Sowing the Seeds for Urban Agriculture in Rocky Mount, NC: An Analysis of Municipal Urban Agriculture Ordinances

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Introduction & Project Purpose

Cities across the U.S. are exploring how to develop their local food systems as a tool to support public health, community and economic development, environmental sustainability, and social equity. The food system is the chain of events that encapsulates the planting, growing, harvesting, processing, distributing, purchasing, and consumption of food (Brinkley, 2013). While cities may traditionally be associated with the distribution, purchasing, and consumption phases of the food system, the first three phases are typically seen as the domain of the rural areas outside of the city boundaries. However, urban agriculture—a wide range of activities that bring food production into urban areas—has become increasingly popular in cities all over the world in response to pressures on land use and community food insecurity, among other concerns (Fralin 2010; USDA, 2020).

Rocky Mount, North Carolina is one such city. The local food policy council, the Just Foods Collaborative, and the local government have begun exploring opportunities to incorporate urban agriculture into Rocky Mount’s landscape. The Just Foods Collaborative sees community gardens as one approach the City could take to repurpose vacant land and mitigate the food insecurity that many residents face. They have expressed interest in creating an ordinance that would establish urban agriculture as a land use activity in Rocky Mount, creating the infrastructure for community gardens and other urban agriculture activities. This work is in its early stages, and the group has requested more information about how other U.S. cities have crafted urban agriculture ordinances.

The primary purpose of this paper is to add to the Just Food Collaborative’s knowledge bank as they continue to work with the City and the community to identify an appropriate path forward for urban agriculture. Accordingly, this paper includes three main sections. First, I discuss urban agriculture and the role municipal zoning plays in supporting it. Second, I examine Rocky Mount’s current zoning ordinance and other relevant ordinances to identify points that may need to change to allow for urban agriculture. Finally, I turn to the research
question: *How are other municipalities incorporating 10 key variables into their urban agriculture ordinances?* These variables are discussed in the methodology section of the paper, and they reflect details that the Just Foods Collaborative may advocate for in Rocky Mount’s potential ordinance. To appropriately answer this question, I provide a brief background about the urban agriculture initiative in each of the nine municipalities in the sample, conduct an in-depth review of each of the urban agriculture ordinances, and generate takeaways and themes about how the 10 variables are incorporated into these ordinances. I close by offering recommendations for the Just Foods Collaborative and the City of Rocky Mount as they continue their work on this topic.

**Rocky Mount, North Carolina & the Just Foods Collaborative**

Located in the inner coastal plains of northeastern North Carolina, Rocky Mount is home to about 55,000 people. Rocky Mount and the larger Tar River region has historically been an agricultural and textile center. While agriculture remains an important industry and the region is still decidedly rural, Rocky Mount has experienced some new investment that has spurred interest in additional development downtown. While this new economic development poses opportunities for Rocky Mount, it also has heightened community members’ concerns about the affordability crisis many neighborhoods adjacent to the downtown are already experiencing.

The Just Foods Collaborative has identified urban agriculture as an approach to use vacant land for community benefit. Food insecurity is an especially salient issue, as Nash and Edgecombe Counties—Rocky Mount is split between the two—are among the top five counties with the highest food insecurity rates, with Edgecombe County occupying the top slot (Watson 2020). Within Rocky Mount, certain neighborhoods are disproportionately impacted. For instance, according to the 2015 USDA Food Access Research Atlas, 84% of residents of the Holly
Street neighborhood, or over 1,400 people, were identified as having low food access.¹ Disaggregated by race, 92% of Holly Street residents who face low food access are Black, while only 0.5% are White (USDA Economic Research Service, 2015). These disparities are reflective of the larger historical context of Rocky Mount. As previously mentioned, Rocky Mount spans both Nash and Edgecombe Counties, and significant differences exist between the two sides of the city. Nash County has a higher median household income and better health outcomes as compared to residents in Edgecombe County (County Health Rankings and Roadmaps, 2020).

To address food insecurity and uneven community development, Just Foods has advocated for more attention to be paid to urban agriculture within the municipal limits. Members see urban agriculture as a way to address racial disparities in terms of food access and economic development and promote healthy, connected neighborhoods. Before the COVID-19 pandemic broke out, Just Foods began working with the City of Rocky Mount to start conversations about urban agriculture. The City has demonstrated interest—community feedback about urban agriculture was incorporated into the recommendations of their 2018 Atlantic-Arlington Corridor Study.² Therefore, this is an opportune time to begin considering if and how urban agriculture might be feasible in Rocky Mount. Work around this topic has stalled somewhat, given the time and energy required to respond to the COVID-19 pandemic and limited ability to continue public meetings outside of a virtual space. However, Just Foods is curious to continue adding to their knowledge surrounding the benefits and challenges surrounding urban agriculture.

¹ This measure is defined by the USDA as not having a grocery store within 1 mile in an urban area and 10 miles in a suburban area.
² The Atlantic-Arlington Corridor Study was developed as a plan to inform future development for a key gateway corridor into Rocky Mount. The plan considers five central themes: land use and zoning, urban design, housing, transportation, and public facilities and infrastructure. In September 2020, the City won an award from the North Carolina chapter of the American Planning Association in recognition of the quality of this small-area plan.
Urban Agriculture, Its Benefits, and Its Challenges

While the rise of the local food movement has increased interest in a variety of food system development strategies—including urban agriculture—local food system development is still a relatively emergent stream of literature, particularly as it relates to the planning and policy implications (Pothukuchi & Kaufman 1999; Thibert 2012; Brinkley, 2013, Morgan 2015). Food systems and food policy are typically regarded as the domain of the federal government, and agriculture as a land use activity is generally considered to be a priority for rural areas that can support large-scale production (Pothukuchi & Kaufman 1999; Nestle 2002, 95; Lovell 2010). However, a 2015 survey of 2,237 municipal and local governments found that 73% of responding organizations had at least one policy or program to support local food system development in place (Goddeeris 2016). Local governments’ growing interest and involvement in local food systems has helped urban agriculture become a compelling strategy to consider.

Urban agriculture is a component of a local food system that encompasses activities including backyard or rooftop gardens, community gardens on public or private land, farms on the urban fringe, and livestock grazing in open space (USDA 2020). Thus, while “urban” is a key word, urban agriculture is not limited to agriculture initiatives in major metropolitan areas that are miles away from farmland. Rather, urban agriculture is a broad term that encourages infusing agricultural practices inside municipal boundaries. Communities have become interested in urban agriculture as a mechanism to achieve multiple social benefits, including food security, neighborhood social capital, community development, public health, and racial equity (Horst, McClintock, & Hoey 2017). Food security is perhaps the most obvious benefit, as community gardens and other urban agriculture initiatives can be intentionally located in communities that typically lack access to fresh food (Meenar & Hoover 2012).

While urban agriculture can be a way to meet physical needs, it can also promote the social and emotional well-being of the community. Gardens can provide therapeutic green space for residents, while also creating venues for community engagement and organizing (Meenar
2015). Providing shared spaces for residents to work together can help strengthen neighborhood ties, mutual trust, and social capital among community members, and according to Alaimo, Reischl, and Allen's (2010) study of community gardens in Flint, Michigan, this social capital can be particularly impactful in urban neighborhoods.

From a land use perspective, urban agriculture provides a method for adaptive reuse of vacant lots (Tranel & Handlin, 2016). While planners historically have not paid a great deal of attention to urban agriculture as a planning activity, integrating small-scale agricultural production into the traditional urban form provides an opportunity for innovation, achieving green space goals, and improving community health (Lovell 2010).

However, there are challenges associated with urban agriculture as well. While more studies are emerging, empirical evidence of the specific economic, social, and environmental impacts of urban agriculture is a gap in the scholarly literature (Meenar, Morales, & Bonarek 2017). Long-term sustainability of urban agriculture initiatives is a concern, particularly if land tenure is uncertain, if there is not sufficient community engagement to sustain the momentum long term, or if residents do not know how to grow their own food without ongoing support from those with gardening knowledge (Meenar, Morales, & Bonarek 2017; Diaz et al. 2018). There are also some critiques when it comes to food justice issues, as community gardens can result in racial exclusion, making it important to formulate equity goals for any initiative (Horst, McClintock, & Hoey 2017). Accordingly, it is important to remember that while community gardens and other urban agriculture initiatives are one strategy for mitigating food insecurity, it is critical to not overstate their ability to overcome larger structural barriers to equitable food access.

**Urban Agriculture Ordinances & Policy Approaches**

Over the past two decades, municipalities have begun to adopt legislation to facilitate urban agriculture (Heckler 2012). These policies may enable a variety of agricultural activities—
from backyard chicken coops to small-scale farms—as well as commercial components like establishing farmers markets and farm stands. For the purposes of this paper, this legislation is collectively referred to as “urban agriculture ordinances.”

Previous studies have examined policy frameworks to understand how urban agriculture is being incorporated into U.S. cities. Meenar, Morales, and Bonarek (2017) examine regulatory practices in 80 U.S. cities and identify three overarching policy categories: enabling legislation, urban agriculture production regulations, and fiscal policies. Enabling legislation broadly refers to zoning code amendments to permit agriculture uses and land tenure agreements to identify parcels of land for gardening and other agricultural activities. Agriculture production regulations include provisions regarding animal husbandry, built structures, and responsibilities soil quality, runoff control, insurance, and other practical concerns. Fiscal policies include restrictions on sales, tax abatements, and fees.

Voigt (2011) examines examples of urban agriculture ordinances in U.S. cities like Los Angeles, Cleveland, Seattle, and Madison, all of whom have taken different approaches for enabling urban agriculture. For example, Seattle and Madison both incorporated urban agriculture into updates of their comprehensive plans, while Cleveland took a more immediate approach and passed four ordinances updating the municipal zoning code (Voigt 2011). To combat the often-piecemeal approaches cities take to urban agriculture regulations, Voigt offers a three-step approach: 1) integrate urban agriculture explicitly into the city’s comprehensive plan; 2) clearly define agricultural uses as allow these uses as widely in municipal zoning districts as widely as possible, and 3) permit agriculture as a home occupation, which would allow residents to sell the products they grow (2011, 560).

Mukherji and Morales (2010) specifically focus on zoning codes and how cities are zoning for different types of urban agriculture. They outline a typology of urban agriculture that is based on dimensions of intensiveness of use and extensiveness in area. For instance, community gardens are an example of urban agriculture that is less intensive and less extensive,
while a small-scale farm on the edges of the city are both intensive and extensive. They conduct a broad sweep of municipalities’ zoning ordinances and find that cities are using a wide variety of approaches, and that some communities' ordinances are more permissive than others. Given that no two cities are the same, they do not prescribe specific regulatory approaches for cities starting out with urban agriculture. Rather, they recommend that cities start with broad definitions and permissive standards that allow “creative experimentation” from residents and organizations interested in urban agriculture (Ibid, 7). They also recommend that cities be intentional about siting—permitting urban agriculture everywhere might be best for some cities, but creating corridors of urban agriculture to promote community access and wildlife habitats may be preferable for others (Ibid).

From a practical perspective, there are no shortage of policy toolkits and other documents to shape local governments’ understanding of different approaches to support local food system development and urban agriculture (Goddeeris, Rabynicek, & Takai 2015; Edmonds & Dunning 2016; U.S. Environmental Protection Agency Office of Sustainable Communities 2017). Documents like these are certainly useful for shaping planners’ and public administrators’ notions of the role they play in urban agriculture. Further, there are numerous case studies of individual communities’ experiences with urban agriculture initiatives and regulations that offer valuable lessons learned for other communities and contribute to the ongoing debate of how urban agriculture should be treated in municipal codes of ordinances (McClintock, Wooten, & Brown 2012; Thibert 2012; Colasanti, Hamm, & Litjens 2013; Horst 2015).

This paper builds on these existing practical and theoretical perspectives, seizing the opportunity for further research into regulatory approaches for urban agriculture that is tailored to a community’s interests. Rather than engaging in an in-depth case study of one community, I aim to systematically examine urban agriculture ordinances across several communities. Establishing common and divergent elements of existing urban agriculture ordinances across a
variety of geographic, political, and social contexts can help communities like Rocky Mount understand how different communities are regulating urban agriculture. These takeaways can serve as guidance while considering what might be appropriate in the Rocky Mount community.

**The Role of Municipal Zoning**

Municipal zoning has traditionally been a tool for keeping incompatible uses apart by establishing zoning districts. Given agriculture’s central role in the founding and survival of permanent human settlements, food production used to take place both within and on the edges of cities (Voigt 2011). However, as cities grew and urban form and function changed over time, livestock and other agricultural uses were pushed out of cities for public health and nuisance reasons (Heckler 2012). As municipalities’ power to create distinct zoning districts was increasingly upheld through landmark U.S. Supreme Court cases like Euclid v. Ambler Realty Co. (1926), cities limited agricultural land uses to districts at the urban fringes or in suburban areas (Voigt 2011).\(^3\) This exclusion of agricultural uses from other zoning districts remains a barrier to urban agriculture in many U.S. cities. Consequently, a supportive zoning code is critical enabling legislation for urban agriculture, whether by permitting urban agriculture activities in existing districts or creating new urban agriculture districts (Meenar, Morales, & Bonarek 2017). While zoning codes are not the only regulatory barrier to urban agriculture, it is an important step for cities like Rocky Mount.

**Rocky Mount’s Current Zoning Ordinance**

It is worth examining Rocky Mount’s current Land Development Code (LDC) to understand what might need to change or what existing elements could be interpreted to support urban agriculture. Looking first to the definitions in the ordinance, Rocky Mount has two definitions that relate to agriculture:

\(^3\) The Village of Euclid v. Ambler Realty Co. (1926) affirmed local governments’ ability to create distinct zoning districts through its police powers.
• **Agricultural uses (bona fide farm exemption)**: “Land used as pasture or in the commercial production of crops, horticultural products, fish hatcheries or aquaculture. Also for the purposes of this LDC, the keeping of livestock for commercial or noncommercial purposes is defined as an agricultural use. Livestock includes but is not limited to poultry and hoofed animals such as cattle, horses, swine, goats, and sheep. Also included in this definition of agricultural uses are agricultural accessory buildings, and sales of agricultural products grown or raised on the premises. Not included in this definition is the commercial slaughtering of animals for marketing and farm tenant dwellings” (Rocky Mount, N.C. Code of Ordinances § 102).

• **Farm**: “The production and activities relating or incidental to the production of crops, fruits, vegetables, ornamental or flowering plants, dairy, livestock, poultry, and all other forms of agricultural products having a domestic or foreign market. For the purpose of this definition, farm buildings are defined as structures, other than residences and structures appurtenant there to, for farm use” (Ibid).

Therefore, Rocky Mount currently has agricultural land uses defined in the LDC. However, looking at the zoning districts where agricultural uses are permitted reveals that the intention behind the definition is to promote large-scale operations the edges of the city. Agricultural uses are only permitted in the Agricultural District (Ibid § 503). The Agricultural District “is intended to provide for land situated on the fringe of the urban area that is agricultural in nature and is customarily situated in the city's extraterritorial jurisdiction” (Ibid § 405(A)). Rocky Mount would need to establish new definitions to specifically delineate any urban agricultural uses (e.g. community gardens, urban farms, etc.) to ensure that they are appropriate to be located within the city’s municipal boundaries.

An important note is that North Carolina statute establishes an exemption for “bona fide” farms from local zoning ordinances in county or municipal extraterritorial jurisdiction
(ETJ) areas (N.C. G.S. 160A-360).4 This exemption is mentioned in Rocky Mount’s definition of agricultural use, and the LDC indicates that other than the flood regulations, bona fide farms both in the extra-territorial jurisdiction (ETJ) and within the corporate boundaries are exempt from the LDC (Rocky Mount, N.C. Code of Ordinances § 203). There are criteria that a farm use must meet to be considered a “bona fide farm,” and these are consistent with large-scale agricultural operations rather than urban agriculture (Owens 2016). Establishing clear definitions that draw the distinction between what would be considered a bona fide farm use and what would be an urban agriculture use could help prevent confusion around the exemption and its applicability.

Once urban agriculture land uses are defined, they must be incorporated into the zoning framework. This could involve simply permitting these uses in the existing zoning districts and/or creating a new urban agriculture zoning district. Rocky Mount may also decide to require a special use permit for urban agriculture uses in certain areas. This includes considering if, how, and where to allow for sales of agricultural products.

The LDC outlines dimensional standards for lots in each zoning district (Ibid § 601). Given that urban agriculture is not a current land use, Rocky Mount will need to consider what standards it wants to apply to urban agriculture. This could include required setbacks from the property line for crops and maximum height or area of any structures (storage sheds, greenhouses, hoop houses). In terms of buildings, the LDC currently requires that a building permit be obtained to construct, move, or alter any structure, and the application process for a building permit requires site plan review (Ibid § 702 (A)(B)). Some of the elements required in the site plan review (e.g. location of parking stalls, points of ingress and egress for cars) may not be applicable to sites used for urban agriculture where residents may simply want to build a

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4 Extraterritorial jurisdiction, or ETJ, refers to land just outside of the municipal limits where cities have the legislative authority to enforce zoning and land use regulations (Owens 2014).
hoop house or a storage shed. As the extent of urban agriculture uses are defined, Rocky Mount may consider how to handle the permitting process for structures on urban agriculture sites.

