrictions

Dollar stores have been presented as both a main cause and potential intervention for food access issues. Some professionals are of the opinion that while not an ideal solution, dollar stores already exist in many LILA areas and therefore should be leveraged to increase food access. Others state that dollar stores are only solving a problem they create by driving away other options.

A major concern that was mentioned several times is the "false affordability" in dollar stores. A gallon of milk may seem cheaper than the nearest grocer, but the quantity in the jug is deceptively less than you would get elsewhere, leaving low-income families paying more than they would otherwise per unit. For this reason and other debates about the effects of dollar stores, this study gives more attention to other food access interventions.

Grocery Access Intervention Tool

A flow chart has been developed to assist local legislators, municipal leaders, and interested community members in determining potential best practices given a variety of circumstances. These suggestions were arrived at through the integration of all interviews and literature found. This tool focuses on grocery store interventions specifically because this study was originally intended to increase the presence of successful grocery store and market-access interventions in areas of need. Similar tools could be developed regarding several of the other intervention orientations contained in this report, but time and resources do not permit the development of all of them at this time. (See Appendix: Grocery Access Intervention Tool)

Education-Oriented Interventions

In addition to addressing issues related to proximity to and affordability of healthy food, several respondents suggest that targeted, appropriate efforts to improve adequacy and acceptability of food can also help improve food access. These education-oriented interventions can help improve familiarity of accessible and available foods. In other words, education may help reconcile how procurement and preparation of food can be done in ways that do not compromise the *dignity, self-respect, or basic human rights of eater or producer*, and allows food choices in line with moral, religious, ethical, and cultural values (Rocha 2007 and Chappell 2018).

Familiarity

Once food is present, affordable, and appropriate, familiarity is king. If people are distressed, they reach for "comfort foods" and foods for which they have nostalgia. Those experiencing distress sometimes do not have the energy to learn new recipes, learn how to utilize unfamiliar produce, or prepare even simple meals. This means we must consider how to ensure an ongoing familiarity with culturally appropriate, locally sourced, and nutritious foods.

One way to encourage this familiarity is to **include local healthy foods in schools**. The Texas Department of Agriculture already encourages this at a statewide level through its Farm Fresh Program, but additional inroads could be made at the local level. This is perhaps one of the single best options for building resilient food economies and familiarity, because **schools have a steady demand for large amounts of food. Connecting farmers to that demand can have immediate cyclical influence on local economies.** The presence of these foods in schools increases familiarity for children, but it can also increase familiarity for other members of the household through what some call "kidfluence." This is the same phenomena that drives the high occurrence of child-eye-level candy and toys in checkout lines. Introducing healthy foods to kids at an affordable price can potentially "kidfluence" the entire family into being more familiar with local healthy foods. According to the FNS, the introduction of local healthy foods into schools also has the benefit of building more familiarity and resiliency within the operation of local food systems long-term.

> *The agricultural education opportunities for participating children [in Farm to School programs] also contribute to agricultural supply chain resiliency because such opportunities* ***build a stronger consumer base and demand for agricultural products as well as increase interest in supporting or even becoming an agricultural producer*** *in the future.*
>
> *(USDA FNS 2022)*

Other forms of familiarity education are cooking and nutrition education, of which there are already many great programs available through schools, after school programs, and community programming. These efforts could best be supported by a Texas Food Systems Office (see Systems-Oriented Interventions: Texas Food Systems Office) that could facilitate more efficiency in programming through communication and collaborative efforts with like-minded groups.

In his book "Beginning to End Hunger," food access scholar MJ Chappell, discusses many of the efforts of a city in Brazil to reduce hunger to zero. In the city of Belo Horizonte, he describes strategies similar to the ones found in this report. One idea from the book that was not brought up by participants in our study is the idea for at-cost public kitchens. These are **public dining areas, much like a restaurant, where food is sold on a sliding scale,** with the lowest-income patrons paying nothing, middle-income patrons paying at cost, and wealthier patrons paying

more**.** The program was widely used by patrons of all income levels and provided **increased access to and familiarity with healthy, locally sourced, ready-made foods.** This is especially good for those experiencing various types of time-poverty, material-poverty, or shelter-poverty who may not have time nor space to prepare foods. When they do gain the necessary resources to shop and prepare foods on their own, they will have familiarity with those foods, how they are prepared, and perhaps even a nostalgia for them.

Adoption Costs

An adoption cost is a common economic concept that represents the cost of switching habits or behaviors. Strategies that address these costs such as specials, targeted advertising, and recipe cards comprised of available ingredients should be built into business plans in areas where new stores are created to assist the public in changing their behaviors. This can seem obvious from experiences at major retailers where this is normalized, but it can be easily overlooked by smaller operations just starting out.

Adoption costs can also be included, as Molk suggests (see Coop Policy Appendix), in the adoption by the public of a new and less familiar business strategy when starting a business or joining a cooperative. In both cases, adoption costs should be covered in the support for new projects and could be **included as part of the overall strategies of a Texas Food System Office.**

Resilience-Oriented Interventions

As discussed in the Main Underpinnings of Food Security: Stability section, there are a variety of circumstances that threaten the stability of a Texas food system. These range from global pandemics and wars to severe droughts and fires to hurricanes and floods. Below are some approaches to maximize resiliency and stability through an agroecology lens.

As an agroecology research lab, UTRGV Agroecology sees opportunities to strengthen resilience in the Texas food system through an agroecological framework. Agroecology provides a good guideline from which to develop resilience-oriented solutions, and the researchers have used this framework to form the following three recommendations in this section. A quick overview of the Food and Agriculture Organization's (FAO) 10 Elements to Agroecology will suffice for this purpose to lay the groundwork for discussing related solutions.

The following 10 Elements emanated from the FAO regional seminars on agroecology:

> ***Common characteristics, foundational practices, and innovation approaches:***

*1. **Diversity –** Diversification (and biodiversity) is key to agroecological transitions to ensure food security and nutrition while conserving, protecting and enhancing natural resources*

*2. **Synergies -** Building synergies [in production systems and socio-economic systems] enhances key functions across food systems, supporting production and multiple ecosystem services… To promote synergies within the wider food system, and best manage trade-offs, agroecology emphasizes the importance of partnerships, cooperation and responsible governance, involving different actors at multiple scales.*

*3. **Efficiency** - Innovative agroecological practices produce more using less external resources. Agroecology thus promotes agricultural systems with the necessary biological, socio-economic and institutional diversity and alignment in time and space to support greater efficiency….*

*4. **Resilience -** Enhanced resilience of people, communities and ecosystems is key to sustainable food and agricultural systems… [and] they have a greater capacity to recover from disturbances including extreme weather…*

*5. **Recycling -** More recycling means agricultural production with lower economic and environmental costs. By imitating natural ecosystems, agroecological practices support biological processes that drive the recycling of nutrients, biomass and water within production systems, thereby increasing resource use efficiency and minimizing waste and pollution.*

*6. **Co-Creation and Sharing of Knowledge** - Agricultural innovations respond better to local challenges when they are co-created through participatory processes.*

Context features:

*7. **Human and social values -** Protecting and improving rural livelihoods, equity and social well-being is essential for sustainable food and agricultural systems…. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems…*

*8. **Culture and Food Traditions** - By supporting healthy, diversified and culturally appropriate diets, agroecology contributes to food security and nutrition while maintaining the health of ecosystems…*

Enabling environment:

9. ***Responsible Governance*** *- Transparent, accountable, and inclusive governance mechanisms are necessary [at different scales] to create an enabling environment that supports producers to transform their systems… Agroecology depends on equitable access to land and natural resources… in providing incentives for the long-term investments that are necessary to protect soil, biodiversity and ecosystem services.*

10. ***Circular and Solidarity Economy*** *- Agroecology seeks to reconnect producers and consumers through a circular and [inclusive] solidarity economy that prioritizes local markets and supports local economic development by creating virtuous cycles… [and] promote fair solutions based on local needs, resources and capacities, creating more equitable and sustainable markets.*

The 10 Elements of Agroecology are interlinked and interdependent (Food and Agriculture Organization 2020).

