



## Introduction

On November 22, 2019, a diverse group of people with a common interest in Lansing's urban agriculture system came together at the Allen Neighborhood Center to discuss two major questions:

1. What is a desirable future for urban agriculture in Lansing?
2. How can we support the continued thriving of the system into the future?

Workshop organizers used resilience theory to orient discussions, to understand what provides resilience within the system, and how to build on it to create a desired future. In this report, the principles of resilience theory are used to frame workshop findings and to develop recommendations for planning the future of urban agriculture in Lansing.

## A Brief History of Urban Agriculture in Lansing

Participants developed a timeline of events that have shaped Lansing's urban agriculture system. Embedded in the history of the system are the industrial-racial inflections common to other 'rust belt' cities. The ways in which the system has been shaped by long-established and still-growing immigrant and refugee populations are significant and unique. Also unique to Lansing are the ecological surprises associated with the Grand River. The risk of catastrophic flooding in some residential areas has been mitigated by working to move homeowners out, razing houses, and planting gardens in their stead. This strategy affects the distribution of the urban agriculture system as well as how it continues to develop. A number of key organizations have been instrumental to the management and development of the system: The Garden Project, which provides garden related training and material resources, was established in 1982 as a grassroots "Self-Help Garden Program" and quickly adopted in 1983 by the Greater Lansing Food Bank; the Ingham County Land Bank has allocated a portion of blighted or foreclosed properties to the establishment of garden and farms; the Lansing Urban Farm Project, which, in 2010, established Lansing's first urban farm on land leased by the Land Bank; and, Allen Neighborhood Center, which, among its many programs, manages a local food hub, community supported agriculture program, and farmers' market.

The entire timeline may be viewed here:

<https://www.canr.msu.edu/resources/resilience-of-urban-agriculture-in-lansing>

### *Using Resilience to Frame Urban Agriculture*

Resilience theory provides a way to discern the social and ecological qualities of systems that enable them to cope with change. 'Coping' refers to the degree to which a system carries on in the face of uncertainty, surprise, or disturbance. Resilience researchers have identified seven principles that can be managed to encourage resilience.

*Diversity:* Systems that are more diverse are generally able to cope better with disturbance or uncertainty (e.g. a flood, a pandemic) than less diverse systems. This is because diversity provides for redundancy and improves the likelihood that system components can compensate if other system components fail.

*Connectivity:* Systems that are well-connected facilitate access to new ideas, information, and resources that help to adapt to or mitigate surprises.

*Slowly changing variables or feedbacks:* Some slowly changing variables in a system, like racism or soil structure, can maintain or limit the resilience of a system but are often forgotten in management plans. If such variables are not understood or managed, conditions may cause the system to cross a threshold that results in an undesirable system reorganization.

*Foster complex adaptive systems thinking:* In order to manage for resilience, decision-makers must understand that systems are complex and unpredictable and that one-size-fits-all solutions do not exist. When working in cities, it is important to recognize that different people experience ecological and social environments differently and manage accordingly.

*Encourage Learning:* Social-ecological systems maintain their function by being dynamic and building capacity to adapt. A system that encourages learning is constantly incorporating new knowledge and experiences and is therefore more prepared to adapt to disturbance than one that does not.

*Broaden participation:* The more actors hold a shared understanding of, feel a part of, and benefit from the system, the more they will work together to maintain it.

*Polycentric governance:* In ways similar to participation, encouraging management by multiple decision-making bodies can enhance coordination and collective action in times of surprise and uncertainty.

# Resilience of Urban Agriculture in Lansing

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This section is organized into themes that emerged from participants' conversations and captured by notetakers and recorders. Themes suggest domains where management actions could be implemented. Resilience principles are used to analyze discussions. Many of the qualities that participants value enhance the resilience of the system.

## Governance and Institutions

City administrative and community organizations play an important part in defining and managing system resilience. Good governance and civic engagement can prepare and support system actors to manage risk and to adapt in the face of uncertainty. The degree to which governing processes and institutions are responsive to change heavily influences how systems take shape and who benefits from them.