There are appearance standards that apply to certain neighborhoods. Given the requirements that accessory buildings have an architectural style that is compatible with the principal building, this could be used as an argument to prevent greenhouses or hoop houses in certain neighborhoods (Ibid § 714(D)(6)(a)). These standards also require that mechanical equipment should be screened from public view (Ibid § 714(9)(a)). Rocky Mount should consider appearance standards in the context of urban agriculture and how to incorporate standards for agricultural uses and related structures to prevent them from conflicting with the standards in certain neighborhoods.

**Other Relevant Ordinances**

In addition to the LDC, other components of Rocky Mount’s Code of Ordinances are relevant for urban agriculture. The code already reasonably provides for keeping animals. Certain animals, like bees and hogs, are prohibited outside of the Agricultural District. Other animals such as hoofed animals, chickens, and other fowl outside of the Agricultural District require a permit from the animal control unit. The current permitting process includes requirements to prevent nuisances to neighbors, and there are provisions for how many animals can be kept and the structures that must be maintained to house them (Ibid § 4-51, 4-52). These permits must be renewed annually (Ibid § 4-54(b)(1)).

The section of the code that deals with nuisances outlines three provisions that may be problematic for urban agriculture. First, piles of dirt and soil are defined as public nuisances (Ibid § 10-91(1)). Given the nature of gardens and farms, there will often be piles of dirt and soil on site. Rocky Mount will need to consider how to amend this section or incorporate use standards for urban agriculture that indicate where and how soil can be stored on site. Second, the code also establishes any accumulation of “vegetable matter that is offensive by virtue of strong odors or by the inhabitance of...vermin of any kind” (Ibid §10-91(2)). This could be a
complication for composting, although well-managed compost should not cause strong odors or attract pests. Therefore, if and how compost should be kept on site should also be a consideration when discussing use standards for urban agriculture. Finally, “noxious weeds,” defined as weeds or grasses that grow taller than 12 inches within 75 feet or 1 parcel width (whichever is less) of a residential structure, place of business, or any other permanent or temporary structure intended for human occupation is also defined as a public nuisance (Ibid §10-71). Standards about how the urban agriculture uses should be maintained should be considered to prevent these uses from violating this ordinance.

The section of the code that deals with Parks and Recreation does not include any language about community gardens or any other urban agricultural activities. Starting community gardens at a park could be one way to incorporate urban agriculture on public land.

The code specifies that the Department of Public Works is responsible for solid waste collection, and it indicates the types of receptacles that would be required depending on the land use of the property (Ibid § 18-8, 18-9, 18-10). The type and location of receptacles for urban agriculture uses would need to be established in the ordinance.

A final note relates to environmental regulations regarding stormwater and controlling pollutants that might impact the ground and surface water quality. Misuse of pesticides and herbicides can run afoul of the code’s illicit discharge controls (Ibid §10-251(18)). The City should consider appropriate regulations to govern the use of chemicals for urban agriculture purposes.

This is not an exhaustive analysis of elements of Rocky Mount’s Code of Ordinances that may need to be examined or amended to support urban agriculture. However, it provides a starting point for conversations between the community and City staff, and it lays the foundation for the analysis of other cities’ ordinances and how they have addressed some of these items.
Methodology

This paper includes a review of nine municipalities’ urban agriculture ordinances. I selected cities to represent a range of sizes, geographic regions, and regulatory approaches. Some are large cities that are known for having well-developed, nationally-recognized urban agriculture initiatives. Others included in this review are smaller cities closer to Rocky Mount’s size. Some cities have a long history of community gardens in the city limits, while others are just starting to demonstrate interest in urban agriculture and local food system development. This mixture of characteristics provides a broad picture of how various cities are approaching urban agriculture through their zoning ordinances to provide the Just Foods Collaborative with ideas to adapt to their local context. A national review of municipalities and ordinances was not possible given the timeline for this project. Further, a national review would provide breadth for this analysis, but too large a sample size would complicate the depth of analysis under the project timeframe. The cities were selected after a thorough internet search using key phrases like “urban agriculture ordinances” and “urban agriculture zoning ordinances” as well as reviewing numerous articles and existing studies compiling examples of U.S. cities leading the way on urban agriculture initiatives. Table 1 shows the chosen cities by population compared to Rocky Mount and provides the year the municipality first passed an urban agriculture ordinance.

Table 1: Sample of U.S. Cities with Urban Agriculture by Population Category Compared to Rocky Mount

<table>
<thead>
<tr>
<th>City</th>
<th>Population (2019 estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large Cities</strong></td>
<td></td>
</tr>
<tr>
<td>Austin, Texas</td>
<td>978,908</td>
</tr>
<tr>
<td>Detroit, Michigan</td>
<td>670,031</td>
</tr>
<tr>
<td>Baltimore, MD</td>
<td>593,490</td>
</tr>
<tr>
<td><strong>Mid-Size Cities</strong></td>
<td></td>
</tr>
<tr>
<td>Kansas City, Missouri</td>
<td>495,327</td>
</tr>
<tr>
<td>Madison, Wisconsin</td>
<td>259,680</td>
</tr>
<tr>
<td>Winston-Salem, North Carolina</td>
<td>247,945BB</td>
</tr>
</tbody>
</table>

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5 Population according to the U.S. Census Bureau 2019 Population Estimates
<table>
<thead>
<tr>
<th>Small Cities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Peoria, Illinois</td>
<td>110,417</td>
</tr>
<tr>
<td>Lawrence, Kansas</td>
<td>98,193</td>
</tr>
<tr>
<td>Rocky Mount, NC</td>
<td>53,922</td>
</tr>
<tr>
<td>New Port Richey, Florida</td>
<td>16,737</td>
</tr>
</tbody>
</table>

The remainder of this paper includes four sections: profiles of each of the nine municipalities, the content analysis of each urban agriculture ordinance, overall takeaways and discussion from the content analysis, and recommendations for Rocky Mount as it considers future action on urban agriculture. The community profiles provide context about the urban agriculture initiatives in each municipality that led to the formulation and passage of urban agriculture ordinances by the local government. I found information for the profiles through internet research of existing case studies, newspaper and magazine articles, municipal websites, and blog posts about urban agriculture in these communities. The profiles are paired with the respective ordinance content analysis for each community. I describe the process and variables for the content analysis in the subsequent section.

**Content analysis**

The variables of interest for the content analysis were informed by the interests of the Just Foods Collaborative. The group specifically mentioned certain regulatory components or urban agriculture activities that they were interested in exploring for Rocky Mount. Consequently, the analysis of the nine municipal ordinances will examine if and how each of the ten variables described in **Table 2** are addressed in the ordinance’s language.

**Table 2: Ordinance Content Analysis Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use definitions</td>
<td>The different urban agricultural uses (e.g. community gardens, market gardens, urban farms, etc.) that are defined in the ordinance and how they are differentiated from each other</td>
</tr>
<tr>
<td>Zoning requirements</td>
<td>How different urban agricultural uses are permitted in the zoning code (e.g. creating new urban agricultural districts, permitting different uses in existing zoning districts)</td>
</tr>
<tr>
<td>Use of public land</td>
<td>If gardens or farms are allowed on public land</td>
</tr>
<tr>
<td>Use standards</td>
<td>The extent of use standards that apply to a site including setbacks, lighting, parking, permitted structures, etc.</td>
</tr>
<tr>
<td>Sales</td>
<td>If sales are permitted and in what zoning districts they are permitted</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Animal raising</strong></td>
<td>If raising animals (e.g. bees, chickens, goats, etc.) is permitted and in what zoning districts it is permitted</td>
</tr>
<tr>
<td><strong>Required permits &amp; documentation</strong></td>
<td>The applications needed and permits that must be acquired from the municipal government for different urban agricultural uses</td>
</tr>
<tr>
<td><strong>Level of review</strong></td>
<td>The relevant parties in the municipal government that must review a permit application (i.e. whether it is review by administrative staff or must be approved by a board)</td>
</tr>
<tr>
<td><strong>Permanency</strong></td>
<td>If there is language regarding how long urban agriculture uses will be permitted on public land</td>
</tr>
<tr>
<td><strong>Floodplain/Critical water quality zone requirements</strong></td>
<td>If gardening is permitted in floodplains and if there are specific requirements that must be met in floodplains or critical water quality zones</td>
</tr>
</tbody>
</table>

After dissecting each municipality’s ordinance, I offer key takeaways from each that will inform a broader discussion of how these municipalities are regulating urban agriculture. An individual table with the 10 variables addressed in detail is constructed for each ordinance. An important note is that while agricultural uses can include many activities such as aquaculture, horticulture, and silviculture, I narrow the scope of the content analysis to uses like community gardens and small-scale urban farms to focus on the Just Foods Collaborative’s interests. While those other uses may be appropriate inside the municipal boundaries for some communities, this document is meant to support policy approaches to small-scale production of food crops.

To assist with the comprehension of these ordinances, I define key planning terms and concepts in Table 3.

**Table 3: Definitions of Key Terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Permitted by right</strong></td>
<td>If a use is permitted by right it means that it is permitted without any special review or approval by the local government. This can also simply be referred to as a permitted use. Each zoning district has a list of land uses that are permitted by right (Neumann 2019).</td>
</tr>
<tr>
<td><strong>Conditional use or special use</strong></td>
<td>Conditional uses or special uses are land uses that are allowed in a given zoning district only after a number of conditions are met. This allows local governments to take a more nuanced approach to land use planning and apply a case-by-case review of certain uses in certain districts. Conditional or special uses require review and approval from a decision-making body (e.g. governing board, board of adjustment, planning board), but the specific board that is given the authority to make those decisions varies by local government. The terms conditional use and special use can be used interchangeably—in North Carolina, there is no legal difference between them. Some ordinances call them conditional uses and some call them special uses. Some ordinances even have both</td>
</tr>
<tr>
<td><strong>Conditional Uses</strong></td>
<td>Conditional uses and special uses with conditional uses being approved by one board and special uses being approved by another (Owens 2012).</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Administrative Decision</strong></td>
<td>Administrative decisions are the routine tasks and review involved in the implementation of a land development regulation. These decisions are handled by staff and include issuing permits for permitted uses, interpreting ordinances, and reviewing site plans (Owens 2020, 7). Local government staff will review an application or site plan, determine if it meets the technical standards established in the ordinance, and approve or deny it based on the objective standards.</td>
</tr>
<tr>
<td><strong>Quasi-judicial Decision</strong></td>
<td>Quasi-judicial decisions involve applying an ordinance to an individual case. A quasi-judicial process is used to approve conditional or special use permits, variances, certificates of appropriateness in historic districts, etc. These decisions include two key components: 1) findings of fact based on an individual proposal, and 2) the exercise of judgment and discretion in applying an ordinance to an individual situation (Owens 2020, 6). Quasi-judicial decisions require a public hearing where evidence is presented to indicate that the conditions for granting the relevant permit have been met.</td>
</tr>
<tr>
<td><strong>Legislative Decision</strong></td>
<td>Legislative decisions are the policy-making decisions of a governing board. The governing board (e.g. City Council, Board of Alderpersons, County Commissioners) uses legislative decisions to adopt, amend, or repeal ordinances and approve development agreements. While legislative decisions also require a public hearing, these hearings are an opportunity for the board to hear public opinion about the policy in contrast to the evidentiary nature of a quasi-judicial hearing (Owens 2020, 5).</td>
</tr>
</tbody>
</table>

These terms are defined with North Carolina’s statutory framework in mind. Therefore, these processes might be slightly different depending on how different states grant local governments authority. For example, in Detroit, special use permits are reviewed and approved by a City department, which would not be authorized under North Carolina law.

**A Note on the Community Profiles**

Together, the community profiles show a variety of contexts for urban agriculture. Certainly, community activism is important in all of these cases. Urban communities, particularly communities of color, have long been at the forefront of food system activism, especially as urban communities experienced disinvestment during White flight and suburbanization of the 1950s and 60s (Gripper 2020; Shostak 2021). The emphasis placed on community approaches in some of these profiles is in no way meant to erase the activism that has taken place in each of these communities. Rather, the differences highlighted in these
profiles are meant to show that in some cases, the local government has been involved in urban agriculture for decades, even if action on urban agriculture has ebbed and flowed over the years as funding and political support has changed. In other cases, urban agriculture has not been a priority for local governments until more recently, following community interest in making it possible in their city. In both cases, community activism plays a key role in bringing this to a city council’s agenda, whether it has been talked about for years or is just being considered for the first time.

Austin, Texas

Austin is the fastest growing metropolitan area in the country—Austin proper had a population of 978,908 in 2019—and is considered to be one of the cities leading the way on sustainable food systems (Seifer 2014; Ordoñez 2020; U.S. Census Bureau n.d.). Community
activists around urban farms and community gardens in Austin have been active for decades, and the local government’s explicit involvement in urban agriculture began in the late 2000s. The City Council founded the Sustainable Urban Agriculture and Community Garden Program (SUACG) in 2009 as a way to streamline the growing interest in establishing community gardens in Austin. This program oversees the application and permitting process for community gardens on city-owned property. The city maintains a database of all the community on city-owned land. It is unclear how often it is updated, but as of March 2018, there were 628 garden plots on city land, totaling about 8.6 acres. Also in 2009, the City Council passed an ordinance creating the Food Policy Board, a committee charged with advising both the Austin City Council and the Travis County Board of Commissioners on food system issues and relevant policy changes (City of Austin, n.d.).

Austin’s current Urban Farm Ordinance grew out of the legislation originally creating the SUACG. The zoning code had already been fairly permissive of agricultural uses, but the ordinance created specific use definitions (urban farm, market garden, community garden) and established use standards and other processes farmers and gardeners must meet (Rutledge 2013; Rangarajan & Riordan 2019). It has gone through several rounds of revisions in response to issues that have arisen gradually—mostly related to clarifying the size of small-scale farms that are permitted in residential areas and responding to neighbor complaints about odors due to raising animals (Gandara 2018). Of particular note is the incorporation of community gardens into floodplain buyout land. For example, the City purchased flood-prone properties in the Onion Creek neighborhood, and opened up land in both the 100-year and 25-year floodplains for urban agriculture, as long as it is approved by floodplain engineers (Gauthier n.d.). This is not the only time the City has set aside floodplain buyout land for urban agriculture—other gardens such as the Cherry Creek Community Garden that was established on buyout land in 2015 (Laporte 2018). Thus, Austin has developed a good process for repurposing land in the floodplain.
### Austin Urban Agriculture Ordinance

**Use definitions**

The ordinance distinguishes between gardens and farms:

- **Community Garden**: “…the use of a site for growing or harvesting food crops or ornamental crops on an agricultural basis, by a group of individuals for personal or group use, consumption or donation” (Austin, T.X. Code of Ordinances § 25-2-7(3))

- **Urban Farm**: “…the use of a site that can consist of multiple contiguous parcels that is at least one acre in size cultivated primarily for the sustainable production of agricultural products to be sold for profit and may provide agricultural education activities. Agricultural education activities include volunteer programs, farm tours, youth programs and farming classes” (Ibid § 25-2-7(7)).

- **Market Garden**: “…the use of a site that is less than one acre in size cultivated primarily for the sustainable production of agricultural products to be sold for profit and may provide agricultural education activities. Agricultural education activities include volunteer programs, farm tours, youth programs and farming classes” (Ibid § 25-2-7(8)).

**Zoning requirements**

The three uses are permitted in the following districts:

- Community Gardens are a permitted use in all zoning districts (Ibid § 25-2-491)

- Urban Farms are a permitted use in all zoning districts (Ibid § 25-2-491)

- Market Gardens are a permitted use in all base zoning districts (i.e. residential, commercial, industrial, and special purpose); however, according to (Ibid § 25-2-864(D)), there must be a dwelling unit located on site, so market gardens are only be permitted in zoning districts that include residential uses.

**Use of public land**

Austin has guidelines for City-Supported Gardens in Title 14 of the Code of Ordinances governing the use of public streets and property. City-supported gardens refer to either gardens located on city-owned land through a lease agreement or gardens on non-city-owned land where there is documentation allowing the nonprofit organization to use the land for a city-supported garden. This does not apply to privately-owned land (land owned by churches, businesses, etc.) that wish to establish community gardens.