Farmer Centered Monitoring

Agroecology Principles: 2, 6, 7, 9 (Indirectly 1, 3, 5)

Farmers are the ones whose livelihoods most directly rely on Texas natural resources. They are in the fields every day monitoring local water levels and quality and paying attention to changes in soil and climate. When studies are performed alongside farmers, they can often accurately tell researchers by intuition what will be found in the research. It is still important provide measurable evidence of phenomena to prove or disprove this intuition, and they are usually excited to participate in and benefit from findings.

It only makes sense that **farmers be acknowledged as the experts in climate, soil, and water monitoring that they are and be positioned to work alongside researchers and policy makers.**

This practice assists in placing power firmly in the hands of farmers and allows policy and legislation effecting their livelihoods to be driven by them. It also helps to leverage their voices and increases their agency while centering the discussion on Texas' economy.

In the long-term, the field of **agroecology believes this will bring better water protections, diversification of cropping and cultivation methods, and lateral dissemination of local techniques that work in local conditions.** This is especially true in concert with the recommendation for a Texas Food Systems Office to help facilitate communication and dissemination of information across the food system.

De-Centralized Food Habitats

Agroecology Principles: 1, 2, 3, 5 (Indirectly 8)

Food forests were brought up as a multi-pronged solution by the Food Policy Council of San Antonio during our interview process. They have a pilot site in collaboration with the City of San Antonio where they are implementing public food forests into a park in a flood plain as a flood mitigation, temperature regulation, nutrition supplementation, and economic development strategy (Food Policy Council of San Antonio[2] 2022).

To learn more, we contacted an Agroforestry specialist to discuss the potential of community food forests to address hunger. They confirmed that trees provide a myriad of ecological services that are good for human health and the local ecology. They also confirmed that trees increase public engagement with areas like libraries and parks, but whether they would help to alleviate hunger is a different story. They suggested that, at best, food forests provide supplemental nutrition, and if managed properly, they can provide some surplus foods to local food banks and other forms of community distribution. However, a single food forest of a few acres is not likely to feed a significant population by itself.

An academic article found on the USDA Forest Service website states:

> *"The Urban and community forest paradigm has shifted from focus on beautification to one that encompasses all of the environmental, conservation, economic, and social benefits of community trees…*
>
> *…Collectively, urban trees in the contiguous U.S. account for nearly one-quarter of the nation's total tree canopy cover – some 74.4 billion trees (Dwyer et al 200). The annual total impact of urban forestry related sales in California was $3.8 billion, while the state's commercial forest products had sales of $12.5 billion (Templeton and Goldman 1996)…*
>
> ***…Investing in urban greening is one of the most important things we can do for the future of natural resource conservation. If a new conservation ethic is to emerge, it will come forth… as the product of encounters with nature where people live"***
>
> *(McPherson 2006).*

According to the Environmental Protection Agency (EPA) "trees and other plants help cool the environment, making vegetation a simple and effective way to reduce urban heat islands (US EPA 2022)." Other benefits listed by the EPA are:

> ***Reduced energy use:*** *Trees and vegetation that directly shade buildings decrease demand for air conditioning.*

***Improved air quality**: By reducing energy demand, trees and vegetation decrease the production of associated air pollution... They also remove air pollutants and store and sequester carbon dioxide.*

***Enhanced stormwater management and water quality**: Vegetation reduces runoff and improves water quality by absorbing and filtering rainwater.*

***Reduced pavement maintenance**: Tree shade can slow deterioration of street pavement, decreasing the amount of maintenance needed.*

***Improved quality of life**: Trees and vegetation provide aesthetic value, habitat for many species, and can reduce noise.*

(US EPA 2022)

One new, albeit controversial theory, even suggests that **forests may be a primary driver of precipitation and not just a result of it** (Pearce 2020), indicating that more trees could mean more water. In terms of air quality, the USDA says, "one large tree can provide a day's supply of oxygen for up to four people…," and in one year, a mature tree will absorb more than 48 pounds of carbon from the atmosphere (Stancil 2019). As that carbon is captured, it is stored long-term as biomass for future use as fuel, compost, or building and craft materials.

Fast growing **trees can help restore soil health in damaged areas** via a process called phyto-remediation. Trees can also prevent flooding, improve water quality, and recharge aquifers by increasing infiltration rates. **Deep tree roots can also reduce runoff and wind erosion by holding soil in place** when used on hillsides, stream slopes, or as a field buffer on farms.

Perhaps one day we will see private agroforestry companies harvesting goods on public and urban landscapes as a multi-layered land use strategy. For now, many of these benefits could generated by:

- **Requiring that *X*% of new developments are landscaped with native perennials.** This would reduce the amount of habitat devastation caused by development and in some circumstances work to increase the amount of total habitat in a region that has already been developed and is being re-developed.
- **By incentivizing, via taxes or other methods, landowners on already developed land to incorporate a similar *X*% on existing properties.** This can help re-establish habitat where habitat devastation has already occurred.
- Encouraging municipalities to **include native edible landscaping on government properties and public parks** can also improve public opinion, experience, and engagement with those spaces. This has been seen with various public food forest projects around the country adjacent to libraries and in existing public park areas (Bukowski & Munsell 2019).

This would not be an major additional development cost, as developers already include landscaping into project design and implementation. And it would not be a great cost increase when applied to government properties where landscaping changes are already planned because typical maintenance costs are already factored into their budgets. Some non-profit public assistance programs already exist as a model to help homeowners incorporate trees onto their properties such as Tree Folks Neighbor Woods program in Austin. Their model could be adapted include to edible natives and for developing a tool by which other municipalities partner together and collaborate to create their own programs. Several federal organizations such as United States Fish & Wildlife (USFW) also have regular tree nurseries and annual tree plantings across the state. They could also, hypothetically, be brought into the fold for their expertise and shared mission.

This requirement or incentive for including "edible" native perennials creates a "**habitat" for humans and can provide supplemental nutrition, thus reducing pressure on public assistance programs and state public health budgets.** It can also help to encourage landowners that may otherwise prevent renters from growing their own food to permit certain types of food producing plants on the property. And finally, it provides an additional stream of revenue for participating farmers and nurseries providing the plants to landscapers and landowners.

Localization

Agroecology Principles: 2, 3, 4, 7, 10

Studies ranging from the 1940's to 2011 show that small-scale business orientation within communities is a predictor of community health and well-being, as well as levels of civic engagement. According to researchers, this is due to the stronger bonds and trust that are cultivated in such communities, as well as the presence of a stronger middle class and entrepreneurial spirit. This is true of both agricultural and small-scale business networks where the community works to support itself (Lyson et al 2001).