Workshop participants highly value organizations such as the Lansing Urban Farm Project, the Land Bank, The Garden Project, and Allen Neighborhood Center, which provide relative ease-of-access to land and other resources, training, and markets. These three organizations provide a high degree of connectivity and help to broaden *participation* and encourage *learning* in the system. However, the limited number of organizations involved means there is little back-up if their capacities were to decline. That is, each of these organizations carries out tasks that are both unique and critical. Should one organization fail, there is question as to how those vital tasks could continue to be carried out.

Encouraging public ownership/stewardship of land was recognized as an important community-building practice. A key concern, however, is the uncertainty surrounding land ownership, which prevents land managers from being able to plan into the future. Several participants characterized Lansing ordinances as both rigid and vague. This, in combination with land-use decision-making that is contingent on subjective determinations, creates a system vulnerability with which many participants expressed concern. Informal governance processes might be thought of as another *slow variable* that has allowed urban agriculture to develop in the way that it has, but which need to be acknowledged and managed in order to foster the system's continued development. One could envision a situation in which land values increase due to demand and city management reflexively pushes out urban agriculture in favor of land use that generates higher capital.<sup>1</sup> Indeed, participants recognized that city decision-makers are increasingly interested in marijuana cultivation, an indoor agricultural and economic activity that can likely generate more capital but which cannot provide other valued services associated with urban agriculture, e.g. community cohesion, food security, and access to green space. Codifying the value and practice of urban agriculture as a legitimate use of urban space could help to reduce this existing system vulnerability. Expressed aims include having urban agriculture experts audit city codes to describe how they block development of the system and to establish where various kinds of green infrastructure are suitable. Guidance for such a process and ensuring that urban agriculture is intentionally considered in relation to city goals, as, for example, stated in the *Design Lansing Plan*, could be overseen by a mayor-established urban agriculture committee. Raising the profile of urban agriculture among Lansing decision-makers was recognized as a requisite step, and it was suggested that urban agriculture advocates should organize and attend city meetings.

Participants recognized the institutional value of Michigan State University but observed that it was sometimes intimidating to approach people working at the university. Moreover, several participants noted that researcher interest was often focused in places other than Lansing. As an institution with enormous reach and access to resources, participants hoped that, going forward, more substantive relationships could be cultivated, which would provide better access to technical expertise and material resources but also to students, for example through the Agriculture, Food, and Natural Resources Education major within the Department of Community Sustainability.

## Community and Networks

Community and other kinds of networks can provide for a resilient system because of their potential to facilitate access to resources and information, enable sharing among system actors, foster *learning*, and improve the ability to collectively manage the system.

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<sup>1</sup> Some Rust Belt cities envision becoming climate change refuges. Lansing might see an influx of 'climate change refugees.'  
<https://www.nbcnews.com/science/environment/buffalo-oasis-scientists-say-warmer-earth-could-make-colder-cities-n1113711>

Central to what participants value about Lansing's urban agriculture network is the forum it provides for building community cohesion and enriching their own individual lives. Through knowledge sharing, commiserating, volunteering, collaborating, eating, selling, and a range of other activities, the way that urban agriculture is practiced offers ample opportunity to collaboratively develop and increase *participation* in the system. Organizations support this relationship-building by offering spaces and opportunities to collectively practice agriculture. Participants also recognized the rich cultural diversity that shapes and informs the system.

Workshop participants recognized that refugee and immigrant (i.e. New Americans) populations in Lansing have shaped the urban agriculture system in ways that are unique to Lansing and which have resulted from dynamics at city, state, national, and international scales. Many of them are instrumental in managing urban gardens in their respective neighborhoods and have established good working relationships with urban agriculture organizations. At the same time, it was recognized that New Americans are not in higher-up leadership positions within the system. Finding ways to increase the share of leadership positions held by New Americans could diversify decision-making processes, resulting in improved resilience *vis-à-vis diversity, participation, and polycentric governance*.

Community networks and relationships might be thought of as a *slowly changing variable*. Changes to the community are more discernable over a period of years, rather than days or months. Residents hostile to urban agriculture may threaten or block the system's development through, for example, complaints to city managers. Workshop participants recognized the need to manage such thorny relationships, though how to manage this tension and what to communicate is not yet clear.

Stated aims include expanding the practice of urban agriculture to other neighborhoods; connecting in more substantive ways with, and eliciting the support of, policymakers and other civic institutions; and, growing youth engagement. Involving youth is seen as a critical dimension to sustaining the system *vis-à-vis* increased and diverse *participation* into the future. An immediate way to build out community networks might be to find potential champions on district/school boards that are interested in growing youth engagement around food, agriculture, and participatory action. Establishing a set of shared goals and developing curricula could then be leveraged towards funding opportunities.