A City-Supported Garden must meet several criteria (Ibid § 14-7-1):

- Gardens must be made up of four or more separate plots gardened by four or more participating individuals, or they must be collectively gardened for personal or group use, consumption or donation; common areas where the group grows ornamental crops are permitted

- The garden must either be started or endorsed by a nonprofit organization, as a nonprofit must be the entity entering into the agreements with the City
- Gardeners must practice organic gardening methods, including water conservation, composting, and pest management (this is not equivalent with USDA organic certification)
- The lot being used must either be a platted lot or must be determined as being exempt from the platting requirements due to its use as a community garden
- The land must have a community garden zoning use classification

Land eligibility for City-Supported Gardens is determined by the director of the department appointed by the city manager to oversee this program (the Department of Parks and Recreation).

Urban Farms and Market Gardens can also be operated on city-owned property. The appropriate contracting for those activities is determined by the city manager.

| Use standards | The different standards that apply to sites for the three uses are as follows:
| Market Garden (Ibid § 25-2-864) |
| - The site must be no more than one acre |
| - A dwelling unit must be located on site |
| - Synthetic pesticides are prohibited |
| - One full-time employee (not including the property owner) is permitted |
| - The residential character of the lot and the dwelling must be maintained |
| - Signs are permitted, but must be in accordance with the City’s regulations |
| - Agriculture education activities are permitted and do not require a temporary use permit |
| Urban Farm (Ibid § 25-2-863) |
| - An urban farm must be between 1 acre and 5 acres in size |
| - No more than two dwelling units are permitted on site |
|   - If animals are being raised on site, a dwelling unit must be present |
| - Synthetic pesticides are prohibited |
| - Two full-time, non-seasonal employees are permitted per acre, plus two for any remaining portion of an acre, if applicable. This does not include the property owner |
| - The residential character of the lot or dwelling must be maintained |
| - Signs are permitted in accordance with the City’s regulations |
| - Agricultural education activities are permitted and do not require a temporary use permit |
| City-Supported Gardens/Community Gardens |
Other than the requirements established in the City-Supported Garden section of Title 14, there do not appear to be use standards for City-Supported Gardens or Community Gardens.

| Sales | Sales are permitted for both market gardens and urban farms with conditions. |
- **Market Gardens**: products grown on site may be sold to off-site distributors or sold on-site. However, on-site farm stands are not permitted, and any sales that are done must be done out of sight of the general public. Only three customer-related trips to the site per are permitted per day (Ibid § 25-2-864(l)).

- **Urban Farms**: Any product raised by the farmer or produced within Texas may be sold on-site or distributed to off-site buyers. However, products produced off-site may not exceed 20% of the retail area on the site (Ibid § 25-2-863(l)).

Sales are not permitted for Community Gardens/City-Supported Gardens. Produce grown in these gardens must be for personal or community use or donation.

### Animal raising

Raising animals is permitted, although it is limited.

- **Market Gardens**: Raising fowl, rabbits, and fish through an aquaponic system is permitted—although it must be within City ordinances in another chapter—and slaughtering, processing, or composting animals on-site is not permitted (Ibid § 25-2-864(F)).

- **Urban Farm**: The requirements vary depending on whether the zoning district is residential or nonresidential. In residential zones, raising fowl, rabbits, and fish is permitted. Slaughtering and processing of fish is permitted, but slaughtering fowl or rabbits and composting animal parts is prohibited. In nonresidential districts, slaughtering, processing, and composting fowl, rabbits, and fish is permitted. Only one animal per 1/10th acre can be processed per week, and these activities must take place at least 50 feet away from the nearest off-site residential structure and out of site from the general public (Ibid § 25-2-863(F)).

Raising animals is not permitted for Community Gardens/City-Supported Gardens.

Individuals can keep fowl, small livestock, and bees on their property, but there are requirements that must be met regarding the number of animals that can be kept, secure and sanitary enclosure provisions, and the prohibition of animals running at large (Ibid § 3-2-1, § 3-2-11, § 3-2-42, § 3-6-2 - § 3-6-7).

### Required permits & documentation

Because these three agricultural uses are permitted by right in all zoning districts, zoning review is not required. However, other permits and/or documentation are needed.

Urban Farms and Market Gardens must submit two applications:

- **Site plan exemption**: Urban Farms and Market Gardens do not need to submit formal site plans in accordance with § 25-5-2 given that these uses involve limited development of a site. Individuals must submit a site plan exemption application, which include details about how the site will be developed. Approval of this application changes the designated land use to urban farm or market garden.
• **Building permit**: A building permit is required whether or not there will be new construction.

There are separate requirements for City-Supported Gardens. A non-profit organization must submit:
• An application for a garden permit
• A land control document if the garden will be on non-city-owned land; this can be a deed or written agreement allowing the nonprofit to use the land as a city-supported garden.
• A license agreement if the garden will be on city-owned land; this license agreement should include insurance provisions, a site sketch, and any other provisions deemed necessary by the city attorney.

<table>
<thead>
<tr>
<th><strong>Level of review</strong></th>
<th>All of these uses involved administrative review by city staff.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Permanency</strong></td>
<td>For City-Supported Gardens, the required license agreement and garden permit can be terminated by either the nonprofit organization or the City. The nonprofit must give the City 90-days notice before the termination of the permit. If the nonprofit organization is no longer meeting the terms of the permit or the license agreement, the City can reassign the garden to another nonprofit within 90 days of the original organization failing to comply. License agreements are renewed annually automatically unless: 1) the nonprofit has been out of compliance and a termination or suspension has been issued, and 2) that the Director of Parks and Recreation continues to consent to the use of this land as a garden.</td>
</tr>
<tr>
<td><strong>Floodplain/Critical water quality zone requirements</strong></td>
<td>Community Gardens, Market Gardens, and Urban Farms are all permitted in the critical water quality zone if it meets requirements in another ordinance. These requirements specify how close a garden or farm can be to a waterway, requires a design in accordance with the City’s Environmental Criteria Manual, and limits on-site structures to under 500 square feet (Ibid § 25-8-261(B)(4)).</td>
</tr>
</tbody>
</table>

**Takeaways from Austin’s Urban Agriculture Ordinance**

- The different urban agriculture uses (Community Garden, Market Garden, and Urban Farm) are distinguished from one another based on three criteria: 1) the size of the lot in use, 2) whether the produce is for community use or commercial sale, and 3) if additional activities, such as educational and volunteer programs, can take place on site.
- The ordinance is permissive from a zoning perspective, as both gardens and farms are permitted in all of Austin’s zoning districts. A caveat is that Market Gardens must have a
dwelling unit located on site, so Market Gardens would only be permitted in zoning districts that include residential uses.

- Community Gardens do not have specific standards separate from what would be required by the zoning district, suggesting that Community Gardens on private land are not heavily regulated by the City. This is in contrast to Market Gardens and Urban Farms that have use standard that must be met on top of zoning district standards. While there are specific details that must be met, these standards are not overly prescriptive. They emphasize maintaining the residential nature of the base zoning district and mandate sustainable gardening and farming practices.

- More activities are permitted for Market Gardens and Urban Farms (e.g. raising animals, educational programs, and on-site or off-site sales). Although for both raising animals and on-site sales, Urban Farms are permitted a higher volume of sales and are able to slaughter animals.

- Austin has a well-established program for community gardens on public land, which they call City-Supported Gardens. These gardens must be operated or endorsed by a nonprofit organization, and they require entering into a formal agreement with the City. Automatic annual renewal of the agreement reduces the need for both City staff and the garden operators to go through a detailed renewal process, making it more feasible for the land to be used as a garden long term. However, language in the ordinance indicates that the City can decide to use the land for something else, which suggests that development proposals could subvert the garden use.

- From an administration perspective, the way the permitting and review process is laid out in the ordinance does not seem to be administratively burdensome for staff. Market Gardens and Urban Farms do not require full site plan review from planning staff, and because these uses are permitted by right, they do not require the extra step of approval from a board or commission, which would require more work from staff. The processes
for City-Supported Gardens are more detailed, and likely require more work from staff; however, this seems appropriate given that the land in use is owned by the City.

- Austin’s ordinance specifically discusses the potential for gardens in floodplains. While this requires review from floodplain engineer and there are restrictions on how close a garden can be to a waterway, the ordinance explicitly enables community gardens in floodplain buyout land.

**Detroit, Michigan**

Contrasting with Austin, Detroit is considered to be one of the quickest shrinking cities in the U.S., peaking at 1.8 million in 1950 and settling at an estimated 670,031 in 2019 (DeVito 2020; U.S. Census Bureau n.d.). This economic and social context has been a catalyst for a variety of urban agriculture initiatives over the last fifty years. In the 1970s, the mayor implemented a Farm-A-Lot program where the city provided seeds and technical assistance to residents to garden in vacant lots left behind from White flight (Gabriel 2013). This program was particularly important to Black elders in the city who started the Gardening Angels, a group
whose efforts laid the foundation for future urban agriculture initiatives and passed on knowledge to younger generations. In the 1980s, Detroit’s mayor encouraged residents to farm on public land, including in parks and outside City Hall (Ibid).

More recently, the City of Detroit has started planning for urban agriculture in response to community groups like the Detroit Food Policy Council organizing gardens and advocating for local food system development. In 2013, the City Council passed its urban agriculture ordinance to permit a variety of urban agricultural activities across zoning districts. The City’s Office of Sustainability operates a land-based project program, where residents can identify public land that is for purchase to start urban agriculture initiatives (Detroit Office of Sustainability n.d.).

This work has given rise to a variety of urban agriculture projects. It’s estimated that Detroit has nearly 1,400 urban gardens and farms, as well as a designated “agrihood”—a term for planned communities built around a working farm—called the Michigan Urban Farming Initiative (Adams 2019). While zoning is no longer a barrier to urban agriculture, other challenges remain. For instance, while farming and gardening on city-owned land may reduce start-up costs of acquiring land, many urban farmers and community organizations struggle to cover the costs of water bills due to irrigation (Albaugh 2019).

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th>Detroit Urban Agriculture Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use definitions</strong></td>
</tr>
<tr>
<td>The ordinance distinguishes between gardens and farms:</td>
</tr>
<tr>
<td>• <strong>Urban Garden</strong>: “A zoning lot, as defined in this article, up to one acre of land, used to grow and harvest food or non-food crops for personal or group use. The products of an urban garden may or may not be for commercial purposes” (Detroit, M.I. Code of Ordinances § 50-16-421).</td>
</tr>
<tr>
<td>• <strong>Urban Farm</strong>: “A zoning lot, as defined in this article, over one acre, used to grow and harvest food crops and/or non-food crops for personal or group use. An orchard or tree farm that is a principal use is considered an urban farm. An urban farm may be divided into plots for cultivation by one or more individuals and/or groups or may be cultivated by individuals and/or groups</td>
</tr>
</tbody>
</table>
collectively. The products of an urban farm may or may not be for commercial purposes” (Ibid § 50-16-421).

| Zoning requirements | These uses are permitted by right in some zoning districts and as a conditional use in others (Ibid § 50-12-109).  
- Urban Gardens: Permitted by right in all residential districts and all business districts except for one—the “Major Business District”—where it is a conditional use; permitted as a conditional use in industrial districts  
- Urban Farms: Permitted by right in higher-density residential districts and business districts except for the Major Business District where it is a conditional use; permitted as a conditional use in lower-density residential districts and industrial districts.  

There are separate requirements for special and overlay districts—in some cases they are not allowed and in others they are a conditional use or require legislative review.  

Generally, hoop houses and greenhouses are permitted by right in business and industrial districts, and are conditional uses in residential districts. |

| Use of public land | The City operates a land-based projects program that allows people to purchase or lease land for projects—including urban agriculture. However, this program is not part of the urban agriculture ordinance. |

| Use standards | Numerous use specifications apply to both urban gardens and farms (Ibid § 50-12-397 – 410).  
- Growing oats, wheat, and rye is generally not permitted to prevent rodents  
- Trash containers should be stored at the rear of the property  
- Buildings must comply with accessory structure height and setback guidelines established in the zoning ordinance  
- Crops and greenhouses/hoop houses must have a setback of 5 feet from the property line  
- Any lighting on site must be shielded to prevent lighting surrounding properties  
- Signage is regulated  
- Any gardens or farms that are a conditional use must provide written notice of the agricultural activities to abutting property owners  
- The property must be maintained to prevent grass from growing too tall and plants from encroaching into the public right-of-way  
- Appropriate drainage controls must be in place  
- Agricultural uses should not be a nuisance to the surrounding area (noise, odors, fumes, etc.)  
- Tools and equipment should be stored out of site in an enclosed structure  
- Any restroom facilities on site should be screened from public view  
- Compost piles must be at the rear of the property and at least 20 feet from the nearest residential structure |
| There are also regulations on the accessory uses that can accompany urban gardens and farms. Structures require a building permit where applicable.  
- **Urban Garden**  
  - Green houses  
  - Farm stands  
  - Hoop houses  
  - Signs  
  - Benches, bike racks, raised beds, compost bins, picnic tables, etc.  
  - Tools sheds and shade pavilions  
  - Garages  
- **Urban Farm**  
  - All the accessory uses/structures permitted at an urban garden  
  - Aquaculture  
  - Aquaponics  
  - Hydroponics  
  - Barns/storage buildings  
  - Structures for cold storage and processing |  
| **Sales** | Sales of products grown at urban farms and urban gardens are permitted on-site at a farm stand as an accessory use and/or can be sold at a farmers’ market (Ibid § Sec. 50-12-398) |  
| **Animal raising** | Raising animals is prohibited in accordance with another chapter of the code (Ibid § Sec. 50-12-397) |  
| **Required permits & documentation** | When urban agriculture is a conditional use in a particular zoning district, it requires site plan review. Farmers and gardeners must submit detailed plans that includes (Ibid § 50-3-138):  
- Basic information about the applicant  
- Site area and location map  
- A description of existing conditions (wetlands, any bodies of water, existing structures, proximity to sensitive land uses)  
- Site plan that includes (where applicable):  
  - Proposed crops and crop areas  
  - Location, description, and dimension of proposed structures  
  - Setbacks  
  - Fencing/walls  
  - Location of compost piles  
  - Points of ingress and egress  
  - Location of loading areas  
  - Location of trash containers  
  - Location of storage structures and items to be stored  
- A narrative that includes a variety of information related to usage of pesticides and equipment, waste management procedures, erosion and runoff control measures, and potential environmental impacts |  
<p>| <strong>Level of review</strong> | The level of review depends on the zoning district in which the agricultural use is proposed. In most cases, the site plans will only |</p>
<table>
<thead>
<tr>
<th>Permanency</th>
<th>Given that Detroit does not have a program for gardens on city-owned land that is set up in ordinance, land tenure or permanency for urban agriculture is not mentioned.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floodplain/Critical water quality zone requirements</td>
<td>It appears that urban agriculture activities would be permitted in a floodplain, but additional steps would need to be taken to receive a floodplain development permit (Ibid § 5-14-527).</td>
</tr>
</tbody>
</table>

**Takeaways from Detroit’s Urban Agriculture Ordinance**

- Detroit’s two urban agriculture uses (Urban Garden and Urban Farm) are distinguished based on two criteria: 1) the size of the lot, and 2) what is being grown (e.g. orchards are considered a farm by default). Otherwise, the two uses are fairly similar in definition, as products from either can be used for community consumption or commercial purposes.

- Both of these uses could be located in any of Detroit’s zoning districts; however, in some districts they are conditional uses. This requires additional steps for both those interested in starting a garden or a farm and City staff. Community Gardens are widely permitted by right throughout the city.

- The ordinance outlines fairly specific use standards that must be met for both Urban Gardens and Urban Farms, including limiting the types of crops that can be grown, establishing crop and structure setbacks, and mandating drainage controls. Similar to Austin, most of these standards seem to be aimed at preserving the character of the base zoning district and minimizing nuisances that agricultural uses may cause.

- There is a spectrum of permitted activities, with Urban Farms having more permitted accessory uses, such as aquaculture and hydroponics. However, the ordinance is equally
permissive of on-site or off-sites sales for both uses, and raising animals is prohibited for both Urban Gardens and Urban Farms.

- Detroit’s program for urban agriculture on vacant land involves applicants purchasing or leasing land from the City. However, this program was not laid out in the ordinance.

- Where urban agriculture uses are permitted by right, any necessary review by staff would not be any more administratively burdensome than other permitted uses. In some zoning districts, Urban Gardens and Urban Farms would require approval as a conditional use. The City of Detroit’s conditional use approval process does not involve a decision from a board or commission. Rather a City department must hold a public hearing and issue a conditional land use grant.

- Detroit has a floodplain development permit process. Urban agriculture is not specifically mentioned as a desirable use in the floodplain, but it is not prohibited either. According to the ordinance, development of any type requires a floodplain development permit, so as long as the proposed design for the site meets the City’s criteria, the use should be approved.

**Baltimore, Maryland**

Urban agriculture has deep roots in Baltimore, and the municipal government has been involved in promoting urban gardening as a way to revitalize vacant lots for decades. Baltimore’s population has been gradually trending downward, and the 2019 Census estimate of 593,490 had the city’s population dropping below 600,000 for the first time in a century (Knezevich 2020). The vacant lots that resulted from suburbanization created an opportunity for community gardens. Similar to Detroit, in the early 1970s, the City implemented a program called Adopt-a-Lot where neighborhood groups or individuals could turn city-owned vacant lots into gardens or playgrounds. The mayor also created an Urban Gardening Task Force to
increase urban gardening, and by 1981, there were 33 gardens on vacant city-owned land (City of Baltimore 2013).