> *...communities in **agriculturally dependent counties with a civically engaged populace, in which a high percentage of persons work for themselves and operate small independent businesses, tend to have higher levels of welfare…***
>
> *...For policy makers, the implications are clear. Communities must work to enhance civic life and **make the political process accessible to everyone**. Also, organizations (e.g., credit unions, community investment banks) and programs (e.g., micro lending) which foster **small-scale self-employment should be nurtured.** The key is to promote a healthy number and mix of social and economic balancing institutions. Such institutions are conducive to the development of a civically-minded middle class.*

(Lyson, Torres, & Welsh 2001)

A 2014 report from the Institute for Local Self-Reliance on North Dakota's pharmacy industry provides an interesting case study showing the research in action. In North Dakota, one cannot own and operate a pharmacy without being a pharmacist. This simple rule means that there are no chain pharmacies in the state. According to the report "North Dakota's rural census tracts have 51 percent more pharmacies than South Dakota's do" (Mitchell & Lavecchia 2014), and these small-scale, independently owned business networks provide stronger service where "the average prescription price in North Dakota is not only lower but has increased much more slowly over the last five years" (Mitchell & Lavecchia 2014).

Recently, the resilience of various capacities of our supply chains has been tested during the COVID pandemic. A memo from the USDA Food and Nutrition Service also indicates that areas with more localized food production and purchasing were better able to weather the economic and supply chain shocks.

> *The importance of the Farm to School infrastructure to supply chain resiliency became evident during the supply chain disruptions related to the COVID-19 pandemic. School food authorities and State* ***agencies with strong Farm to School practices already in place were better able to adapt to the disruptions****.*

(USDA FNS 2022)

Small-scale and independent ownership are not the best option for all industries at all times. For example, airplane manufacturing ought to remain a large central operation. Nevertheless, when and where it is appropriate, building local food webs, where shocks can be absorbed, generates a more resilient long-term approach than highly specialized and distant chains, where any link can become the weakest.

Systems-Oriented Interventions

Crossing boundaries and addressing all primary food systems issues is the idea of a central Texas Food Systems Office. Such an office could help to aggregate information into a single location for ease of access and application for individuals seeking assistance, entrepreneurs seeking financing & partnership, as well as municipalities seeking the resources available to them. Ideally, such an office could also facilitate communication and collaboration across sectors, ensuring the maximum efficacy and reach of existing programs. Such an office could be quintessential to addressing many of the communication breakdowns across the industry from farmers looking for markets, markets looking for local foods, buying power among smaller groups, access to and knowledge of existing funding, and agricultural resource monitoring. Perhaps most importantly, such an office could ensure that the Texas food system remains resilient and stable in the face of shocks like the global pandemic, the war in Ukraine, and

climate disasters by making sure that someone has a pulse on what is happening and how to connect the matching pieces together.

Texas Food Systems Office

The Gulf of Mexico Alliance (GOMA) is a model initiated by three Texas politicians: George Bush as President of the United States, Jeb Bush as Governor of Florida, and Rick Perry as Governor of Texas alongside Bob Riley as Governor of Alabama, Kathleen Blanco as Governor of Louisiana, and Haley Barbour as Governor of Mississippi (Wondolleck & Yaffee 2017). It is a strategy that retains full autonomy for its member states and is empowered by the deferment and support of the federal government. Resources and information are shared so that collaborative efforts can enhance ecological and economic outcomes for the Gulf of Mexico. GOMA enjoys the support of government, NGO, academic, and economic stakeholders in all 5 states.

Many of the systemic concerns in the Texas food system could benefit from a similar coordinating office. This is a proven model of coordination that could serve to strengthen Texas from within through a low-cost structure by utilizing volunteer membership of municipal leadership throughout Texas to create a forum for collaboration, resource sharing, and a central clearinghouse for research and programming information aggregation, as well as consolidated applications. The office could facilitate communication among its members and coordinate various programming throughout the Texas food system to streamline and strengthen pre-existing programming and resources with minimal additional investment.

Initial functions and goals to organize around are proposed as such:

1. **Distribution** – Connecting markets to farmers including connecting schools, local retailers, and distributors to local producers. Aggregated buying support for small retailers. Collaborative efforts to expand rural delivery loops. Development opportunities for equitable private distribution companies like Kanbe's Markets. All of this can help to build more localized and therefore more resilient food markets.
2. **Information/Application Aggregation** – Make simple clearinghouse interfaces for public assistance programs, farmer and distribution support programs, municipal and collaboration opportunities for retail development, and food access cooperative businesses development information and resources. Develop streamlined and consolidated single applications for multiple programs.
3. **Facilitated Communication & Collaboration** – Build communications and information network of city, county, state, federal, NGO, and for-profit programs operating in and relating to the Texas food system. Potentially organize a regular Food Systems Summit to slingshot communication across programming and collaborative efforts for common goals.

4. **Resource Monitoring** – Build aggregated data base for environmental, soil & water information and put farmers at the forefront of the conversation. Calculate and monitor a TX-RPM to better represent the experiences of Texans in local policy discussions. Collect and monitor a measure of the percent of income spent on housing via consolidated applications process for federal and state benefits.
5. **Community Empowerment & Texas Resiliency** – Staying focused on community empowerment & resiliency as a central tenant of this office helps to ensure these qualities stay central to the Texas Food System and that programs bring increased agency to those they serve.

Distribution

Because distribution challenges were such large and common concerns across many food access intervention strategies, a separate section relating only to distribution is warranted. It was tempting to create a section for Distribution Orientation, but ultimately it was decided that distribution fits better nested as a subsection of the broader Systems Orientation Programs.

Connecting local producers to market opportunities could greatly strengthen the Texas food system because, as we have seen with Farm to School programs**, strong localized supply chains increase the adaptive capacity of communities when dealing with shocks like those we have seen with the COVID-19 pandemic** (USDA FNS 2022). Schools, smaller grocers, and cooperatives have all expressed an interest in more local food purchasing during our interviews. Many of them, however, struggle with the coordination efforts of purchasing from many separate farmers. **Having an intermediary to connect these market opportunities with producers for steady local supplies would greatly impact farmer livelihoods, food availability, local food familiarity, and the resilience of the local food system.**

Corner stores could benefit more from **purchasing aggregation clubs and coordination of training for the participants** of such a buying club. For rural stores and consumers, distribution through a systems orientation could look like collaboration and coordination of **sharing delivery costs** among private delivery purchases, food bank deliveries, and grocer purchases, combined with designated drop-off locations like those established in the USDA Rural Development programs**.**

These efforts can be accomplished through the **development of a tool to be disseminated** on an information clearinghouse web page, through the **development of localized cooperatives**, or through **conscientious private solutions** such as we see with Kanbe's Markets.

Additional recommendations included **caps on delivery fees, subsidies to help cover the cost of deliveries, and the development of cooperative delivery services** owned by the community themselves. A cooperative delivery service that has generated substantial interest thanks their

ability to help small businesses and communities during the pandemic was brought to our attention by an interviewee. Simply called Delivery Co-op, this business been able to expand the service area of many restaurants and grocers while reducing the normal fees associated with delivery and simultaneously increasing the wages for employees (Delivery Coop 2022).

When a set of rural stores in North Dakota were cut off from distributor routes, they created a distribution cooperative among themselves. The stores purchase together, distribute among themselves, and pooled their resources to build food lockers in distant communities to expand their service area. These **food lockers are refrigerated and allow the customer to** gather their groceries when it is convenient.

Interventions such as these could become the expertise of a Texas Food Systems Office as part of the larger coordinated strategy to address various systemic concerns within the food system in a site-specific way.

Agency-Oriented Interventions

Put simply, agency-oriented solutions require explicit consent and inclusion of the communities in which interventions are taking place.

"Agency" as defined by Rocha and Chappelle encompasses the keys to all other aspects of food security and food access. Chappelle lists the definition of Agency as:

> *"**Agency:** the requirement that citizens are empowered in defining and securing their own food security, and thus that there are competent sociopolitical systems wherein policies and practices may be brought forth by the will of the citizens and reflected in governance to enable the achievement of overall food security. This includes access to accurate information, the right to such information and to other aspects of food security, and the ability to secure such rights"*

This perspective holds that a community in charge of their own resources will build systems that include "dignity, self-respect, or basic human rights of eater [and] producer, and allow food choices in line with moral, religious, ethical, and cultural values."