### Financial and Material Resources

Financial and material resources foster system resilience by enabling participants' access and ability to take advantage of education, social and institutional networks, infrastructure, tools and a variety of other inputs, all of which are instrumental to developing the system. The more diverse the range of networks, assets, and inputs, the more resilient the system because the more *participation* and *learning* can be supported.

Participants valued the common access to tools and other resources, with one participant remarking that Lansing "stands out" among other urban agriculture programs across the United States in its provision of material resources. However, it was noted that the quality of compost is sometimes very poor, containing weed seeds and trash. In addition, some participants observed that some resources are more easily accessed by gardeners than farmers. Similarly, several participants remarked on the high cost of water. The low entry barriers to multiple markets was also identified as an important aspect of the system, though not all participants agreed and some suggested that markets are not open. Overall, the distribution of resources is benefiting some groups, supporting their *participation*, but could be extended to more diverse groups, supporting additional *participation* and therefore growth.

The high costs of production paired with low prices for other produce in the market presents a challenge for farmers. One participant observed that consumers need "rock bottom" prices, while grocery stores' prices are "ridiculously" low. Restaurants, which might offer another outlet for farmers, are not a reliable market, even though they may tell their customers they buy from area urban farmers. Participants observed that the "Lansing Grown" label, a nascent cooperative marketing effort, might be one way to improve demand, as well as encourage restaurants to be more accountable as it relates to their Lansing farmer purchases.

Funding to build the system is generally tied to specific grants, so it cannot be accessed in ways that might be more responsive to system needs. For example, the limited number of organizations, each carrying out unique, vital tasks to keep the system going is, in part, a function of the allocation of scarce resources. Moreover, participants felt as though

grant opportunities are missed, a situation that could be remedied by a grant coordinator, more active external support, and better connections with different MSU researchers. In general, participants recognized that a lack of capital impeded development of the system and reflects limited *connectivity* outside of Lansing.

To improve the financial and material dimensions of the system, stated aims include: developing a source of start-up funds; applying for more grants; improving access to tool sharing through, for example, a tool library or cooperative (especially expensive tools that would be needed to carry out larger scale urban agriculture, including a tractor); and creating cooperatives that would help to ensure supply and could offer other services responsive to the needs of farmers.

### Knowledge and Practice

Acknowledging and understanding the knowledge and practice that constitute the system helps to identify avenues and assets for further developing the system.

Urban agriculture provides a meaningful activity for demonstrating connections between people and nature. Participants noted that urban agriculture provides the opportunity to observe natural cycles and interactions of various organisms and how such cycles and interactions are important to human wellbeing. Farmers and gardeners noted that the practices carried out in gardens and farms provide havens for both people and wildlife. Overall, urban agriculture provides a way to *foster complex adaptive systems thinking* for those involved and supports *learning* about nature and food production.

Participants identified the Allen Neighborhood Center's Veggie Box Community Supported Agriculture program as a critical system practice, instrumental to linking farms with urban households and an important reliable market for farmers. Moreover, the role of Allen Neighborhood Center and the Garden Project help to make the practices of urban farmers and gardeners visible to the wider community, increasing *connectivity* with those not involved in urban agriculture themselves and potentially supporting their *learning* about urban agriculture. Likewise, the various educational programs and public facing activities offered by these organizations occur on farms or in relation to urban agricultural practices, e.g. the educational offerings regularly hosted at Hunter Park. However, participants suggested that the 'one off' nature of some of these activities did not allow appropriate incubation and development of promising practices.

Among the aims for urban agriculture practice and knowledge are to normalize and increase the acceptance of it as a legitimate use of city space. Building out the existing urban agriculture network and increasing *participation* in the system is one way to do this, and might be accomplished by exploring how the knowledge and practices of Lansing's urban agriculture system are relevant to other urban domains, which, in turn, could foster *learning* and support among city residents not currently involved with urban agriculture. In the context of such a diverse knowledge system, informed by people with diverse backgrounds, the opportunities for community or school-based experiential education could be better developed, which, in turn could help to promote the acceptance of urban agriculture. Relationships with schools could be cultivated through the development of curricula exploring, for example, soil biology, pollination, botany, food justice, cooking, food culture, etc. Already-involved institutions and actors, such as AmeriCorps, might be convened to explore the way forward, or through new connections with MSU students, as outlined above.