While these early efforts stalled due to lack of funding and changes in political administrations, growing interest in gardens for environmental, public health, and entrepreneurial reasons led to additional action from the City of Baltimore. In 2009, the City created the Baltimore Sustainability Plan that included creating a sustainable food system as a goal. To help inform land use policy to support urban agriculture, the Planning Department held stakeholder meetings with farmers to identify characteristics for urban agriculture sites, and the department undertook a GIS land inventory project to identify city-owned vacant sites suitable for urban agriculture. As the City began a multi-year process to rewrite the zoning code in 2008, changes were proposed to support urban agriculture (City of Baltimore 2013). Prior to the zoning rewrite, urban agriculture had only been permitted as a temporary use, but the revisions to the code created new use categories to permit urban agriculture in most zoning districts (City of Baltimore Office of Sustainability (a) n.d.)

Ultimately, the City adopted an urban agriculture plan entitled Homegrown Baltimore (City of Baltimore 2013). The City’s urban agriculture initiative includes three stated goals: 1) reducing vacant blight, 2) increasing food access, and 3) creating education and employment opportunities (City of Baltimore Office of Sustainability (b) n.d.). This initiative includes a variety of programs, including a land leasing initiative where farmers can obtain five-year leases of city-owned land for $100 a year (City of Baltimore Office of Sustainability (b) n.d.).

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th><strong>Baltimore Urban Agriculture Ordinance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use definitions</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
- **Community-Managed Open Space Farm**: An open space area that is maintained by 1 or more household that, in addition to the uses permitted for community-managed open space gardens, includes 1 or more of the following activities: the keeping of livestock or animals, a temporary farm stand, and/or the receipt and free distribution of compost (Ibid § 1-304(i)(1)).

- **Urban Agriculture**: The cultivation, processing, and marketing of food, with a primary emphasis on operating a business enterprise. Urban agriculture may include: animal husbandry, aquaculture, agro-forestry, vineyards and wineries, and horticulture; and it may involve the use of: intensive production methods, structures for extended growing seasons, on-site sale of produce, and composting (Ibid § 1-314(h)(1-2)).

### Zoning requirements
These three urban agricultural uses are either permitted uses or conditional uses requiring approval by the Board of Municipal and Zoning Appeals (BMZA). Generally, Community-Managed Open Space Gardens are permitted by right in all zoning districts while Community-Managed Open Space Farms and Urban Agriculture are conditional use requiring approval by the BMZA. There are two base zoning districts with slightly different rules.

- In the Educational Campus District, Community-Managed Open Space Gardens and Urban Agriculture are permitted by right, but Community-Managed Open Space Farms are conditional uses.

- In the industrial districts, the uses vary depending on the intensity of the industrial use. Community-Managed Open Space Gardens are permitted and Community-Managed Open Space Farms are conditional uses in more mixed-use industrial districts, but neither use is permitted in the light, heavy, or maritime industrial districts. Urban Agricultural is a conditional use in these mixed-use industrial districts as well as the light industrial district, but it is not permitted in heavy industrial or maritime industrial districts.

### Use of public land
The City of Baltimore does operate a land-lease program, but that program is not established in the code of ordinances.

### Use standards
The standards that apply to these different uses are as follows:

- Standards that apply to both Community-Managed Open Space Gardens and Community-Managed Open Space Farms (Ibid § 14-307(a-b)):
  - When food crops are grown, the soil on-site must be tested to ensure it is safe, and if necessary, remediated.
  - Permanent structures are not permitted on site, but temporary structures (greenhouses, hoophouses, etc.) to extend the growing season and accessory structures (gazebos, sheds, etc.) are permitted. Open-air recreation spaces, such as playgrounds, are also permitted.

- Standards that only apply to Community-Managed Open Space Farms (Ibid § 14-307(c-e)):
  - Temporary farmstands for the sale of products grown on site are permitted, but they must be stored on site or off
site during off seasons. Only one farmstand is permitted per lot.
  - Composting is permitted so long as the compost pile is three feet from the property line and they are maintained so that they prevent nuisance odors and pests. Materials from other sites can be accepted to compost on site, and compost may be distributed for use on other lots for free—it cannot be sold.

  - Standards that apply to Urban Agriculture uses:
    - A management plan is required for certain activities and must be approved by the planning director. These activities are: animal husbandry of any kind, on-site food processing, spreading manure, spraying chemicals, and the use of heavy equipment.
    - Greenhouses—whether permanent or temporary—are permitted with no square footage maximum.
    - Soil testing and remediation is necessary for food crop production.
    - Permanent accessory structures (sheds, barns, pavilions, etc.) are permitted, but must be set back at least 5 feet from the property line, cannot exceed 25 feet in height, and cannot exceed 25% of the lot area.
    - Farmstands are permitted but must be stored on or off site during off season.
    - Composting is permitted so long as the compost pile is three feet from the property line and they are maintained so that they prevent nuisance odors and pests. Materials from other sites can be accepted to compost on site, and compost may be distributed for use on other lots for free—it cannot be sold.

Additionally, according to the lot dimensions established for the zoning districts, in the R-1A Detached Residential District (very low-density), lots must have a minimum size of 2 acres.

<table>
<thead>
<tr>
<th>Sales</th>
<th>Sales are permitted for both Community-Managed Open Space Farms and Urban Agriculture. Sales can be conducted at temporary farm stands on site (Ibid § 14-307(c)).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal raising</td>
<td>Raising animals is permitted for both Community-Managed Open Space Farms and Urban Agriculture, and must be done in accordance with the Baltimore City Health Department’s Health Code. All animals must be provided with adequate care, food, and water.</td>
</tr>
<tr>
<td></td>
<td>- Bees are permitted but must be registered with the Maryland Department of Agriculture (MDA). The number of hives is limited based on the size of the lot, and hives must be set back at least 5 feet from the property line.</td>
</tr>
<tr>
<td></td>
<td>- Chickens are also permitted and must be registered with the MDA. The number of chickens is limited based on the size of the lot (with a maximum of 10). An adequately sized coop must be provided and must be 15 feet from any residence.</td>
</tr>
</tbody>
</table>
Takeaways from Baltimore’s Urban Agriculture Ordinance

- Baltimore’s three urban agriculture uses (Community-Managed Open Space Garden, Community-Managed Open Space Farm, and Urban Agriculture) are distinguished based on the type and intensity of the activities the lot is used for and if the products are for community consumption or commercial enterprise.

- From a zoning perspective, Baltimore is the first city in the sample to have zoning districts where urban agriculture uses are not permitted. None of the urban agriculture
uses are permitted in certain industrial districts, which indicates that, depending on the character of certain zoning districts, urban agriculture may not be appropriate in certain areas of a city. Otherwise, Baltimore’s Community Managed Open Space Garden use is pretty widely permitted by right across the city while Community Managed Open Space Farms and Urban Agriculture are generally treated as conditional uses.

- The ordinance outlines some fairly detailed standards, and the number of requirements increase as the urban agriculture use becomes more intensive. In general, as with other ordinances, the standards are focused on preventing urban agriculture from becoming a nuisance. The soil testing requirements for food crops and management plan requirement for Urban Agriculture also speak to concern for public health and environmental management.

- The permitted activities for the three uses are a spectrum, with Urban Agriculture having more accessory uses due to its commercial nature. However, both Community Managed Open Space Farms and Urban Agriculture can include raising animals and on-site sales.

- Community Managed Open Space Gardens are always permitted by right, so they would not require more than administrative review to ensure zoning compliance. Conditional uses require more staff time and approval from the Board of Municipal and Zoning Appeals.

- Baltimore does not require a separate permit for urban agriculture uses to be permitted in the Floodplain Overlay Districts. Applicants for conditional uses need to show that the use will not increase flood risk, that the design will help minimize flood damage and maximize drainage, among other requirements.
Kansas City, Missouri

The Kansas City metropolitan area straddles the Missouri and Kansas state lines, and is characterized by sprawl due to suburbanization and urban flight during the mid-20th century (McCammon 2017). However, more recently, Kansas City has been identified as one of the fastest growing downtown areas in the country: the population grew by 87% from 2000 to 2018 after decreasing for the 20 years prior (Tomer & Fishbane 2020). As of 2019, Kansas City, Missouri had a population of 495,327 (U.S. Census Bureau, n.d.).

The momentum behind urban agriculture in Kansas City appears to be a relatively recent initiative and largely community driven. Two groups in particular—Cultivate Kansas City and the Greater Kansas City Food Policy Coalition—have worked with City staff to effect local policy change to enable urban agriculture (Cultivate Kansas City 2015). Cultivate Kansas City, a nonprofit organization, partnered with the City to host the first KCMO Food Summit, bringing together community groups and the local government to examine opportunities for the City to
support local food system development (Urban Neighborhood Initiative 2020). As a result of this community advocacy, the City Council passed its urban agriculture ordinance in 2010.

The ordinance greatly expanded urban agriculture uses across the City’s zoning districts, and the updates were particularly important to increase economic opportunities for farmers and gardeners looking to sell their produce (Cultivate Kansas City 2015). Cultivate Kansas City and other community-based organizations have taken the lead on spreading awareness and supporting urban agriculture initiatives in Kansas City (Smiechowski 2014). While nonprofits appear to be playing the central role in the growth of urban agriculture, the municipal government is a key partner. Kansas City is reportedly home to over 3,000 empty lots, which the city must spend money to maintain (Smiechowski 2014). Neighborhoods have developed projects to garden on these lots, taking maintenance costs off the City (Spencer 2014). In 2014, the City established a grant program to assist groups in obtaining water access—which can be a big barrier to entry for many aspiring farmers and gardeners (Spencer 2014). It is unclear if this program is still in operation in 2021.

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th>Kansas City Urban Agriculture Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use definitions</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Zoning requirements</strong></td>
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</tbody>
</table>
Use of public land

In addition to creating urban agriculture land uses, Kansas City also amended the redevelopment ordinance to allow for the creation of Urban Agriculture Zones (UAZs) (Ibid § 74-201 – 220). The concept of UAZs was established through enabling legislation by the Missouri General Assembly as means to bring economic development to blighted areas.

Businesses, or a group of businesses, may apply to the City to establish a UAZ, whether for growing, processing, or vending locally grown produce and/or value-added products. Applicants must be qualifying small businesses recognized by the MO Department of Agriculture. These UAZs can only be established on blighted land. To be considered blighted, parcels must either be vacant, owned by the City and have been determined to be eligible for use for urban agriculture, located in an area with a 20% or higher poverty rate, or located in a food desert (i.e. 1 mile or more from a grocery store). Establishing UAZs brings certain benefits to growers and vendors, such as tax incentives and commercial water rates incentives. The businesses must go through a thorough application process, and if approved, must comply with annual reporting requirements and agree to a clawback (recoup of tax incentive funds) if they violate the conditions of the UAZ.

A separate article of the redevelopment ordinance created a separate land bank agency to acquire land for a variety of uses including urban agriculture (Ibid §. 74-80 (e)(6)).

Use standards

<table>
<thead>
<tr>
<th>Use standards</th>
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<tbody>
<tr>
<td>The standards that apply to these different uses are as follows:</td>
</tr>
<tr>
<td><strong>Home Garden</strong> (Ibid § 88-312-02-A):</td>
</tr>
<tr>
<td>o Food grown may be used for personal consumption, or whole, uncut produce may be sold on site or donated.</td>
</tr>
<tr>
<td>o Row crops (crops grown in rows that are two feet in height or taller) are not permitted in the front yard of residentially zoned property, except in the least dense residential district.</td>
</tr>
<tr>
<td>o A home garden is an accessory use to a principal residential use, and must comply with building/lot standards for the given zoning district.</td>
</tr>
<tr>
<td>o On-site sales are not considered a home occupation.</td>
</tr>
<tr>
<td>o Any area of land that is managed as a CSA cannot be considered a Home Garden</td>
</tr>
<tr>
<td><strong>Community Garden</strong> (Ibid § 88-312-02-B):</td>
</tr>
<tr>
<td>o The lot may include common areas (e.g. storage sheds) used and maintained by the group</td>
</tr>
</tbody>
</table>
The Community Garden must comply with the building/lot standards for the zoning district.

- Row crops (crops grown in rows that are two feet in height or taller) are not permitted in the front yard of residentially zoned property, except in the least dense residential district.
- A community garden may be a principal or accessory use.
- Any area of land that is managed as a CSA cannot be considered a Community Garden.

- CSA (Ibid § 88-312-02-C):
  - Garden and farm-related buildings must comply with the accessory structure requirements in the given zoning district.
  - Farmed areas must be set back at least 3 feet from the property line, and the setback must be covered with ground cover plants.
  - Row crops (crops grown in rows that are two feet in height or taller) are not permitted in the front yard of residentially zoned property, except in the least dense residential district.
  - Shareholders may pick up produce grown on site and may work at the site.
  - The site must be designed and maintained so that chemicals will not drain onto adjacent properties.
  - Tractors, lawnmowers, and other equipment in more dense residential districts must be stored in an enclosed structure.
  - Interns and apprentices may work at the site.
  - Synthetic pesticides may be used in accordance with federal and state regulations.

| Sales | Sales are permitted for all three urban agriculture uses. For Home Gardens, on-site sales are permitted, and are not considered to be home occupations (Ibid § 88-312-02-A). For Community Gardens, on-site sales are permitted on otherwise vacant property, but may not occur residentially-zoned property, except in the least dense residential district (Ibid § 88-312-02-B). For CSAs, on-site sales are permitted (Ibid § 88-312-02-C).

An important note for all uses is that produce sold must be whole, uncut produce. Therefore, there is no processing of produce allowed on site. |

| Animal raising | Livestock—including larger animals (cattle, goats, sheep) and fowl—can be kept in the municipal boundaries in accordance with additional regulations. For large livestock, they must be kept 200 feet away from the nearest structure used by people, and only two animals can be kept (Ibid § 4-12 (a)). Chickens and other fowl can be kept, but they must be kept in coops that are 100 feet away from the nearest structure used by people, and no more than 15 chickens may be kept (Ibid § 14-15 (e)(f)). Given these space requirements, the zoning districts where animals may be legally kept may be limited. |
| Required permits & documentation | These standards do not apply to land that is zoned for agricultural use (i.e. traditional agricultural use, not urban agriculture). Where urban agriculture uses are permitted uses, projects may require site plan review to ensure compliance with the zoning district. For a CSA to operate in a residential district, the owner must obtain a special use permit. In addition to the specific use standards outlined in the previous section, the City may impose additional conditions it deems reasonable for the operation of the CSA. The permit may be granted for an initial period of one year, with subsequent renewals for up to a five year period if the CSA has complied with all of the requirements for the previous permit period (Ibid § 88-312-02-C (1)(j-k)). |
| Level of review | Where urban agriculture is a permitted use, it only requires administrative review by staff. Where a special use permit is required, the City Plan Commission must review the application before referring it to the Board of Zoning Adjustment. The Board must hold a public hearing and approve it through a quasi-judicial decision. Creation of a UAZ requires a legislative decision by the City Council. |
| Permanency | Designation as a UAZ and any benefits received from the City is temporary. The period of time will be set in the ordinance passed to create each UAZ, but cannot exceed 25 years. However, the City Council may dissolve the UAZ at any time if they determine that the businesses involved are not meeting the requirements, or if they determine that the UAZ is no longer in the city’s best interest (Ibid § 74-218). |
| Floodplain/Critical water quality zone requirements | Urban agriculture uses could be approved for the floodplain, but any accessory structures may require a variance and a floodplain development permit (Ibid § 28-77). |

**Takeaways from Kansas City’s Urban Agriculture Ordinance**

- Kansas City includes a definition of a home garden as an urban agriculture use. The three types of uses (Home Garden, Community Garden, and Community Supported Agriculture) are distinguished based on the scale of the gardening activities (home gardening versus growing food for shareholders) and whether the site is maintained by residents of the property or a group of individuals.

- From a zoning perspective, Kansas City’s ordinance is permissive. The three uses are permitted by right in three of the four base zoning districts, but the more intensive use—Community Supported Agriculture—is treated with increased scrutiny in most of the residential districts where it is a special use.
• The use standards for each of the uses are mostly deferential to the standards of the base zoning district, especially for Home Gardens and Community Gardens, as the prohibition of row crops in the front yard is the only additional standard layered on top of the zoning district’s requirements. Community Supported Agriculture has more specific standards, including crop setbacks and drainage requirements. Again, a goal appears to be reducing potential nuisances to surrounding properties.