Ashante Reese explains this phenomenon in her work through a community self-reliance framework and examination of historical case studies in black communities throughout Washington D.C. She shows that in times of adversity, when resources were cut off from the community due to prejudicial policies and social norms, the community would frequently come together to help each other find access and collective bargaining power (Reese 2019). This is the same motivation driving the development of many rural agricultural cooperatives to keep rural economies going.

Many interviewees mentioned prejudice and/or paternalism as playing a prominent role in the creation of conditions causing food insecurity. The history of prejudice, in many circumstances, has literally shaped neighborhoods as they developed. Circumstances such as the abandonment of rural and urban low-income communities by commerce groups, development surrounding redlined districts, and the location of hazardous industries near low-income populations can leave long-lasting legacies even after the policies have been changed. This is evidenced by the higher rates of poverty, food insecurity, and food deserts in marginalized communities even after laws like the Fair Housing Act, Equal Pay Act, and Civil Rights Act have long been in effect.

Even if a policy is not directly restricting of a person's or a group's autonomy, coercive and indirect practices can limit the feasibility of other options and thereby make it seem like a choice was made by that person or group. Many times, this is not intentional and the person or groups implementing the paternalistic practice may have the best of intentions at heart. However, the community knows themselves and their needs the best and are frequently excluded as the target of intervention and not the progenitor of their own solutions. The problem lies in the lack of clear and available mechanisms to consult and include the populations themselves in the decision-making process.

This has turned many organizations and program administrators interviewed toward an increased focus on the "relevance" and "appropriateness" of their programs for their target audience. The only real way to assure this is through the inclusion of members of the target community into the design process for interventions. This has been reported as extremely effective to increasing the success of interventions by those in our study as well as in the literature.

Agency-oriented strategies are an approach that can be applied to the design and management of any other type of intervention. Instead of the common approach of addressing the missing resources within a marginalized community, an agency-oriented perspective presumes that a community is experiencing disparity because of a lack of agency and addresses that fact first. Thus, these interventions are intended to build empowerment and capacity for communities to own and make decisions about their own resources and to have the authority to carry out their own solutions. This could very well mean a community chooses to invite third parties to carry out research on their behalf, consult on best practices, or to manage various community resources. However, a subtle difference is that this would be the community inviting groups into the fold to help themselves make informed decisions rather than having outsiders impose an agenda assumed to be best without community input.

Because communities know what their own needs are, these types of approaches are more likely to solve a multitude of food access solutions and to avoid unnecessary solutions that do not help as much as outsiders assume they will. Given the opportunity, a community is more likely to choose solutions that are culturally appropriate, provide dignity for themselves, ensure stable affordable access, and perhaps even call into focus some of the non-food input needs that may not be readily visible by outsiders. This requires a collaborative role for local governments that facilitate and legitimize community power.

The above details are the foundation of why cooperatives are such a resilient business model that is beneficial to marginalized populations and require less outside regulation (Molk 2013). This was already explored in more detail in the Grocery-Oriented Interventions section of this report.

The study has identified three main approaches to develop circumstances in which agency can thrive. They are Community Governance Theory (CGT), Ostrom's Principles for Common-Pool Resource Governance (CPRG), and the International Cooperative Alliance's (ICA) Cooperative Principles.

Community Governance Theory

Economists and behavioral scientists Samuel Bowles and Herb Gintis outline the necessary conditions for successful community governance projects via their community governance theory. In this theory, they propose four goals for policies to achieve the most successful community-oriented strategies. The authors of the report have added a fifth supporting goal to help alleviate some of the pitfalls they describe in their 2002 article "Social Capital and Community Governance." These five conditions are:

1. "The community should own the fruits of their successes or failures" equally among members.

2. The group must be empowered to uphold mutual monitoring and punishment and it must be built into the structure of social interactions.
3. A legal and governmental environment must be favorable to their functioning with agency.

4. An active internal advocacy of ethics of equal treatment and enforcement of anti-discrimination policies must be present.

5. The regular presence of celebrations, ceremonies, and other practices that reaffirm an inclusive community identity to prevent internal group fracturing

   (Bowles & Gintis 2002).

Interventions that seek to maximize community agency then will ideally uphold and facilitate these conditions for their growth and success. Bowles and Gintis are careful to point out that this is not a "hands off" approach and that a laissez faire approach can be not only counterproductive, but also harmful to the success of such a project. Instead, they are adamant that these processes are most successful when nested inside a cooperative and facilitative political structure that supports and empowers them.

Ostrom's Principles

Similar in scope and practice are Nobel Prize winning economist Elinor Ostrom's 8 principles for common-pool resource governance (Ostrom 2015) . She studied groups all over the world that have accomplished successful and sustainable common-pool resource (CPR) management to meet their own economic and material needs. She determined eight primary conditions that determine the success of these groups. These 8 principles are:

1. ***Clearly defined boundaries:*** *Individuals or households who have rights to withdraw resource unites from the CPR must be clearly defined, as must the boundaries of the CPR itself.*

2. ***Congruence between appropriation and provision rules and local conditions:*** *Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions and to provision rules requiring labor, material, and/or money.*

3. ***Collective-choice arrangements:*** *Most individuals affected by the operational rules can participate in modifying the operational rules*

4. ***Monitoring:*** *Monitors, who actively audit CPR conditions and appropriator behavior, are accountable to the appropriators or are the appropriators.*

5. ***Graduated sanctions:*** *Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, by officials accountable to the appropriators, or by both*

6. ***Conflict resolutions mechanisms:*** *Appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials.*

7. ***Minimum recognition of right to organize:*** *The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.*

For CPRs that are parts of larger systems:

8. ***Nested enterprises****: Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.*

One thing to note is that there overlap between successful CGT conditions originating from behavioral science and Ostrom's observations of successful CPR conditions originating from economics.

International Cooperative Principles

Very similar to CGT and CPR are the 7 cooperative principles accepted by the International Cooperative Alliance in 1995:

1. ***Voluntary and open membership:*** *Create a culture of inclusivity and respect within your membership.*
2. ***Democratic member control:*** *For a democratic structure to work successfully, your co-op needs to focus on communication and engagement.*
3. ***Members' economic participation:*** *Economic contributions from individuals are considered membership shares, which go directly towards financing the co-op and benefitting the members. Your cooperative should require limited participation from all members indiscriminately, and in return, grant them the right to vote.*
4. ***Autonomy and independence:*** *Members of cooperatives are the deciding forces behind new policies and decisions. They should be able to run their cooperative without the influences of wider government policy or other organizations. However, your co-op should also engage with government and businesses. To maintain independence, ensure your co-op is creating relationships with boundaries and speaking with a single, unified voice.*
5. ***Education, training, and information:*** *Each individual should have a proficient understanding of co-operative identity, the seven principles and values.*
6. ***Cooperation among cooperatives:*** *All organizations should practice openness and transparency in all business matters, and the general memberships should approve all strategies. All organizations should also practice representing each co-op's collective interests, flexibility, and willingness to compromise in working towards a mutual benefit.*
7. ***Concern for community:*** *By maintaining a focus on spreading information and educating others [on a variety of topics], co-ops can help create a better community.*

(International Cooperative Alliance 1995)

Recommendations

Though many interesting and feasible proposals are available as detailed above, this list narrows down the official recommendations according to solutions that meet the following criteria: have the farthest-reaching impacts for the least inputs, have relatively low or no costs to implement, work to alleviate multiple concerns simultaneously, and have minimal political overtones.