## Managing for Resilience: Summary Points

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In this brief report, we have discussed the resilience of the urban agriculture system in Lansing. Whilst not sufficient to support a full resilience assessment, the workshop identified multiple features of the urban agriculture system in Lansing that support resilience (strong organizations that support *participation* and *learning*) but also features that could be strengthened (*diversity* of individuals in leadership positions and of organizations and enhancing *learning* to *foster complex systems thinking* about our cities as a whole). Legitimizing the practice of urban agriculture and use of urban space would likely be served by fostering *polycentric governance* processes. This, in turn, will likely require understanding and clearly articulating the services that urban agriculture provides. For example, at a wider scale, to what extent does urban agriculture affect the city's capacity to respond to social and environmental surprises that come with climate change? At a smaller scale, how might it affect a household's capacity to navigate food insecurity or *participation* in the community? Likewise, the development of green infrastructure is identified in the 2018 Lansing Hazard Mitigation Plan as a hazard mitigation strategy. Tri-County Planning's continued involvement could help determine opportunities for developing the

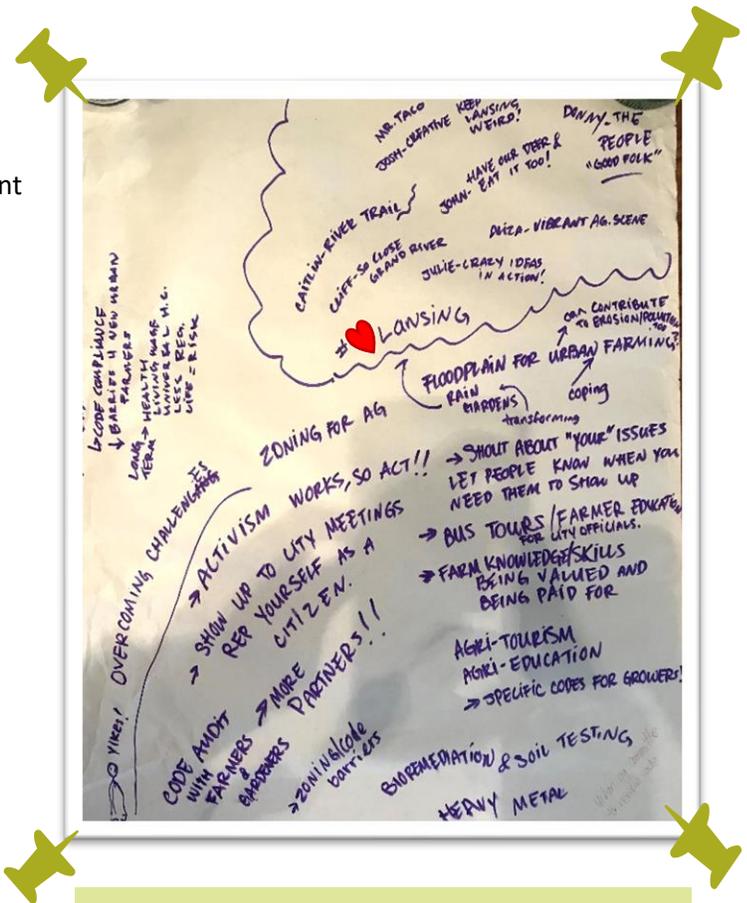
urban agriculture system as part of a wider adaptive management strategy that also could provide educational or economic opportunities.

Last, Michigan State University could participate in fostering resilience in several ways that respond to participants' goals for the system.

- MSU's Office of Public Engagement and Scholarship is a resource that could help link practitioners with scholars to develop mutually beneficial relationships.
- Researchers can work with system actors to develop compelling narratives about the food system, which could then be used to acquire grants, which MSU staff and researchers can help support the submission of.
- Facilitate relationships with Agriculture, Food, and Natural Resources Education majors, formally and informally.
- Make the timeline data available for all urban agriculture stakeholders, as a learning resource about the nature of shocks that have positively and negatively influenced the Lansing urban agriculture system in the past.

## Workshop Participants

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