• On-site sales are permitted for all three uses, including Home Gardens, and Community Supported Agriculture is allowed to have interns work on site. Otherwise, the ordinance does not mention many other activities (e.g. educational programs) that can take place on site. Raising animals is not included in any of the three use definitions, so Kansas City’s urban agriculture program seems more geared toward food and horticultural crops. Keeping animals is permitted within the municipal boundaries, but the space requirements for keeping animals may limit the zoning districts where they can be kept.

• Kansas City’s program for the use of public land is unique, as it is a state program being implemented on the local level. The goal is to create pockets of urban agriculture enterprises to spur economic development, but the existence of the program is dependent on the state-level legislation creating the program.

• Where a use is permitted by right it requires administrative review, and special uses require additional steps to be brought before the City Plan Commission.

• Similar to other cities in the sample, gardening is not specifically mentioned as a preferred use in floodplains, but it is also not prohibited. Depending on the improvements that will be made on the site (e.g. storage structures), a floodplain development permit or variance may be required.
Madison, Wisconsin

Madison is the fastest-growing city in Wisconsin—it’s population was 259,680 in 2019—and is situated on rich agricultural land in one of the most productive agriculture states in the U.S. (Hubbuch 2019; USDA 2021). Unlike some of the larger cities included in this paper, the interest in urban agriculture grew out of residents’ desire for a greener city and increased connections to the area’s agricultural history as opposed to a policy response to urban decline and vacant land (Raja & Diao 2016). In fact, Madison has relatively limited vacant lots, which is good for the overall economic well-being of the city, but poses challenges for the expansion of urban agriculture (Becker 2016).

The City began a zoning rewrite process in 2008, and the new zoning ordinance, adopted in 2013, incorporated many changes to support a variety of urban agriculture activities (Becker 2016). In addition to the zoning updates, the City of Madison supports urban agriculture through key partnerships and funding opportunities. In 2014, the City, the Dane County UW Extension office, and a local nonprofit called Community GroundWorks formed the Gardens Network, a group that supports local gardens with resources and technical assistance. The City provides funding for this network through its Community Development Block Grant and money from the general fund, and the Network also obtains some funding from the plot fees of the
gardens it supports (Becker 2016). The Madison Food Policy Council is an official City Committee with multiple workgroups that provides recommendations to the City Council (City of Madison (a) n.d.). There is an urban agriculture workgroup that meets monthly, although it appears that this group has not met since before the COVID-19 pandemic began in March 2020 (City of Madison (b) n.d.).

As previously mentioned, Madison has limited vacant space, but the City has taken the lead on a land inventory project to identify more city-owned space for gardens. The gardens that currently exist on city-owned property were created with a five-year master lease (expiring in 2020) with one automatic renewal, and the City has indicated that they want urban agriculture to be a long-term land use (Becker 2016). The Madison Area Community Land Trust provides one alternative model to leasing public land. The nonprofit developed the Troy Gardens project, which includes a housing community, an organic community-supported agriculture (CSA) farm, and 327 community garden plots (Madison Area Community Land Trust n.d.). The 26 acres of open space is held in a conservation land easement (Center for Resilient Cities n.d.). While space constrains the extent of Madison’s urban agriculture scene, their permissive regulatory approaches have been largely embraced by community members (Becker 2016).

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th>Use definitions</th>
<th>Madison Urban Agriculture Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Garden:</strong> “An area of land or space managed and maintained by a group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, for personal or group use, consumption or donation. Community gardens may be divided into separate plots for cultivation by one or more individuals or may be farmed collectively by members of the group and may include common areas maintained and used by group members” (Madison, W.I. Code of Ordinances § 28.211).</td>
<td></td>
</tr>
<tr>
<td><strong>Market Garden:</strong> “An area of land managed and maintained by an individual or group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, to be sold for profit” (Ibid § 28.211).</td>
<td></td>
</tr>
</tbody>
</table>

<p>| Zoning requirements | Madison has four base zoning districts: Residential, Mixed Use and Commercial, Downtown and Urban, and Employment. Community |</p>
<table>
<thead>
<tr>
<th>Gardens</th>
<th>Gardens are permitted by right in all of these districts. Market Gardens are permitted as a conditional use with supplemental regulations in all of these districts (Ibid § 28C – 28F). In addition to permitting urban agriculture uses widely across the existing zoning districts, the ordinance also establishes an Urban Agricultural District. Within this district, Community Gardens and Markets Gardens are permitted by right. The goal of the district is to ensure that urban garden and farm areas are appropriately located and provide space for community education, job training, natural resource protection, and community enjoyment (Ibid § 28.093 (1)).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of public land</td>
<td>Madison also adopted an ordinance to allow for edible landscaping on public property. An individual or organization can apply to the City for an edible landscaping permit to plant and maintain edible plants on City-owned property. The land remains City-owned and any plants are open to the public to be harvested and consumed for free—the produce cannot be sold by anyone. The applicant must submit a plan for the proposed landscaping, and there are certain limitations, including where these plantings can be installed. While the City may arrange for water services to be provided at the site, the applicant must pay for those services (Ibid § Sec. 8.33).</td>
</tr>
</tbody>
</table>
| Use standards | There are not use standards specific to urban agriculture uses. Sites with Community Gardens and Market Gardens must comply with the use standards for the given zoning district (which will mostly impact permitted lot size and required setbacks). There are specific use standards for gardens located in the Urban Agriculture District (Ibid § 28.093):
- Lots must be at least 15,000 square feet and 50 feet wide
- Front, side, and rear yard setbacks are 15 feet, 6 feet, and 20 feet, respectively, or the required setback in the adjacent zoning district, whichever is greater
- Maximum height for buildings is 25
- Maximum lot coverage of buildings and paved areas (does not include hoop houses and greenhouses) is 15% |
| Sales | Sales are permitted for Market Gardens. However, the ordinance does not specify if on-site sales are permitted or if the products must be harvested and sold elsewhere. |
| Animal raising | Keeping chickens and bees is permitted as an accessory use in the residential, mixed use and commercial, and downtown and urban districts and is permitted by right as a principal or accessory use in the Employment district. To keep chickens, an individual must obtain an annual license from the City and pay an annual license fee of $10.00. A similar annual license and fee must be obtained and paid to keep bees. Structures and setbacks for housing the animals must be consistent with the accessory use standards in each district. Animal husbandry is permitted as a conditional use in the mixed use and commercial districts. Within the employment districts, it is a |
| **Required permits & documentation** | Where a conditional use, Market Gardens must obtain a conditional use permit through a decision by the City Plan Commission. Market Gardens must submit a Management Plan to the City Zoning Administrator, the Alderperson of the district where the garden is located, the Health Department for Madison and Dane County, and any neighborhood or business associations that serve the area if the following activities will be a part of the Market Garden (Ibid § 28.151):  
- Animal husbandry  
- Off-street parking of more than 10 vehicles  
- Processing of food produced on site  
- Spreading of manure  
- Application of fertilizers and pesticides  
- Use of heavy equipment such as tractors  
Community Gardens and Market Gardens, given that they will likely include a change in use of a site, site alterations, and/or new principal or accessory buildings, will be subject to site plan review by the Zoning Administrator (Ibid § 28.186(2)). |

| **Level of review** | Conditional uses require a public hearing and approval by the City Plan Commission through a quasi-judicial decision process (Ibid § 28.183). Permitted uses require administrative review from City staff (Ibid § 28.186(2)). Applications for an edible landscaping permit must first be reviewed by City staff and then approved by the Food Policy Council (Ibid § 8.33(5)). |

| **Permanency** | The term of an edible landscaping permit for City-owned land can vary, but must not be less than 3 years (Ibid § 8.33(5)). If a permittee fails to comply with the terms of the permit or the ordinance, the City may terminate the permit and dispose of the landscaping (Ibid § 8.33(6)(f)). |

| **Floodplain/Critical water quality zone requirements** | Development that may obstruct the flow of floodwaters or cause any increase in the regional flood height is not permitted in the Floodplain Overlay District. Development in a floodplain requires approval and a permit from the Zoning Administrator (Ibid § 28.121(7)). |

**Takeaways from Madison’s Urban Agriculture Ordinance**

- Madison has two urban agriculture uses, Community Gardens and Market Gardens. They are distinguished based on two criteria: 1) whether the produce will be used for individual/group consumption or sold, and 2) Market Gardens may be managed by a group or individuals while Community Gardens are, by definition, managed by a group.

- From a zoning perspective, urban agriculture uses are widely permitted across the city. Community Gardens are permitted by right in all zoning districts, and Market Gardens
are a conditional use in all zoning districts. Additionally, Madison is the only city in the sample that created a specific Urban Agricultural District where both uses are permitted by right. A potential benefit of creating a specific district for urban agriculture is that it may reduce nuisance complaints if urban agricultural uses are clustered together in certain areas.

- Madison does not have separate standards from the zoning district standards for either Community Gardens or Market Gardens. The ordinance lays out the lot standards for the Urban Agricultural District, which covers pretty basic requirements such as lot setbacks and height.

- In terms of permitted activities, sales are permitted for Market Gardens, but the ordinance is not specific in describing how sales can take place and if they must be on site or off site. Raising animals and using synthetic pesticides is also permitted for Market Gardens, but they require a management plan to be submitted to the City. Similar to other cities in the sample, the more intensive uses require more oversight from the City.

- Madison’s program for using public land for gardening takes a slightly different approach, as it is designed to provide space for edible landscaping. Edible landscaping is typically much smaller-scale than a community garden, and anyone may pick the produce at any time, but given that Madison does not have many vacant lots, this may be a feasible way to incorporate urban agriculture on public land. The land can be used for edible landscaping for multiple years at a time, and since this use does not require the lots to be vacant and does not require the use of the entire lot, it may be less likely that the City would choose to use the land for a different purpose in the future.

- Community Garden require administrative review by City staff, similar to any other use permitted by right in Madison. Conditional uses require the additional steps of being brought before the City Plan Commission.
• Similar to other cities in the sample, Madison does not mention gardening as a preferred use in the floodplain, but it is not prohibited either. These uses in the floodplain would require a permit from the Zoning Administrator.

Winston-Salem, North Carolina

Winston-Salem, while a much larger city than Rocky Mount, provides a useful comparison as it operates in the same statutory environment. Further, it provides another example of a more grassroots approach where community activists have elevated urban agriculture relatively recently. With a population of 247,945 in 2019, Winston-Salem is the fifth-largest city in North Carolina, although it is not experiencing the same growth and development pressures cities as other metropolitan areas in North Carolina (Stanford 2019; U.S. Census Bureau n.d.). One neighborhood of the city, East Winston, is particularly impacted by food insecurity and economic marginalization, and activists from this community have been at the forefront of urban agriculture promotion in Winston-Salem (Railey 2020).

Community activism coalesced with planning efforts in both Winston-Salem and Forsyth County. The joint comprehensive plan for Winston-Salem, Forsyth County, and its other municipalities was updated and adopted by the respective boards in 2012 and 2013. Titled Legacy 2030, this update included language about encouraging healthy food production in urban areas and removing barriers to urban agricultural production (City of Winston-Salem n.d.). Simultaneously, activists in East Winston had begun guerilla gardening—a term for gardening on land someone does not have the legal rights to—on vacant lots and exploring opportunities for more permanent spaces to grow food in their neighborhoods (Railey 2020). These efforts have led to the creation of new organizations such as Island CultureZ and Forsyth
Foodworks in addition to other existing organizations like food banks and churches that have been leading the way for urban agriculture in Winston-Salem.

The Council adopted the urban agriculture ordinance in 2015, which updated the Unified Development Ordinance to allow for urban agriculture production—distinct from gardening on residential property for personal use (City of Winston-Salem n.d.). While the website does not suggest that the City is opening up city-owned land for urban agriculture, the City is encouraging residents interested in starting community gardens to identify vacant lots and get permission from the owners to garden on the land (City of Winston-Salem n.d.). Additionally, the City created the Winston-Salem Urban Food Policy Council to provide recommendations and strategies to the City Council to promote food system development. These policy changes have facilitated the creation of partnerships to increase awareness of urban agriculture. For instance, Island CultureZ partnered with the Forsyth Cooperative Extension to create an Urban Farm School program to help residents gain knowledge about how to grow food (Vasquez 2020). The Miracle Grounds Farm is the anchor for the Miracle Grounds Network that partners with smaller gardens across the city and supports them with technical assistance (Beck 2020). Advocates are now turning their attention toward land trusts and other mechanisms to establish land tenure for urban agriculture (Vasquez 2020).

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th><strong>Winston-Salem Urban Agriculture Ordinance</strong></th>
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<tr>
<td><strong>Use definitions</strong></td>
</tr>
<tr>
<td>The Winston-Salem/Forsyth County Unified Development Ordinance outlines one urban agriculture use:</td>
</tr>
<tr>
<td>• Urban Agriculture: “The growing, processing, and distribution of food and other agricultural products through plant cultivation. It may include plant cultivation and the growing of non-food crops such as herbs and ornamentals. This use may include accessory structures and buildings used for agriculture-related storage or field packing. Urban agriculture as defined here does not include the accessory cultivation of plants on residential lots solely for the use and/or consumption of the occupants of said lots, or on-site accessory sales as authorized in Section 5.3.5, Other Accessory Uses of the UDO” (Winston-Salem Forsyth County UDO § 11.2)</td>
</tr>
</tbody>
</table>
| Zoning requirements | There are 4 base zoning districts: Residential, Commercial, Industrial, Institutional and Mixed Use. Urban Agriculture is permitted either by right or as a special use within each base district (Ibid § 5.1.1(A)).  
- **Residential**: Urban Agriculture is permitted by right in the Agriculture District. It is a special use in all the other 14 Residential Districts.  
- **Commercial**: Urban Agriculture is permitted by right in 4 of the Commercial Districts (the Pedestrian Business District, the Limited Business District, the Highway Business District, and the General Business District). It is not permitted in the other 9 Commercial Districts.  
- **Industrial**: Urban Agriculture is permitted by right in 2 of the 3 Industrial Districts (the Light Industrial District and the General Industrial District).  
- **Institutional and Mixed Use**: Urban Agriculture is permitted by right in all 3 districts. |
| Use of public land | Winston-Salem does not have a program for the use of public land for urban agriculture. |
| Use standards | There are general requirements specific to each zoning district that outline minimum lot area and width, minimum setbacks, maximum impervious surface coverage, maximum building height, etc. (Ibid § 4.1.4(B)). Sites used for Urban Agriculture must comply with these standards. However, there is a specific setback requirement for Urban Agriculture uses that apply regardless of the zoning district: land being used for agricultural cultivations should be set back a minimum of 5 feet from all adjoining parcels or rights of way (Ibid § 4.1.4(C)(21)).  
There are also parking requirements for Urban Agriculture in nonresidential districts—1 parking space must be provided per 20,000 square feet of lot area. Parking requirements in residential districts will be determined on a case-by-case basis by the Board of Adjustment through the special use permit process (Ibid § 6.1.2).  
Given that accessory structures are included in the definition of Urban Agriculture, the accessory structure requirements apply (Ibid § 5.3.1(F)):  
- Accessory structures may not exceed 5% of the size of the lot or 576 square feet, whichever is greater.  
- Accessory structures that exceed these maximums require a special use permit from the Board of Adjustment.  
- Accessory structures cannot occupy more than 25% of the area of the required yard per the zoning district requirements. |
| Sales | On-site sales of products grown on site are not permitted per the definition of Urban Agriculture. The ordinance does not specify if and where produce can be sold off site, so it appears that produce could be sold off site at a farmer’s market or other settings. |
| Animal raising | Livestock is regulated in a separate part of Winston-Salem’s code of ordinances:  
- Keeping chickens is permitted with specific requirements. They must be kept within an enclosed run and a coop that has 3 |
<table>
<thead>
<tr>
<th>Required permits &amp; documentation</th>
<th>Where permitted by right, Urban Agriculture requires a zoning permit issued by the City zoning administrator. Zoning permit applications include a description of the intended use and a plan that is annotated and dimensioned to show buildings in relation to the property lines. Where Urban Agriculture is a special use, a special use permit must be granted by the Board of Adjustment. A special use permit application requires a scaled site plan of the property showing existing and/or proposed structures and any other relevant notations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of review</td>
<td>Where permitted by right, Urban Agriculture requires only administrative review by City staff. Where a special use, Urban Agriculture requires a public hearing and approval by the Board of Adjustment through a quasi-judicial decision process.</td>
</tr>
<tr>
<td>Permanency</td>
<td>Given that Winston-Salem does not have a program for Urban Agriculture on public land, permanency is not applicable. The owner of a lot can continue to use the land for Urban Agriculture for however long they would like.</td>
</tr>
<tr>
<td>Floodplain/Critical water quality zone requirements</td>
<td>Development may occur in the floodplain, but it requires a flood development permit. Flood development permit applications must include a variety of information to indicate compliance with the ordinances that govern floodplain and stormwater management (Ibid § 3.2.6).</td>
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</tbody>
</table>

**Takeaways from Winston-Salem’s Urban Agriculture Ordinance**

- Winston-Salem is singular in the sample of cities as it is the only one that does not have more than one type of urban agriculture land use. Therefore, whether an individual wants to start a community garden or a small-scale farm, the land use would technically be treated the same under the ordinance. The ordinance also explicitly states that the standards do not apply to home gardens, which are already authorized as an accessory use to a residential use in another section of the unified development ordinance.