1. **Agency Orientation** – Keeping an agency orientation in mind while designing other interventions helps to keep Texans at the heart of conversations and in control of their own lives. It also helps to reduce instances of and alleviate issues related to "outsider-savior" perspectives. Below are some examples of how an agency orientation was utilized to consider other recommendations on this list.
    a. **Coop Support** – Community owned and controlled resources. See Appendix on Cooperative Policy Recommendations.
    b. **GOMA model** – A non-authoritative collaboration model that could be replicated to increase efficiency and efficacy of all parts of the Texas food system. This is the model used in developing the idea of a Texas Food Systems Office.
2. **Texas Food Systems Office** – Potentially the most influential action this report recommends is the development of a new Texas Food Systems Office to help coordinate and facilitate cooperation among food access industry professionals and program administrators to maximize the reach and efficacy of pre-existing resources.
3. **Housing:** Affordability, stability, and inclusivity in the housing market help to ensure that Texans can afford to survive shocks like inflation, COVID, the war in Ukraine, and climate instability. Access to home purchasing is also one of the primary ways Americans use to develop generational wealth and so this may also be an avenue to help reduce and eliminate poverty conditions in some areas. See Appendices from the Reinvestment Fund on Housing.
4. **Human Habitat** – Incorporating native edible perennials reduces water usage, increases water infiltration, improves water and air quality, regulates temperatures and precipitation, restores lost ecological and habitat services, and creates supplemental nutrition for people. This program would also cost very little by utilizing tax incentives for existing landowners and non-compliance penalties for new development to offset market adoption costs.
5. **Education** – There are already many educational food access programs in existence. Many of the issues surrounding this intervention orientation could be addressed via facilitated communication among these various pre-existing programs (see Food Systems Office: Facilitated Communication and Collaboration). Exceptions to this are recommendations for inclusion within the public educational system directly:
    a. **Incorporation of Healthy Local Foods** into schools increases familiarity with foods and strengthens the resiliency of local markets (see Texas Food System Office:

Distribution). Familiarity is essential for healthy food selection, especially when people are experiencing low personal time and energy to shop and cook.

b. **Education on Home Purchasing Processes** in school helps to familiarize students to the process. This makes home purchasing more likely and better equips Texans to navigate the complexities of home purchasing, which can be intimidating for first time buyers. Overall, this has the potential to strengthen the middle class, raise families out of poverty by building generational wealth, as well as helping to stabilize portions of the economy that are very vulnerable to inflation due to predatory real estate practices.

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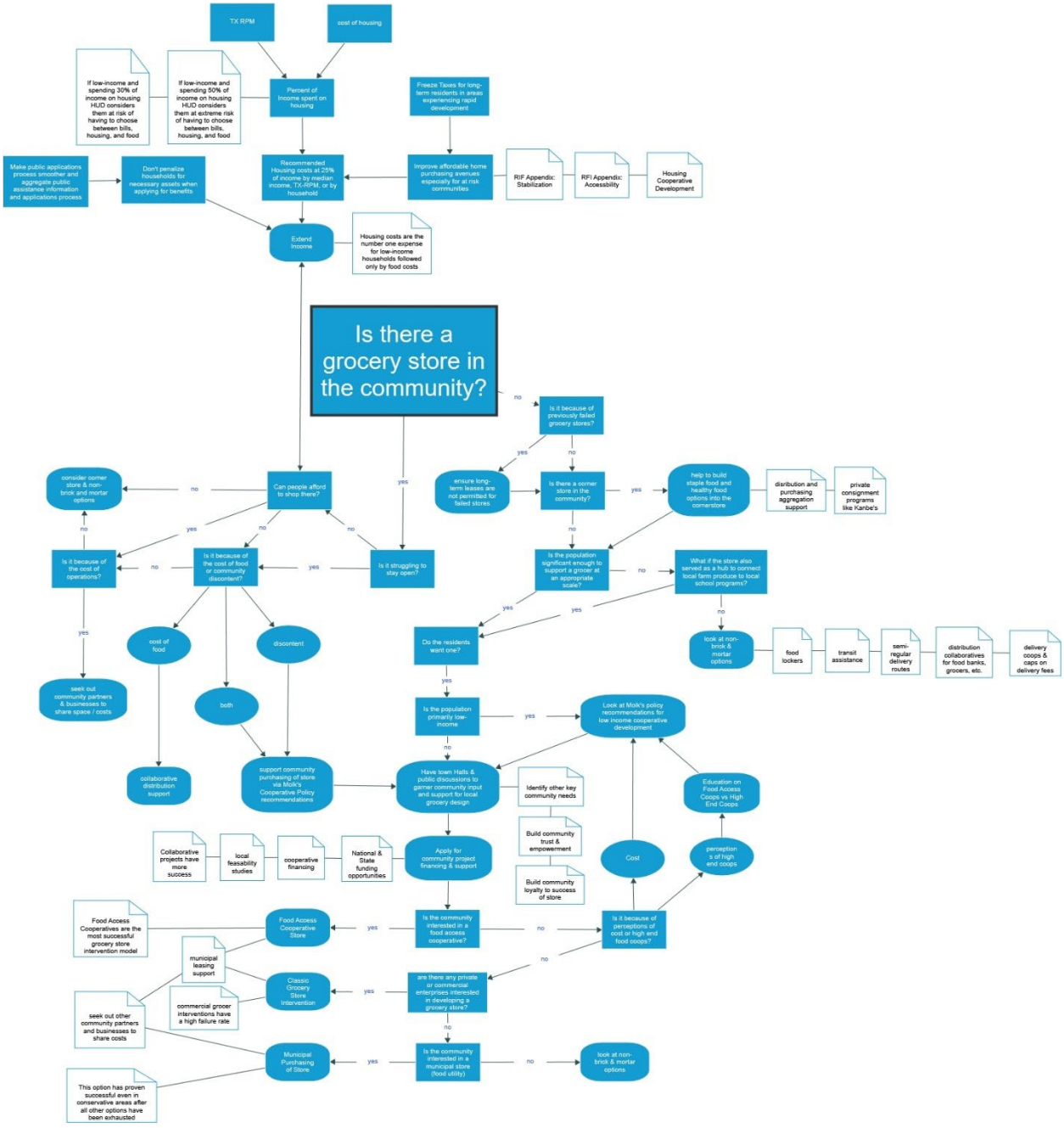
Appendix

Grocery Access Intervention Tool



Rural Grocery Initiative: Considerations for City Leaders

The following excerpt is from the Kansas Rural Grocery Initiative's "Grocery Store Considerations for City Leaders," published in 2021. The full text along with additional resources can be found here: https://www.ruralgrocery.org/publications/Resources.html

Many city leaders across Kansas and the nation have recognized that healthy food access is critical for community well-being, public health, and a robust local economy. As such, local governments have used the numerous tools at their disposal to encourage the development of grocery stores and other healthy food retail outlets in their communities. Although not comprehensive, below are examples of how city governments can get involved to increase access to healthy food.

Appoint a taskforce: City and county leaders can help advance a grocery development by delegating responsibilities to a small group of community stakeholders. Within a given deadline, this dedicated team explores grocery store solutions, conducts research, identifies target areas and potential partners, gathers feedback from stakeholders, and presents their findings to both municipal leadership and the broader community (Rural Grocery Initiative, 2021).