- In terms of zoning, Winston-Salem has a patchwork of zoning districts where Urban Agriculture is permitted, as there are several districts (certain commercial and industrial
districts) where Urban Agriculture is not allowed. However, it is permitted by right in
many commercial, industrial, and mixed-use areas, and considered a special use in the
residential districts.

- The use standards for Urban Agriculture are specific to each zoning district so that the
  use will fit in with surrounding zoning district. The only standards that apply across the
districts are a required crop setback, parking requirements, and accessory structure
coverage limits.

- Winston-Salem does not provide much detail about activities that are permitted on site
  other than cultivation, processing, and distribution of crops, per the definition of Urban
Agriculture. On-site sales are not permitted, but it is reasonable to assume that off-site
sales are allowed since this is not explicitly prohibited in the ordinance. Keeping
chickens is permitted by right, and small livestock can be kept, although keeping animals
within 50 feet of the property line of an adjoining property requires a special use permit.

- Winston-Salem encourages individuals to find vacant lots and ask the owner’s
  permission to use the land for urban agriculture, but it does not have a program for using
public land for urban agriculture.

- Similar to other cities, Urban Agriculture requires either administrative review or
  administrative review plus approval by the Board of Adjustment, depending on whether
is it permitted by right or as a special use.

- Urban Agriculture is not mentioned as a preferred use within the floodplains, but it is
  also not prohibited. Establishing Urban Agriculture on a lot in the floodplain will require
a flood development permit.
Peoria, Illinois

Peoria provides an example of a city that, while located in a major agricultural state, hasn’t shown much interest in urban agriculture until recently. Peoria is a mid-size city and one of the larger metropolitan areas in Illinois, but it has been decreasing in population faster than other areas of the state (Buedel 2018). Peoria proper had a population of 110,417 in 2019 (U.S. Census Bureau n.d.). While urban agriculture projects appear to be a new initiative, the City of Peoria has demonstrated interest in local food system development, particularly as a way to reduce food insecurity in the South Side neighborhood. In 2017, a team from the University of Illinois completed a case study and proposed site design for a food hub in Peoria (Nuding, Osterloo, & Dearborn 2017). Peoria has also benefitted from food system studies of the larger central Illinois region to identify opportunities to increase production and consumption of local foods (Sigan 2012).

The City amended the unified development ordinance in 2016 and 2018 to permit both community gardens and urban farms as land uses. Peoria is situated on the banks of the Illinois River, and stormwater management provided the motivation for one of the first city-sponsored urban agriculture projects. The City’s Innovation Team acquired USDA grant funding and partnered with a Chicago-based consulting firm, a local philanthropy, and other community organizations to fund, design, and build a 1.5-acre urban farm on a vacant lot in Downtown Peoria (City of Peoria 2018; Cohen 2019). Not only does this farm, called the Well Farm at Vooris Field, provide space for urban agriculture and community greenspace, it also functions as a key stormwater management strategy to control runoff in a once-problematic area (Cohen 2019). This site will also host an urban agriculture apprenticeship program in which 20 residents per year will learn about urban farming (City of Peoria 2018).
Beyond these higher-profile, city-sponsored projects, community organizations seem to be embracing installing community gardens, particularly in the South Side neighborhood. One local social service agency constructed a hoop house to extend the growing season, and a South Side neighborhood collective organizes a tool library so residents have access to gardening tools (Tarter 2017). However, some communities have faced challenges with garden maintenance, particularly during the COVID-19 pandemic; a garden located on vacant, privately-owned property was recently razed by the City after it claimed it had fallen into disrepair, violating City policy (Kravetz 2020). This illustrates a potential challenge for community gardens—without dedication to their maintenance, local governments may decide to terminate their permits.

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th>Use definitions</th>
<th>Peoria has defined two urban agriculture-related uses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Community Garden: “A garden, managed by public or civic entities, for profit and nonprofit organizations, corporations and businesses, or other community-based organizations or individuals, with the primary purpose to grow plants for beautification, education, recreation, donation, sale for profit, or use by those individuals cultivating the land and their households. Community gardens may be divided into separate plots for cultivation by one or more individuals or may be farmed collectively by members of the group or business and may or may not include common areas maintained and used by group members” (Peoria, I.L. Code of Ordinances § 10.3).</td>
</tr>
<tr>
<td></td>
<td>• Urban Farm: A farm, located within the Heart of Peoria area, greater than one acre and less than ten acres in size, in which plants, and products derived from them, are grown and sold on the same lot or off site. Examples may include flower and vegetable raising orchards and vineyards (Ibid § 10.3).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zoning requirements</th>
<th>Peoria has 6 base zoning districts: Residential, Office, Commercial, Industrial, Institutional, and Parking.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Community Garden: Community gardens are permitted by right in all zoning districts.</td>
</tr>
<tr>
<td></td>
<td>• Urban Farms: Urban farms are a special use in all Residential Districts and the Parking District, permitted in the Neighborhood Commercial and General Commercial Districts (2 of the 5 Commercial Districts), and permitted in all Industrial Districts.</td>
</tr>
</tbody>
</table>

| Use of public land | Peoria does not have a program for using public-owned land for urban agriculture. |

<table>
<thead>
<tr>
<th>Use standards</th>
<th>The following use standards apply to the two urban agriculture uses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Community Garden (Ibid § 5.3(G)(1)):</td>
</tr>
</tbody>
</table>
- Consent of the property owner is required
- Must be less than 1 acre in size
  - No setback is required for plantings, raised beds, or fences that are less than 3 feet in height, but gardens and any associated structures must not obstruct the view from a driveway to an abutting street or vice versa.
  - Certain accessory structures such as trellises, raised beds, benches, covered trash receptacles, 250 square feet of hoop houses, 1 greenhouse (limited to 250 square feet and 1 storage shed (limited to 120 square feet) are permitted. These structures must meet the setback requirements of the base zoning district and must not exceed 14 feet in height. The setback requirement is different if these structures are placed behind a principal structure, in which case they must be 1.5 feet from the side or rear property line. Accessory structures cannot occupy more than 10% of the site.
- Fences cannot exceed four feet in height. Wire fences are not permitted.
  - 1 non-illuminated sign is permitted.
  - Composting is permitted but must be contained, is limited to materials produced on site, and must only be used on site.
  - Gardens must be properly maintained with weekly mowing, weeding, and garbage collection.

- Urban Farm (Ibid § 5.3(G)(2)):
  - Using mechanized equipment similar to what would be used to maintain a residential property is permitted. Using larger mechanized equipment is generally prohibited except when first preparing the land for use as a farm.
  - Structures are subject to the requirements (size, height, setback) of the given zoning district. However, storage structures in residential district are permitted to be larger than the 1,092 square feet limit, but must be approved through the special use process. Permitted structures in hoop houses, greenhouses, farm stands, and greenhouses.
  - Deliveries and shipment of materials must occur between 7:00 am and 7:00 pm using single axle trucks/vehicles that would typically serve residential communities.
  - Lighting should be down lit away from residential properties and public streets
  - Equipment should be stored in an enclosed structure
  - Fences should not exceed 4 feet in height. Wire fences are not permitted.
  - The farm should be property maintained with weekly mowing, weeding, and garbage collection.
| **Sales** | Community gardens are permitted to have a seasonal farm stand on site. This must be a temporary structure (like a tent) that is removed at the end of the season. The area for the sale and display of produce is limited to 120 square feet (Ibid § 10.3).

Accessory retail sales are permitted for Urban Farms, subject to approval through the special use process. The farm stand can be a permanent structure, but it must comply with the standards of the zoning district, and the location of the farm stand should be such that it has minimal impact on adjacent residential properties (Ibid § 5.3(G)(2)(a)(iii)). |
|---|---|
| **Animal raising** | Keeping animals or livestock is prohibited for both Community Gardens and Urban Farms (Ibid § 5.3(1)(G)(viii) and § 5.3(2)(G)(x)).

Bee keeping is established as a separate permitted use. Keeping bees does not require zoning approval, but there are certain requirements that must be met, including setbacks, fencing, water supply, and a limit to only 4 hives, etc. (Ibid § 5.3(H)). |
| **Required permits & documentation** | Community Gardens do not require zoning approval (Ibid § 5.3(G)(1)(a)).

Where Urban Farms are a permitted use, they require zoning approval resulting in a zoning compliance certificate (Sec. 5.3(G)(2)(a)). Where Urban Farms are a special use, they require a special use permit. The special use permit process requires detailed site plans, conceptual renderings, and elevations (Ibid § 2.9.4). |
| **Level of review** | Where Urban Farms are a permitted use, they require only administrative review by the Zoning Administrator and the Development Review Board to ensure compliance with the zoning requirements. Where Urban Farms are a special use, the special use process involves administrative review by City staff, the Development Review Board, and the City Planning and Zoning Commission. The City Planning and Zoning Commission will then issue recommendations to the City Council, and the City Council will hold a public hearing and issue a decision on the special use permit through a quasi-judicial process (Ibid § 2.9). |
| **Permanency** | Given that Peoria does not have a program for urban agriculture uses on public land, permanency is not applicable. The owner of a lot can continue to use the land for urban agriculture for however long they would like. |
| **Floodplain/Critical water quality zone requirements** | Urban agriculture is permitted in floodplains, it does not appear that urban agriculture uses would require an erosion, sediment control, and stormwater control permit (Ibid § 9.5-76). |
Takeaways from Peoria’s Urban Agriculture Ordinance

- Peoria defines two urban agriculture uses—Community Gardens and Urban Farms. There are three distinguishing characteristics between these uses: 1) the size of the lot in use, 2) whether the land is cultivated in a group-oriented or individual-enterprise-oriented manner, and 3) whether the produce will be for the group’s benefit and consumption or will be sold.

- From a zoning perspective, the ordinance is very permissive of community gardens, as they are permitted by right in all zoning districts. It is more mixed for Urban Farms which are permitted by right in some commercial districts and all industrial districts and are a special use in residential districts. Urban Farms are prohibited in certain commercial districts, which speaks to a desire to keep more intensive urban agriculture uses out of some commercial areas.

- The ordinance includes detailed standards specific to both Community Gardens and Urban Farms. These standards are geared toward ensuring that the sites are well-maintained and reducing the potential for nuisances to surrounding properties.

- On-site sales are allowed for both types of uses, regardless of the base zoning district. However, Peoria has taken a conservative approach to allowing animals with the city boundaries—beekeeping is permitted, but raising livestock as part of a Community Garden or Urban Farm is prohibited. Other than these details, Peoria does not specify if other activities such as educational programs or employment opportunities are permitted.

- Peoria does not have a program for using public land for any type of urban agriculture use.

- Since zoning review is not required for Community Gardens, Peoria’s ordinance should not be administratively burdensome for this less intensive use, unless City staff were to receive a complaint about a Community Garden violating the standards. Urban Farms,
as a special use, must be brought to three separate board for review, including approval by the City Council, which would require more staff time.

- Both of these uses appear to be permitted in the floodplains without a specific permit from the City. Peoria piloted an urban farm project as a way to manage stormwater in a notoriously flood-prone area, so the City may be particularly receptive to these land uses in the floodplains.
Lawrence, Kansas

Lawrence is a city of 98,193 people in northeast Kansas (U.S. Census Bureau n.d.). Kansas is a major agricultural state, and the 2010s saw an increased interest in local food system development in Lawrence. In 2010, Douglas County—the county in which Lawrence is located—started a food policy council that included representatives from the community and key organizations in Lawrence and broader Douglas County, the first food policy council in the state (Hughes 2014). According to leaders in Lawrence and Douglas County, when it comes to urban agriculture, smaller cities and more rural areas have an advantage over urban centers as they don’t have to roll back policies to the same degree as urbanized areas to make urban agriculture possible (Ibid).

Urban agriculture appears to have been permitted in Lawrence since the early 2010s. The ordinance was amended in 2016 to clarify regulations about raising livestock and building agriculture-related structures in residential districts (Livingston 2015). The City has played an active role in coordinating community gardens throughout Lawrence. In 2012, it created the Common Ground program. This program provides leases of under-utilized City-owned property for free to residents who are looking to start community gardens (City of Lawrence n.d.). As of 2018, there were nine farms and gardens that were a part of this program, including an Incubator Farm that provides plots for beginning gardeners (City of Lawrence n.d.). Some of the food grown in these gardens is donated—including over 1,500 pounds of food in 2018—while other gardens are open for the public to come and harvest (Cornell 2020).

Overall, urban agriculture seems to be largely embraced in Lawrence. Growing Lawrence is a nonprofit organization that facilitates a network of urban farms to improve coordination among producers and inform recommendations to support farmers. While its membership does not represent an exhaustive list of farms in Lawrence, 43 farms are a part of this network (Growing Lawrence n.d.). While raising livestock can often be a particularly controversial urban
agriculture activity due to the potential for nuisance, it appears that residents have mostly been supportive of these initiatives (Wentling 2016).

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th>Lawrence Urban Agriculture Ordinance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use definitions</strong></td>
</tr>
<tr>
<td>Lawrence outlines two uses urban agriculture uses for growing food crops within the municipal boundaries:</td>
</tr>
<tr>
<td>- <strong>Crop Agriculture:</strong> &quot;The management and maintenance of an area of land to grow and harvest food crops and/or non-food ornamental crops, such as flowers, for personal or group use, consumption, sale, or donation. Crop Agriculture uses include, but are not limited to, personal gardens, community gardens, market gardens, rooftop gardens, tree farms, and hay meadows. Standard structures used for Crop Agriculture include hoop houses, cold-frames, greenhouses, equipment or planting sheds, composting and waste bins, and rain barrel systems” (Lawrence, K.S. Code of Ordinances § 20-1776).</td>
</tr>
<tr>
<td>- <strong>Urban Farm:</strong> “An Urban Agricultural use which is operated primarily for commercial purposes. An Urban Farm is distinguished from other Urban Agriculture uses by scale. An Urban Farm may have a larger retail sales area and/or more agricultural animals than permitted for Crop Agriculture and/or Small and Large Animal Agriculture. An Urban Farm can include other uses such as an educational/training component and/or Agricultural Processing” (Ibid § 20-1780).</td>
</tr>
<tr>
<td><strong>Zoning requirements</strong></td>
</tr>
<tr>
<td>Lawrence has four base zoning districts: Residential, Commercial, Industrial, and Special Purpose.</td>
</tr>
<tr>
<td>- Residential (Ibid § 20-402):</td>
</tr>
<tr>
<td>o Crop Agriculture is permitted by right in all residential districts.</td>
</tr>
<tr>
<td>o Urban Farms are a special use in four of the less-dense residential districts. They are not permitted in the remaining residential districts.</td>
</tr>
<tr>
<td>- Commercial (Ibid § 20-403):</td>
</tr>
<tr>
<td>o Crop Agriculture is permitted by right in all commercial districts.</td>
</tr>
<tr>
<td>o Urban Farms are not permitted in the commercial districts.</td>
</tr>
<tr>
<td>- Industrial (Ibid § 20-403):</td>
</tr>
<tr>
<td>o Crop Agriculture is permitted by right in all industrial districts.</td>
</tr>
<tr>
<td>o Urban Farms are permitted by right in three of the four industrial districts (it is not permitted in the industrial/office park district).</td>
</tr>
<tr>
<td>- Special Purpose (Ibid § 20-403):</td>
</tr>
<tr>
<td>o Crop Agriculture is permitted by right in all special purpose districts.</td>
</tr>
<tr>
<td>Use of public land</td>
</tr>
</tbody>
</table>
| Use standards | The following standards apply to the urban agriculture uses:  
  - **Crop Agriculture (Ibid § 20-548):**  
    - Crop Agriculture may be grown in the public right-of-way adjacent to the property without a right-of-way permit.  
    - There are specific height and setback guidelines to prevent tall crops from impacting visibility on the roadways on sidewalks. Otherwise, Crop Agriculture uses must comply with the setback requirements of the zoning district.  
    - The site shall be designed and maintained to prevent the free flow of stormwater, mud, irrigation water, and chemicals onto adjacent properties, public streets, sidewalks, and alleys.  
    - The site shall be kept free debris and high grass or weeds taller than 12 inches.  
  - **Urban Farm (20-551):**  
    - An urban agriculture use is considered an Urban Farm when it includes uses permitted as Crop Agriculture and Animal Agriculture (discussed in the “Animal Raising” section of this table) but exceeds the standards set for these uses. Examples of these standards include maximum number of animals, the permitted size of the on-site sales area, and the accessory activities conducted on the site.  
    - Certain accessory uses are permitted by right for Urban Farms:  
      - Agricultural processing of products grown on site and with mitigation measures to ensure compatibility with surrounding land uses  
      - Education/training/outreach programs  
      - Employment  

The code also outlines standards for accessory structures (20-533):  
- No principal building is required for structures that are accessory to Crop Agriculture or Urban Agriculture.  
- Unless otherwise specified, accessory structures must meet the height, setback, and coverage established for the base zoning district. Accessory structures in Residential districts should be located at the rear of the property.  
- The combined footprint of accessory structures can be 20% of the lot area as long as the total combined footprint does not exceed the building coverage maximum in the base zoning district.
- Seasonal structures such as cold frames, low tunnels, and hoop houses are exempt from building permit requirements and building coverage regulations.
- Unless otherwise stated, the height of accessory structures may not exceed 25 feet or the height of the principal building, whichever is less.

### Sales

Agricultural sales are established as separate uses from Crop Agriculture and Urban Farms.

- **On-Site Agricultural Sales (20-550):**
  - On-site sales must either consist of sales of items solely grown on site or a combination of items grown on site and items grown on another property in the city owned by the same operator.
  - Only sales of unprocessed eggs, honey, horticultural products, and/or whole, uncut produce can be sold.
  - Sales may occur between 8:00 am and 8:00 pm
  - Any stands for the display or sale of produce should be a minimum of 20 feet from the roadway or curb, and they should be removed and stored when not in use.
  - The size of the permitted retail area is limited based on the size of the lot
  - One temporary sign is permitted 20 feet from the roadway.

On-site agricultural sales are permitted as an accessory use in all zoning districts except for the Hospital Special Purpose District.

### Animal raising

Raising animals are established as separate urban agriculture uses. The code distinguishes between Small Animal Agriculture and Large Animal Agriculture.

- **Small Animal Agriculture:** This use is limited to small animals which are more appropriate in urban settings such as bees, crickets, worms, rabbits, small goats, small sheep, fowl, and fish (Ibid § 20-1775(1)). The following standards apply (Ibid § 20-547):
  - Structures must comply with the accessory structure standards.
  - Any coops or enclosures should be well designed and maintained to keep animals contained and maintain sanitary conditions.
  - For beekeeping, the number of hives permitted depends on the size of the property, and there are specific size, setback, and location requirements.
  - For chickens, 1 fowl is permitted per 500 square feet, up to a maximum of 20 chickens for any lot. Coops with certain size and setback requirements must be provided.
  - Small goats and sheep may be kept as an accessory use. There are limits on permitted breeds, the number of animals that can be kept, and size requirements for housing structures.
- **Large Animal Agriculture**: This use is limited to large animals that are more traditionally considered livestock are require more space, such as horses, cattle, and large goats and sheep (Ibid § 20-1775(2)).
  - Large Animal Agriculture is only permitted in the least dense residential district.

<table>
<thead>
<tr>
<th>Required permits &amp; documentation</th>
<th>Urban Farms require a special use permit. A special use application for an Urban Farm requires a site plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of review</td>
<td>Urban Farms require administrative review for staff to prepare a report on the special use permit application before referring it to the Planning Commission and the City Council. The permit must be approved by the City Council through a public hearing and quasi-judicial process (Ibid § 20-1306).</td>
</tr>
<tr>
<td>Permanency</td>
<td>While Crop Agriculture uses allow crops to be grown in the public right-of-way without a use of right-of-way permit, the use is temporary and City staff can remove the crops when street and/or infrastructure repairs are undertaken in the right-of-way (Ibid § 20-548(1)).</td>
</tr>
<tr>
<td>Floodplain/Critical water quality zone requirements</td>
<td>Urban agriculture appears to be permitted in a floodplain, but would require a floodplain development permit (Ibid § 20-1308).</td>
</tr>
</tbody>
</table>

**Takeaways from Lawrence’s Urban Agriculture Ordinance**

- Like most of the other cities in the sample Lawrence includes more than one urban agriculture land use—one that is less intensive and one that is more intensive. However, it is different in that the less intensive use—Crop Agriculture—is something of a catch-all for a variety of garden uses. The ordinance distinguishes between Crop Agriculture and Urban Farms using two criteria: 1) whether its purpose is primarily communal versus commercial, and 2) the scale of the agricultural activities.

- From a zoning perspective, Crop Agriculture is permitted by right throughout the city, but the ordinance limits Urban Farms to less-dense residential districts and industrial districts. This indicates a desire to keep more intensive urban agriculture uses out of some of the denser parts of the city.

- The use standards for Crop Agriculture are minimal—they are mostly geared toward preserving visibility around the lots and preventing stormwater runoff from the site. Urban Farms do not have their own specific standards. Rather, they must include larger scale urban agriculture activities than would be permitted for Crop Agriculture or Small
Animal Agriculture, and the lot standards will be settled on a case-by-case basis through the special use permit process.

- Lawrence’s ordinance is also permissive of a variety of on-site activities. On-site sales are permitted as an accessory use throughout the city, so gardens and farms alike can sell their produce as long as they meet the standards to reduce impacts on surrounding areas. Keeping small animals is permitted as long as they comply with the standards—keeping large livestock is limited to the fringes of the city. Urban Farms are also permitted to have accessory uses that Crop Agriculture cannot have, including agricultural processing, training and education programs, and employment opportunities, although there are not specific guidelines about how these activities can be conducted.

- Lawrence has a program to rent city-owned land for urban gardens, but this program is not established in the urban agriculture ordinance. The ordinance does say that Crop Agriculture is permitted within the public right-of-way without a permit, but he crops may be removed by City staff during infrastructure repair, so that is not a permanent urban agricultural use.

- Crop Agriculture use would require administrative review by City staff to approve any accessory structures. However, approving Urban Farms would require more staff time, as staff must prepare a report on the application before bringing it to the Planning Commission and the City Council for approval.

- Similar to other cities in the sample, urban agriculture is not established as a preferred use in the floodplains, but it is not prohibited either. Any development in the floodplain requires a floodplain development permit.
New Port Richey, Florida

New Port Richey is a small suburb of Tampa with 16,737 residents, and it is typically considered a retirement community (Reilley 2017; U.S. Census Bureau n.d.). However, a renewed interest in green infrastructure and local food system development appears to be breathing new life into a community that had been experiencing economic decline (Reilley 2017). New Port Richey first turned its attention to community gardens after residents began guerilla gardening in city-owned Simms Park. This garden was eventually removed, but the
community activism led to interest in gardens and other urban agriculture activities from the local government (Spencer et al. 2018).

In response to the community interest in gardening, the New Port Richey Environmental Committee—one of the City’s boards—worked with the City Council to develop a community garden ordinance, which was passed in 2013 (Spencer et al. 2018). This ordinance allowed community gardens to be established on public land. The community garden ordinance laid the foundation for the City to pass an urban agriculture ordinance in 2016, encompassing a broader definition of activities, including allowing for the creation of small-scale farms and permitting the commercial sale of produce (Napper 2016; Spencer et al. 2018). The city does not provide funding or technical assistance to community groups or residents who are interested in gardening on public land, and they do not charge an application fee for gardening (Spencer et al. 2018).

New Port Richey has other community assets that have helped increase people’s access to and interest in farming and gardening. The public library runs a seed library program, there’s a free compost program, and the year-round farmers’ market does not charge vendor fees (Reilley 2017). These help lower barriers to entry for residents—some residents sell produce they grow in their front yards at local market (Ibid). Grassroots organizations have been critical to spreading awareness of urban agriculture and maintaining community gardens (Miller 2015).

**Ordinance Content Analysis**

<table>
<thead>
<tr>
<th>Use definitions</th>
<th>New Port Richey outlines two urban agriculture uses.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• <strong>Community Garden</strong>: “A piece of land dedicated to urban agriculture and gardened by a group of people that provides access to fresh produce and plants as well as access to satisfying labor, neighborhood improvement, sense of community and connection to the environment. They are privately functioning in terms of ownership, access and management” (New Port Richey, F.L. Code of Ordinances § 21.01.00).</td>
</tr>
<tr>
<td></td>
<td>• <strong>Urban Agriculture</strong>: “Agricultural activity, including the cultivation, processing and distribution of plants and other food products. This use may include horticulture, indoor crop production”</td>
</tr>
</tbody>
</table>

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The code specifically states that the section governing Community Gardens does not apply to a residential garden, which is accessory to a principal use.

**Zoning requirements**

New Port Richey does not group their zoning districts into base districts, but the zoning districts generally follow the same pattern of residential, commercial, industrial, and special purpose districts. The zoning requirements for the two urban agriculture uses are as follows:

- Community gardens are permitted in all zoning districts (Ibid § 21.01.00.3).
- **Urban Agriculture:**
  - Residential: Urban Agriculture is permitted in all residential districts, but on-site sales and indoor crop production are prohibited.
  - Commercial & Downtown: Urban Agriculture, including on-site sales, is permitted in all commercial districts, but indoor crop production is prohibited.
  - Office/Mixed Use: Urban Agriculture is permitted, but on-site sales and indoor crop production is prohibited.
  - Industrial: Urban Agriculture, including on-site sales and indoor crop production, is permitted.
  - Government: Urban Agriculture is permitted, but on-site sales and indoor crop production are prohibited.
  - Urban Agriculture is not listed as a permitted use for certain special purpose districts, such as the public/semi-public zoning district (includes schools, hospitals, emergency services facilities) and mobile home park district.

**Use of public land**

New Port Richey's website does state that there is a public community garden program. However, neither the details of this program nor the locations where this is permitted are not established in the code of ordinances.

**Use standards**

The following standards apply to the urban agriculture uses:

- **Community Garden** (Ibid § 21.01.00.4 - 21.01.00.8):
  - The development requirements in the given zoning district will apply to community gardens.
  - The garden should be weeded and maintained; trash should not be permitted to remain on the property.
  - Tools and supplies should be stored indoors or removed from the property at the end of the day.
  - Compost and dirt should be stored at the rear of the property and should not cause odors.
  - Large power tools should be kept at the rear of the property.
  - The garden should be designed and maintained consistent with best practices to prevent runoff and stormwater impacts.
- Only organic pesticides and fertilizers should be used. Any pesticides and fertilizers used on site should be stored in a locked structure.
- Parking is allowed on site consistent with the zoning district standards.
- If the property is to no longer be used as a garden, the owner must clear and level the property.
- **Urban Agriculture** *(Ibid § 7.25.02 (A) – (E)):
  - The property should be weeded and maintained; trash should not be permitted to remain on the property.
  - Tools and supplies should be stored indoors or removed from the property at the end of the day.
  - Large power tools should be kept at the rear of the property and screened from view.
  - Compost and dirt should be stored at the rear of the property and should not cause odors.
  - The agricultural use should be designed and maintained to prevent any chemicals, fertilizers, or other garden waste from draining off the property. The use of chemicals is prohibited within 200 feet of an existing wellhead.
  - Synthetic pesticides, fertilizers, and other chemicals are prohibited. Herbicides and pesticides made from natural materials are permitted but should be used sparingly and stored in a locked structure.
  - Only certain mechanical equipment (mowers, handheld mechanized tillers) may be used on site.
  - All accessory structures (sheds, picnic tables) shall comply with the development standards of the zoning district.
  - Parking is allowed on site consistent with the zoning district standards
  - The owner of the site must coordinate the type of trash container on site with the solid waste service provider.

### Sales

Sales are generally not permitted for Community Gardens as they are not intended to be commercial enterprises. Produce grown at community gardens cannot be sold via wholesale or retail, but excess produce may be sold at garage sale consistent with the code of ordinances *(Ibid § 21.01.00.9).*

On-site sales are permitted for Urban Agriculture, consistent with the zoning district standards. Given the more commercial nature of Urban Agriculture as compared to Community Gardens, wholesale and retail sale of product grown through Urban Agriculture uses are permitted.

### Animal raising

The raising and processing of livestock is prohibited for Urban Agriculture *(Ibid § 2.01.00).* Keeping animals of any kind is not included in the definition or use standards of a Community Garden.

Keeping chickens is permitted within the City boundaries with certain requirements *(Ibid § Sec. 4.6):*
• Up to 5 chickens are permitted. No roosters are allowed.
• Chickens must have a coop that meets certain dimensional requirements. While the chickens may roam the property during the day, they must be securely fenced in so they remain on the property at all times.
• Chickens may not be slaughtered or processed.

**Required permits & documentation**
Both Community Gardens and Urban Agriculture uses must be registered with the City of New Port Richey Environmental Committee. Once the application has been received by the Committee and uploaded to the registry, it is forwarded to Code Enforcement. The registration must be renewed annually and must include information about any changes made to the property (structures, fences, signage) that may require permits. Code Enforcement enforces the provisions of these ordinances for Community Gardens and Urban Agriculture (ibid § 7.25.03 & 21.01.00.10). Other than permits that may be required for these material modifications to sites, no other permits specific to Community Gardens or Urban Agriculture are required.

**Level of review**
Establishing a Community Garden or Urban Agriculture only requires administrative review, as no special use permits are required.

**Permanency**
The permanency of urban agriculture uses on public land is not established in the ordinance.

For Community Gardens and Urban Agriculture on private land, the uses can continue as long as the property owner wishes. Both types of uses must be registered annually. If a registration is not renewed, the site must be returned to its original condition (21.01.00.10(B)(2)).

**Floodplain/Critical water quality zone requirements**
Community Gardens or Urban Agriculture appear to be permitted in floodplains. Any material improvements made on property require an application to the floodplain administrator who will determine the permits necessary for the site (ibid § 22.04.01).

**Takeaways from New Port Richey’s Urban Agriculture Ordinance**

- New Port Richey defines two urban agriculture uses: Community Gardens and Urban Agriculture. These two uses are distinguished from each other based on two criteria: 1) whether the purpose is geared towards community benefit or as a commercial enterprise, and 2) the scale or intensity of the agricultural activities. The code also states that these standards do not apply to home gardens.

- From a zoning perspective, community gardens are permitted by right everywhere in the city. New Port Richey takes a slightly different approach to permitting the higher intensity Urban Agriculture use. Urban Agriculture is also permitted by right in all of the zoning districts, but certain activities that fall within the Urban Agriculture use category
(i.e. on-site sales and indoor crop production) are regulated separately and are only permitted in certain zoning districts.

- The use standards in the ordinance are fairly detailed, as the requirements from the base zoning district apply, but there are also many specific standards about the day-to-day management of the site. As with other cities’ use standards, these requirements aim to reduce nuisances and other impacts on surrounding lots.

- More activities are permitted for Urban Agriculture uses. Community Gardens are intended to provide space for community members to garden and recreate, and selling produce whether on site or off site is generally not permitted. Conversely, Urban Agriculture can include a variety of agricultural methods, processing of produce, and on-site sales. However, neither Community Gardens nor Urban Agriculture are permitted to raise animals, although keeping chickens for eggs for personal use is permitted in New Port Richey.

- According to the Town’s website, there is a program for using public land for gardens, as that was an impetus to the City passing an urban agriculture ordinance in the first place. However, the details of this program and how much land is set aside for this use is not established in the ordinance.

- No special or conditional use permitting processes are involved in New Port Richey’s urban agriculture ordinance. However, both Community Gardens and Urban Agriculture must register annually with the City’s Environmental Committee, and code enforcement will review these applications for any modifications to the site that might require permits.

- Similar to other cities, Community Gardens and Urban Agriculture appear to be permitted in the floodplains. Depending on the intensity of the use and the proposed structures for the site, the use may or may not require a floodplain development permit.
Overall Takeaways from the Nine Ordinances

The details of these ordinances indicate that there is a variety of approaches to regulating urban agriculture, but there are also some commonalities across many of these cities. Based on the analysis and discussion of each of the nine ordinances, I provide overarching takeaways for each of the 10 variables.

Use Definitions

The vast majority of the cities define multiple types of urban agriculture uses in their ordinances—Winston-Salem is the sole exception to this. Of the eight cities with multiple uses, five have two different types of urban agriculture uses while three have three different types. The cities with three types of uses are three of the four largest cities in the sample, while the smaller cities define only two uses. Including multiple types of urban agriculture allows cities to incorporate both smaller-scale, less intensive uses like community gardens and comparatively
larger-scale uses like urban farms into their communities. Other cities use the multiple definitions as a way to create uses that are more community oriented and others that are geared toward commercial enterprise. Two cities (Kansas City and Lawrence) establish household gardens as urban agriculture uses within the ordinance, while other cities explicitly state that home gardens are not subject to the standards of the ordinance.

While multiple use types are the norm, the cities differ on the criteria they use to distinguish among these uses in their definitions. The following themes capture the criteria used by the eight cities with more than one urban agriculture use:

- **The type and scale of agricultural production:** Five of the cities differentiate uses based on the agricultural practices and their scale. For instance, while community gardens typically involve basic gardening in plots or raised beds, a higher use like an urban farm may involve more complex practices (such as hydroponics), growing larger plants (i.e. orchards), and simply growing a larger volume of produce.