Hold community meetings: Before moving forward with a project, city leaders should gather feedback to assess the interest and needs of stakeholders. In-person public meetings allow leaders to present information, answer and ask questions, and receive input quickly. When opening the floor for a facilitated discussion about the vision and direction of the community's grocery store, such events can promote creativity and innovation. They give people the chance to express their views. As such, public meetings are a good way for leaders to gather rich, in-depth feedback from constituents. Public meetings should be accessible and inclusive, held at times when most people are available and in familiar, convenient locations. Consider recording the meeting so that it can be viewed by constituents who couldn't attend (Rural Grocery Initiative, 2021).

Use policy tools: When engaging in land use and economic development planning processes, access to healthy food retail should be incorporated. Many cities and counties are beginning to develop their own unique food system plans to guide decisions and create a roadmap for the future. This allows city leaders to identify current food system needs, set standards, develop strategies for improvement, and measure progress toward increasing food access.

Identify assets: According to one retailer survey, "land availability, market demand (and data demonstrating that demand), construction and operations costs, and approval/zoning requirements all pose barriers to locating in underserved urban areas." Therefore, cities can also help by identifying publicly available land and/or buildings that may be used for grocery development (Treuhaft & Karpyn, 2010).

Fund feasibility studies: One of the first steps in developing a grocery store is to conduct a feasibility study, which creates financial projections for potential locations based on the

surrounding market area. Cities can use feasibility studies to show the viability of a grocery project and attract grocery developers to the area.

Use municipal financing tools: Numerous financing mechanisms may be used to incentivize the development of grocery stores. This could involve redirecting future tax revenues, increasing taxes, abating taxes, or using state/federal tax incentives and credits (Rural Grocery Initiative, 2021). Municipal financing tools include:

- Tax Increment Financing
- Community Improvement Districts
- Transportation Development Districts
- Industrial Revenue Bonds
- Opportunity Zones
- New Market Tax Credits

Leverage other financial resources: Various state and federal programs support projects that increase access to healthy food. City governments can be involved with applications to help secure funding. Examples of these programs include:

- Community Development Block Grants
- America's Healthy Food Financing Initiative
- Kansas Healthy Food Initiative

Engage in public-private partnerships: Communities across Kansas and the nation have overcome grocery store challenges by leveraging innovative partnerships between business owners and municipalities. For instance, a public-private partnership could involve the city owning and leasing the building in which a grocery store operates. This arrangement has several potential benefits:

1. by not having to purchase an entire building, grocers need less up-front capital investment to start their business;
2. by dispersing responsibility for building maintenance, the city helps alleviate the burden of operating a grocery store;
3. as a public entity, cities are eligible for different funding streams that a business owner may not be able to access, which could cover costs associated with building maintenance, and
4. the city's involvement in the grocery store signals long-term buy-in for healthy food access in the area. An example of this arrangement includes the Garden of Eden grocery store in Little River, Kansas.

Improve public transportation: At the very least, until healthy food outlets are made available to low access communities, cities can address transportation barriers. This could mean updating public transportation routes and schedules, adding bus stops, and/or creating specific public transportation shuttles for low-income communities where a grocery store or supermarket is not within walking distance (Treuhaft & Karpyn, 2010).

Reinvestment Fund: Barriers to Homeownership

The following excerpts are from the Reinvestment Fund report on Barriers to Homeownership. The full text can be found at the following link:
https://www.reinvestment.com/insights/evidence-based-policy-making/

1. **Lender Advocates** - Clients, especially clients of color, reported needing an advocate with their lenders, a role frequently played by their realtors.
2. **Assistance Programs** that overcome the lack of assets that make it more difficult to attain homeownership….
    a. Especially for people with credit scores below the 660–700 range.
    b. Down payment assistance programs do not unnecessarily put beneficiaries at a disadvantage to other buyers who do not need this help in the speed and logistics of financing a home.
    c. It is important to think of these assistance programs not as an expense to bear by the source of the funds, but an investment that leads to asset accumulation and all of the short- and long-term benefits associated with homeownership for that family and future generations.
3. **Industry Training Standards**, monitoring, fair housing self-testing, and creation of alternatives for applicants with differing needs or preferences.
    a. State agencies can similarly encourage these activities of those lenders with whom they do regular business.
    b. Political subdivisions can encourage their lending, counseling, and grantee partners to align their activities with their municipality's plan to affirmatively further fair housing.
    c. State agencies can, as a best practice, refrain from doing business with financial institutions against which a local, state, or federal agency has made a finding of discrimination.

4. **Government-Insured Credit** that does not undermine the loan product's utility (i.e., a more lenient credit score or lower down payment requirement) with a process that makes the homebuyer less likely to succeed in a tight market.
5. **Public Education** - inclusion of critical, practical aspects of buying, owning, and maintaining a home in high school curricula.

Reinvestment Fund: Housing Stabilization

The following excerpts are from the Reinvestment Fund report on Housing Stabilization. The full text can be found at the following link: https://www.reinvestment.com/insights/evidence-based-policy-making/

1. **Code Enforcement** has shown effective in two case studies "—where there is room for property condition improvement but not severe challenges with disinvestment."
2. **Targeted Demolition** - Removal of deteriorated or dangerous buildings to eliminate blighting conditions. Basic policy analysis does not show that targeted demolition [of hazardous vacant structures] will stabilize all neighborhoods, but in these two cases, we observed a greater level of stabilization over time in treatment areas than in comparable areas…"
3. **Scattered Site Rehabilitation** - Acquisition and rehabilitation of vacant single-family homes for sale or rental. A limited study… found that "in areas around [Nonprofit acquired and rehabilitated foreclosed single-family homes for homeownership], [the decline in home values] and homeownership declines were… slightly less severe. A higher program dosage was associated with more notable change; treated areas with the most [such] renovations were more likely to outperform their comparison areas than areas with the fewest [such] renovations."
4. **Land Banks** – Government agency or nonprofit established entities charged with reactivating vacant and underutilized properties and returning them to productive use
5. **First Look ™ Programs** – Programs that provide owner occupants and local nonprofit buyers with an exclusive "first look" to purchase single-family real-estate-owned (REO) properties in the portfolios of financial institutions
6. **Emergency Bridge Loan/ Soft Second Mortgage Programs** – Short-term loan programs to prevent foreclosure for homeowners who are delinquent on mortgage payments.

Cooperative Policy Recommendations

The following excerpts are from the 2014 paper titled, "The Puzzling Lack of Cooperatives," by lawyer and economist Peter Molk.

1. **Broker support for Coops:** create a cooperative broker office, add it to university syllabi in business and economics degrees
2. **Tax Exempt bonds** for the formation of and conversion to cooperatives.
    a. This would lessen cooperatives' debt costs and decrease the amount of equity they need. Lower equity requirements make more potential patron-owners able to afford membership and increase cooperatives' expected returns. Both make it more likely the cooperative will start in the first place, the first by lowering formation costs and the second by increasing cooperative profitability and attractiveness to entrepreneurs. (Page 49).
3. **Deferral on Income Tax** - Give cooperative members a deferral on income tax on the first $*x* of a cooperative's profits to be retained by the cooperative for future operations… if retained earnings were not taxable to cooperative owners until ultimately distributed as profits, the result is an effective way of providing cooperatives desired preferential treatment." (Page 50).
4. **Grants or loans**... Unlike tax code subsidies, they provide direct, visible support for starting new cooperatives and should thereby have an immediate impact on cooperative formation. They also can be used to encourage cooperatives in targeted areas where they promise the greatest gains (Page 52) …individual cooperatives should not be subsidized over longer time periods, as are exempt nonprofits. (Page 54) …Since the key deterrent to new cooperative formation is sharing surplus with fellow owners, a starting point would restrict the subsidies to new cooperatives with
    a. (1) a minimum number of members (for example, ten),
    b. (2) who share profits based on their patronage with the firm (amount of supplied input, amount of work performed, or amount of product purchased for producer, worker, and consumer cooperatives, respectively), and
    c. (3) who allocate voting based on relative patronage or equally across members. The minimum member requirement is already a factor sometimes used by the I.R.S. in determining qualification for tax treatment as a cooperative.
5. **Reduced Regulation on Cooperatives**: Recognizing that there is less need to regulate cooperatives that, by virtue of their structure, protect their patron-owners would save cooperatives compliance costs and regulators the expense of regulating cooperatives. (Page 55).

a. Antitrust regulation prevents harmful restraints of trade. A system of labor laws protects worker interests from employer exploitation. Various consumer protection laws keep consumers from being ripped off by firms. Many cooperatives also offer these same protections to their owner-members by virtue of their organizational structure. (Page 54).

b. just because a cooperative lacks the incentive to exploit individuals does not guarantee that exploitation will not occur. For this reason, regulation of cooperatives should not be entirely eliminated. But understanding that the protection offered by regulation can be duplicated by the protection inherent in the cooperative ownership form offers opportunities to reduce unnecessary oversight. (Page 55).

c. regulation should be cut back only in those markets where cooperatives offer the protection that regulation otherwise affords, and then only by how much protection the form offers instead of by how high formation hurdles are. (Page 57).

6. **Required Cooperative Structure** – policy requiring all firms in a particular industry to be organized as cooperatives. (Page 55).

    a. commonly applied to the legal and medical professions, where regulations require that only lawyers and doctors be allowed to own legal and medical practices respectively (Page 55-56).

    b. if the ongoing benefits from worker ownership exceed those of investor ownership in these industries, such [a policy] could be welfare-enhancing. (Page 56).

7. **Reduced Coordination Costs** - Policies could address the coordination costs that keep existing firms from converting to cooperatives by, for example, requiring firms reorganizing in bankruptcy to make a good faith offer to sell to a group of the firm's patrons (page 56) [or local municipality].

8. **Publicity campaigns** extolling the virtues of cooperatives to reduce the costs of assembling co-owners and make both start-ups and conversions more likely. (Page 56).

9. **Startup/Operation Subsidies** - [The] subsidy amount cannot be known ahead of time, so subsidy rates must be adjusted based on observation over time. (Page 57).

    a. support might be relatively heavy as cooperatives gain critical footing in new industries, the level of support can be decreased over time as cooperatives succeed. (Page 57).

    b. if more industries develop viable institutions for brokering cooperative ownership, as has arisen for condominiums, support could be further reduced. A robust brokering process effectively solves cooperative formation difficulties. (Page 57).

10. **Membership Subsidies** - One time membership fee subsidies for lowincome residents that would like a sense of ownership and profit-shares.
    a. Direct subsidy via vouchers
    b. Promotion of loyalty shopper models to earn membership through purchasing for low-income households
    c. Ensure that those in a radius are given (and informed of) accessible avenues to membership

USDA Rural Development: How to Start a Cooperative

Understanding Cooperatives:

How to Start a Cooperative

Cooperative Information Report 45, Section 14

USDA Rural Development
Committed to the future of rural communities.

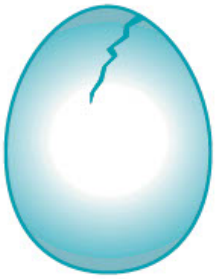
United States Department of Agriculture
Rural Development

Cooperative Programs

September 1995
Revised
April 2011

When Should a Cooperative be Organized? Cooperatives are formed in response to an economic need, such as providing marketing, processing, bargaining, manufacturing, and purchasing services not currently available, or available only at excessive cost.

If interested in forming a cooperative, learn all you can about the legal, economic, and financial aspects of a cooperative business. Careful planning increases the chances of success.



Stage 1

Is there an economic need?

☐ ***Yes - Proceed to Stage 2***

☐ ***No - Stop cooperative development***

Why Groups Organize Cooperatives:

- To improve bargaining power;
- To reduce costs;
- To obtain products or services;
- To create new and expand existing market opportunities;
- To improve the quality of products or services;
- To increase income.

Steps in Organizing

Determine the Economic Need

A cooperative is organized in response to a specific problem or opportunity. The idea is often initiated by a small group that meets to discuss the need. The meeting should focus on the economic need and the potential use of a cooperative as a solution.

Discussion topics should include:

- What information about the perceived need is readily available?
- Could a cooperative effort address this need?
- What information about cooperatives is available?
- Who can serve as an adviser to the group?
- Who should be invited to a meeting of potential users?
- How should potential users be contacted?

If a cooperative seems to offer a solution, a larger meeting of interested potential users may be planned.

Hold Initial Exploratory Meeting

A meeting of potential member-users should be called to decide if interest is sufficient to support a cooperative. The meeting date, time, and place should be publicized in advance. The leadership group should select a chairperson to conduct a meeting and develop an agenda. These items should be discussed:

- What is the need;
- Possible solutions;
- Cooperative principles and terms;
- Advantages and disadvantages of a cooperative;
- What financial and other commitments are expected of user-members;
- Cooperative organization and feasibility analysis process;
- Allow time for potential members to ask questions. If the group votes to continue with more detailed study, a steering committee should be selected.

Member participation in decisionmaking activities and sense of cooperative spirit are important for success.

Stage 2

Can a cooperative offer a soution?

☐ ***Yes - Proceed to Stage 3***

☐ ***No - Stop cooperative development. Consider other organization structure.***

Select a Steering Committee

Steering committee members should have both an interest in the cooperative and sound business judgment. They often become the cooperative's incorporators and may serve as its first board of directors. The committee has a two–part job:

- Deciding the feasibility of the cooperative: Will the proposed cooperative succeed? Will it be valuable to members?
- Preparing a specific, detailed business plan for the proposed cooperative.

The committee should consult specialists in the areas of law, finance, and cooperative business operations. Two essential studies must be initiated: a member-use analysis and an initial market analysis.

Conduct a Member-Use Analysis and Initial Market Analysis.

The steering committee must take steps to learn all it can about the cooperative's potential members and what the cooperative can do for them. The survey should explore four areas:

- ***Members' needs***—The cooperative is formed and operated for the sole purpose of meeting members' needs;
- ***Anticipated business volume***—The cooperative must have some assurance of sufficient volume to operate as a business and to plan for facilities and needed equipment;
- ***Location and business or service characteristics of prospective members***—Where, how, and when the cooperative delivers its services is a prime consideration;
- ***Opinions of members***—How do potential members feel about cooperatives and participation in one? Member participation in decisionmaking activities and sense of cooperative spirit are important for success.

Prior to conducting the initial market analysis, the steering committee will first meet to review the member-use analysis. Potential members have been surveyed regarding their interest in jointing the proposed cooperative, anticipated business volume, and willingness to commit their product and capital. Depending on results, the steering committee then decides whether to proceed with the project.

Following a decision to proceed, an initial market analysis is conducted to determine if the proposed cooperative has an economic role in the marketplace. This analysis will identify and examine market conditions to provide insight into appropriate activities for the cooperative, volume, facility, and technological needs, and other pertinent factors.

The market or supply analysis will determine if the proposed cooperative has an economic role in the marketplace. The analysis will identify which activities are appropriate, business volume, and financial capabilities of the potential cooperative members.

Second Member Exploratory Meeting

This meeting of potential members reviews results of the member-use and inital market analyses. Based on the information presented, the participants vote either to continue or abandon the project. If they choose to continue, the next step is to conduct a comprehensive feasibility analysis.

Potential members may be asked to invest earnest money at this point to demonstrate their commitment to the cooperative and to cover further analysis and organizational costs.

Conduct a Feasibility Analysis

A comprehensive feasibility analysis, conducted by an experienced practitioner, will help the steering committee determine if the proposed cooperative is feasible given well-determined assumptions, researched information, and the member-use and initial market analyses. This study determines management, marketing, technical, economic, and financial feasibility, and presents the entire cooperative concept in one document. It will provide the foundation for the business plan if a decision to proceed is made.

Third Member Exploratory Meeting

At the third exploratory meeting, the steering committee presents the comprehensive feasibility analysis findings to potential members and provides the committee's recommendation on whether to proceed. If the decision by the group is then to proceed, the next step is to prepare a business plan and draft legal documents.

Prepare a Business Plan

Every business should have a business plan. The steering committee should arrange for completion of an in-depth business plan prepared by a professional familiar with cooperative organization. The plan is developed from the foundation provided by the feasibility analysis and provides an organizational map that the new cooperative will follow as it begins operations.

Draft Legal Papers and Incorporate

The articles of incorporation state the purpose and scope of the cooperative business and give the cooperative a distinct legal standing.

The bylaws state how the cooperative will conduct business and must be consistent with both State statutes and the articles of incorporation. Legal counsel should be consulted on these and other legal documents, such as membership or marketing agreements.

Fourth Exploratory Member Meeting

At this meeting, potential members review the work and recommendations of the steering committee, including the articles of incorporation, bylaws, and any adjustments made to the business plan. Support for the cooperative should again be evaluated by a vote on whether or not to form the cooperative. If affirmative, the incorporators file the articles of incorporation.

First Annual Meeting of Cooperative

At the first meeting of the cooperative, members carry out two very important member responsibilities:

- Approve the bylaws;
- Elect the board of directors.

Steering committee members are often board candidates, but other members may also be elected to these leadership positions.

First Board of Directors Meeting

The first meeting of the board of directors should focus on selection of the board officers, committee appointments, and carrying out the business plan. Additional agenda items include arranging debt capital, conducting a membership drive, establishing manager qualifications, and conducting a manager search.

Acquire Capital

The board of directors is responsible for arranging adequate capital. Capital may be raised by members purchasing stock (equity) and borrowing funds (debt) from a lending institution. Members must invest or

Stage 3

Is there member interest?

Yes - Proceed to Stage 4

No - Stop development

Stage 4

Is cooperative plan feasible?

Yes - Proceed to Stage 5

No - Stop development

Stage 5

Do members commit capital and business volume? Are resources available?

☐ ***Yes - Begin operations***

To see this and other USDA cooperative publications online, visit: http://www.rurdev.usda.gov/rbs/pub/cooprpts.htm To order hard copies, e-mail: coopinfo@wdc.usda.gov or telephone: 1-800-670-6553.

pledge sufficient capital in the business to demonstrate commitment to the cooperative's success. Exact amounts will depend on activity and lender requirements. Projected cash–flow schedules and financial statements from the business plan are important in determining capital needs and arranging for debt capital.

Hire a Manager

One of the most important duties of the board of directors is to hire a qualified manager who is responsible for day–to–day operations.

Hire Employees, Acquire Facilities, Begin Operations

The manager hires capable employees and advises the board on what facilities and equipment to acquire, within the budget and operation guidelines established by the board.

Important Factors for Cooperative Success

Experience shows that a newly organized cooperative's chances for success can be improved by doing the following:

- ◆ Clearly identifying the economic need;
- ◆ Reaching agreement on the cooperative's mission;
- ◆ Developing good leadership;
- ◆ Gaining the commitment of members to do business with the cooperative;
- ◆ Following sound business practices.

Summary

A cooperative is a unique form of business used by people and businesses for their mutual benefit. Whatever its purpose, starting a cooperative requires considerable time, energy, and commitment by potential members to finance and use the business and select knowledgeable directors who will hire a competent manager. ■

Where to Get Help

The U.S. Department of Agriculture's Rural Development (RD) offices in some States have cooperative development specialists on staff who can help you. For additional information, contact USDA's Rural Business-Cooperative Progams in Washington, D.C. Its staff of professionals can help organize a new cooperative and provide technical assistance to existing cooperatives. Write to:

Rural Business-Cooperative Service
Stop 3254
Washington, DC 20250–3254
Phone (202) 720–3350
FAX (202) 690–2750,
Attention: CDD
http://www.rurdev.usda.gov/cooperatives.html

For more details, see the following USDA Rural Development publications:
How to Start a Cooperative, CIR 7
Cooperative Feasibility Guide, SR 58

This circular is one of a continuing series that provides training information and presentations for education resource persons who may or may not be familiar with the cooperative form of business. This series provides the basic background material they need and in a form that can be readily adapted, with limited preparation time, to a lecture or other presentation.

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Previous Grocery Intervention Legislation

Title	*Companion Bill*	*Year*	*Author*	*Companion Author*	*Stage*	*Summary*
SB 506		1933	Small		N/A	Relating to protecting Texas industries; regulating a type of competition that unless it be regulated may ultimately destroy the independent grocer, and Texas industries depending for distribution upon grocery stores; providing a penalty of not less than fifty ($50.00) dollars nor more than one hundred and fifty ($150.00) dollars for each violation of any provision or provisions of this Act.
HB 1068		1975	Blythe		Referred to Committee on Agriculture and Livestock	Relating to incorporation, organization, and regulation of food cooperative associations
HB 1146		1975	Barrientos		Referred to subcommittee	Relating to the exemption of non-profit food cooperative corporations from the corporate franchise tax.
HB 725		2013	Guillen		Referred to Public Health	Relating to the establishment of a community development grocery store revolving loan fund program.
HB 1221	SB 415	2013	Miles (Burnam, HB 3616)	Ellis	Failed to receive affirmative vote in committee (H), Referred to Agriculture, Rural Affairs and Homeland Security (S)	Relating to the establishment of a community development grocery store revolving loan fund program
SB 403		2013	Zaffirini		Not again placed on intent calendar	Relating to the establishment of a community development grocery store and healthy corner store revolving loan fund program
HB 269		2015	Miles		No action taken in committee	Relating to the establishment of a community development grocery store and healthy corner store revolving loan fund program.
HB 1485	SB 1590	2015	Rodriguez	Zaffirini	No action taken in committee	Relating to the establishment of a grocery access investment fund program.
HB 3299		2017	Thierry		Referred to Ways and Means	Relating to a franchise tax credit for entities that establish a grocery store or healthy corner store in a food desert
HB 1047	SB 723	2017	Thierry	Miles	Referred to Agriculture and Livestock (H)/Referred to Agriculture, Water, and Rural Affairs (S)	Relating to the establishment of a community development grocery store and healthy corner store revolving loan fund program.
HB 164		2017	Lucio III		Referred to Agriculture and Livestock	Relating to the establishment of a grocery access investment fund program

HB 3324		2017	Rodriguez		Placed on General State Calendar	Relating to the establishment of a grocery access investment fund program
HB 605	SB 574	2019	Thierry	Miles	Pending in committee	Relating to a franchise tax credit for entities that establish a grocery store or healthy corner store in a food desert
HB 3694	SB 2172	2019	Thierry	Miles	Referred to Pensions, Investments, and Financial Services (H)/Referred to Business and Commerce (S)	Relating to the financing of certain grocery stores by a public facilities corporation
HB 1252		2019	Rodriguez		Left pending in committee	Relating to the establishment of a grocery access investment fund program.