- **Whether the site is managed by groups or individuals:** Because community gardens are typically one of the defined uses, five of the cities use language about who is managing the site to differentiate the uses. Community gardens are defined as being managed by a group of people or organizations, whether they are collectively gardening one large plot or individual plots. Meanwhile, larger-scale uses like urban farms or urban agriculture (depending on the terms used by the city) can be farmed collectively, but can also be managed by an individual.

- **Whether the produce can be sold or is for community use:** Similarly, four cities distinguish between community gardens and urban farm/commercially oriented uses based on whether the produce will be grown for community members to take home or

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6 Here, I use the term "urban farm" as a catch-all for larger-scale urban agriculture uses, acknowledging that all of the cities use different terms. While many cities use Community Garden as the smaller-scale, community-oriented urban agriculture use, there is greater variation across terms for larger-scale or commercial uses (e.g. Urban Farm, Urban Agriculture, Community-Supported Agriculture, Market Garden). For simplicity, urban farm refers to any of these uses, unless specifically noted.
sold for commercial purposes. In some cases, produce grown at community gardens can still be sold. However, many cities include a higher use that is specifically defined as an agricultural enterprise.

- **The size of the lot in use:** Three cities include limits on how much land can be in use, with smaller lots (typically less than an acre) for community gardens and larger lots (anywhere from 1 acre to 10 acres depending on the city) for an urban farm or similar use.

- **The additional activities that can be hosted on site:** While other cities may mention additional activities such as educational programs, internships, and farm tours that can take place on site in their use standards, one city (Austin) uses it as a factor defining their Urban Farm use.

**Zoning Requirements**

The cities in this sample have taken a variety of approaches to incorporating urban agriculture uses into their existing zoning policies. Austin has taken the most permissive approach of the nine cities, as all three of their urban agriculture uses are permitted by right in all zoning districts. On the other end of the spectrum, four cities (Baltimore, Winston-Salem, Peoria, and Lawrence) have certain districts where urban agriculture uses are prohibited. The character of the zoning districts where urban agriculture uses are prohibited vary and may be reflective of the broader geographic, spatial, and political realities of the particular city. For instance, in Baltimore, all urban agriculture uses are excluded from the heavy industrial and maritime industrial areas of the city—it seems logical that community gardens may not be appropriate near the port areas of Baltimore. In Winston-Salem, urban agriculture is excluded from certain commercial districts—including the Central Business District and some office-
oriented districts. The community members, City staff, and elected officials may have determined that these areas may not be best-suited to urban agriculture.

The most common approach that cities in the sample take is to permit community gardens by right in all or most zoning districts and require a special use permit or conditional use permit for the higher-intensity uses like urban farms. This allows the City to impose additional scrutiny on the uses in these areas, but if the required standards are met by the applicant, the use should ultimately be approved. Only one city (Madison) created a new Urban Agricultural District, in addition to permitting urban agriculture uses in existing zoning districts, to attempt to create pockets of urban agriculture in the city.

*Use of Public Land & Permanency*

Seven of the cities have a program for using city-owned land for some type of urban agriculture use. However, only three of these cities have the details of the program established in their codes of ordinances. Austin’s program is the most detailed and requires a nonprofit organization to enter into an agreement with the City and take on the liability for the use of the site. Kansas City’s program has more of an economic development focus. The creating of Urban Agriculture Zones comes with tax benefits, trying to incentivize urban agriculture-related businesses to cluster in blighted areas. This is a state program that is being implemented on a local level. Finally, Madison’s program provides space for edible landscaping on city property, which provides a smaller-scale approach to promoting urban agriculture, particularly as Madison does not have a lot of vacant land to repurpose.

Therefore, cities are taking a variety of approaches to directly support urban agriculture, and the majority of them have created an urban agriculture program. These programs do not have to be established through an ordinance. City administrators may determine how to use city-owned property. Passing an ordinance could be a way to formalize the program, and it could contribute to the longevity of the program. However, putting it before an elected board also
invites more political scrutiny, and requires more steps that may not be necessary for the creation of the program. Therefore, there are trade-offs in that decision.

Mechanisms for the permanency of the urban agriculture land use on public land were not discussed in detail in the ordinances. Generally, it seems that urban agriculture can continue as long as the applicants follow any renewal processes and continue to comply with program requirements. However, priorities for a particular lot can change. Austin includes language that a City administrator may decide that the land could be better used in a different way and subsequently terminate a lot’s use for city-supported gardens. Therefore, while these cities are supporting urban agriculture, competing priorities for a lot may challenge the longevity of urban agriculture on public land.

**Use Standards**

There is great variation in the use standards prescribed to the different uses across the nine ordinances. Some municipalities require urban agriculture uses to observe the standards of the base zoning district, which generally covers setbacks, height, and lot coverage requirements for any structures on the site. However, most of municipalities outline additional standards that a garden or farm must meet on top of or instead of the zoning standards. For some of these cities, these urban agriculture-specific standards are numerous and precise. Regardless of how exhaustive these standards are, it is clear that the primary goal across these municipalities is to balance enabling urban agriculture with preventing nuisances and other impacts on surrounding properties. Specifically, most of these standards address three primary concerns:

- **Neighborhood character/appearance**: Many of the ordinances include structure and crop setbacks, requirements about where machinery and equipment are stored, composting guidelines, and lighting and signage regulations. These are efforts to prevent neighbor complaints, preserve the character of the zoning district, ensure that urban agriculture uses blend in reasonably with the uses around them, whether they are residential or non-residential in nature.
• **Safety**: Some use standards specifically address safety concerns such as ensuring that grasses do not grow too tall and that tall crops do not block visibility from the road and sidewalk. Another common requirement is that chemicals and equipment must be kept locked up on site or be removed from the site at the end of the day.

• **Environmental health**: Given the nature of urban agriculture uses, some of the standards involve environmental protections. Some cities require organic gardening/farming practices, while others permit synthetic chemicals but require a management plan. Other standards such as restricting certain crops to prevent pests and requiring drainage and stormwater controls also address environmental concerns.

Beyond preventing nuisances and negative impacts, some of the standards address city planning details that seem insignificant but are supportive of urban agriculture in practice. For instance, often zoning districts have minimum and maximum lot sizes. Not having minimum lot sizes for urban agriculture helps make these uses possible on small sites. Further, many municipalities specifically address the standards for structures on site, whether they are temporary (like hoop houses) or permanent. Generally speaking, these structures would often be treated as secondary to a principal structure—a house or commercial building. Allowing urban agriculture-related structures without a principal structure on site again opens up the number of sites where urban agriculture can be established.

A final note about use standards is that most of the municipalities have different standards for different urban agriculture uses. Of the eight municipalities with more than one use type, six have different standards for community gardens and their higher intensity uses (urban farms, urban agriculture, CSAs). This acknowledges that depending on the intensity of the use, different uses may need to be held to different standards to ensure they will be compatible with the surrounding properties in the zoning district.

*Sales*
Municipalities largely recognize urban agriculture as both a community activity and an economic opportunity. In general, almost all of the ordinances allow for sales in one of two ways: 1) prohibit sales for community gardens, but permit sales for other urban agriculture uses like market gardens, urban farms, or CSAs; or 2) permit sales for all urban agriculture uses, including community gardens. In many cities, these sales can occur on site with some stipulations, such as the hours sales can take place, how much space can be used for sales, and if garden/farm stands can be permanent or temporary structures. Lawrence provides for sales in a different way, establishing on-site agricultural sales as an independent use from the actual urban agriculture land uses. Winston-Salem is only the municipality where the potential for sales is unclear—on-site sales are not permitted, but the ordinance does not explicitly state if produce can be sold off-site at a farmer’s market.

**Animal Raising**

Many municipalities allow animals to kept within their jurisdictions. However, looking across the municipalities, it is clear that promoting animal-raising operations are not the primary focus of these ordinances. Few municipalities allow keeping large livestock, and even fewer allow animal slaughtering and processing, so it would be difficult for animal farmers to have an operation at a profitable scale. Under most of the municipalities’ ordinances, keeping large livestock, animal farms, and processing operations remains most appropriate at the urban fringes or in rural areas. In the municipalities that do allow livestock, smaller animals such as goats, sheep, chickens and other fowl, rabbits, and fish may be kept, although some cities limit the numbers that are allowed, and all of them have regulations on how they are maintained (e.g. size of the structures, setbacks from the property line, overall sanitary conditions requirements). In some cases, larger livestock like horses and cattle are allowed, but space constraints on the size of the property may make it infeasible to keep them too close to the urban core. For cities with multiple urban agriculture land use types, animals are often not permitted for community gardens, but may be allowed for urban farms, CSAs, market gardens, and other higher land uses.
Many municipalities also permit animals separate from designated urban agriculture uses. For instance, residents may be able to keep bees and chickens in their backyards or on their property for their personal use. In most cases, these permissions extend solely to chickens and/or bees, although in some cases residents may be able to keep a few small goats on their property. Typically, there are limits on the numbers of hives or chickens that can be kept, prohibitions of roosters, setbacks, and sanitation requirements. While these uses are not part of a community garden or urban farm, they are still a component of urban agriculture and a way for municipalities to allow food production within the municipal boundaries.

**Required Permits & Documentation**

With respect to the permits and documentation each municipality requires, the specific details of the different kinds of permits vary, but the overarching processes look similar. In general, most of the municipalities have different permitting requirements depending on the urban agriculture use, and in seven of the nine municipalities, that includes a conditional use or special use permit for the higher intensity urban agriculture uses in some or all of the zoning districts. The specifics of a conditional use or special use permit application depend on the municipality, but these processes generally involve the applicant providing detailed descriptions of the use and design of the site and notifying surrounding properties that the site will be used for urban agriculture. In some cases, municipalities prescribe additional steps that urban agriculture uses must undergo, such as providing a management plan for the agricultural practices that will be used on site.

When an urban agriculture land use is permitted by right—which most commonly applies to community gardens—the specifics of the required permits also vary. Austin permits all urban agriculture uses by right and exempts them from site plan review, so a zoning or use permit is not required. Peoria also exempts community gardens from zoning approval, which is a very permissive approach. However, in most municipalities, uses permitted by right are issued a use permit, zoning permit, or zoning compliance permit to indicate that the site meets the use
standards. All types of urban agriculture uses must also comply with any other permits that are required by the municipality—building permits, sign permits, etc.—except where they have been explicitly exempted from these requirements. The variation in these processes speak to the face that every municipality sets up its zoning administration procedures slightly differently.

Only a few municipalities have created a specific urban agriculture permit, typically to govern the use of public land for gardens. For example, Austin has a permitting process for city-supported gardens, and Madison requires an edible landscaping permit for program participants. New Port Richey was the only city that created a registry of community gardens and urban farms in its ordinance as a component of the review process. Community gardens and urban farms are both permitted by right, but they must provide annual information about how the site is being used so the City can ensure they comply with standards. Compared to other municipalities in the sample, this was a unique way to not only keep track of compliance with zoning standards but also institutionalize information about urban agriculture resources in the community.

Level of Review

Consistent with the permitting and documentation requirements, the level of review that is required by local government staff and appointed boards depends on whether a land use is permitted by right or requires a conditional use or special use permit. Generally, uses permitted by right require an application to the local government, and staff will review it to make sure it meets the objective standards in the zoning ordinance. This is the approach that is most common for community gardens, except in the municipalities where community gardens are exempt from zoning review. However, conditional use or special use permit processes require multiple steps, including review by City staff before being passed on to one or more boards for a public hearing and approval. It is difficult to draw conclusions about the administrative burden
of these processes without information about the capacity of each responsible department and how many applications are being brought to the municipal governments. Objectively, quasi-judicial processes do require more time and effort from both staff, board members, and applicants.

**Floodplain Requirements**

Austin was the only municipality that specifically mentioned how to incorporate urban agriculture uses in floodplains. However, none of the others municipalities expressly prohibited urban agriculture uses in floodplains. Based on the floodplain development requirements in each of the ordinances, urban agriculture uses would require review from a floodplain engineer or other relevant floodplain administrator and being issued a floodplain development permit.

**Discussion & Limitations**

The analysis of these urban agriculture ordinances reveals that no two approaches are exactly alike, but there are certainly common themes that cut across these municipalities. Broadly, urban agriculture ordinances serve four main purposes. First, they establish urban agriculture as a recognized land use activity and determine standards for how it fits into the zoning framework. Second, they establish urban agriculture as an economic activity. Most of the municipalities recognize the economic opportunities associated with urban agriculture and outline avenues for residents to sell their produce. Third, they describe the administrative processes that should be used to approve and monitor these uses. Finally, in some cases, they establish programs for the municipality to directly support community gardens and other urban agriculture initiatives.

While there is certainly great variation in the details of each of these ordinances, the majority of them follow a similar approach: 1) define multiple urban agriculture uses, 2) permit community gardens (or the equivalent less-intensive use) by right, 3) require a conditional use or special use permit for more-intensive uses (e.g. urban farms, urban agriculture, CSAs, etc.),
and 4) define use standards that will prevent urban agriculture uses from causing negative impacts on surrounding properties.

The permissiveness of each of these ordinances in terms of zoning districts, agricultural activities, administrative processes, gardening on public land, and other variables examined in this paper do not follow a strict pattern when considered in relation to a municipality’s size. That is, based on the review of the ordinances, larger municipalities do not necessarily take a more permissive approach than small cities or vice versa. Austin is the largest municipality in the sample, and takes arguably the most permissive approach looking across the ten variables: all of the uses are permitted by right, a city-supported garden program in established in the ordinance, animals can be raised and processed in the city limits, among other allowances. On the opposite end of the size spectrum, New Port Richey permits community gardens by right in all zoning districts and urban agriculture is generally permitted by right everywhere as well, with only certain activities like sales and indoor crop production requiring a special use permit. Peoria, a medium-sized city, exempts community gardens from zoning review. Returning to the overall takeaways, every municipality examined in this paper has built flexibility into their urban agriculture ordinances in some way. Rocky Mount should not feel that it needs to shy away from permissive approaches because urban agriculture is a new undertaking. Other municipalities have started with permissive ordinances and have revised them over time as issues or new opportunities have arisen.

The variation in the details among these basic steps reveal that these ordinances need to be responsive to the community context. This includes operating within the relevant legal framework depending on how the state legislature has given authority to the local government. Beyond this legal imperative, communities also respond to social, political, geographic, and economic conditions in crafting these ordinances. For example, Austin has a lot of land in the floodplain, and has participated in floodplain buyout programs. Intentionally creating opportunities for urban agriculture has been one low-risk approach for using this land for
community benefit. Madison does not have a lot of vacant lots, so edible landscaping on city-owned property is the primary way they have sought to incorporate urban agriculture on public land. Other municipalities include restrictions on the use of synthetic pesticides and herbicides as a way to promote environmental sustainability and protect environmental health. A strong community engagement process and partnerships between the City and community members will be essential to creating an urban agriculture ordinance that is responsive to Rocky Mount’s assets and needs.

A potential advantage for smaller municipalities that don’t have as extensive of zoning codes as large, dense cities is that they may be able to incorporate urban agriculture into their regulations using an additive method, rather than having to roll back existing regulations that may pose barriers to urban agriculture. For instance, Rocky Mount has a few existing ordinances that may need to be considered, particularly as it relates to nuisances. However, based on a preliminary review of the zoning code, the primary conclusion is that permission for urban agriculture needs to be added to the code of ordinances, rather than changing existing language that is expressly prohibitive of these activities. Further, given the rural nature and agricultural history of Rocky Mount and the broader region, small-scale agricultural uses may be easier to mix into Rocky Mount’s existing urban form than in a large municipality.

Due to the context-specific nature of these ordinances, I avoid ascribing normative judgments about the different approaches they employ, particularly as this analysis does not consider policy outcomes. For example, requiring a conditional use permit or special use permit is not inherently right or wrong. This process allows a municipality to treat certain areas with greater care and acknowledge that certain uses might require more oversight. However, this process does require more effort on the part of both applicants, staff, and appointed boards, and requires community members to present their applications during a public hearing, which may be difficult for community members depending on their work schedules or comfort with public speaking. A special use permit should not create unreasonable standards that would discourage
residents from actually pursuing these land uses. Therefore, making decisions about what should or should not be in an ordinance requires consideration of the tradeoffs among the expectations for applicants, the time required of administrative staff and board members to review the applications, and Rocky Mount’s land use goals.

**Limitations**

While there are lessons to learn from these examples, these approaches should be considered with nuance. Analyses of the political contexts, funding, demographics, and community engagement history are critical factors that were out of scope of this project. These factors provide an important backdrop to the policy approaches of the municipal government. Therefore, while understanding the language and technical components of a zoning ordinance is an important first step, the approach that is best for Rocky Mount may be different depending on political or financial feasibility, responsiveness to community needs, and alignment with Rocky Mount’s character and urban form.

Limiting this analysis to the content of the ordinances may miss details that are administrative in nature. For instance, most of the cities in the sample have a program that provides for some type of use of public land for urban agriculture, but only a few of those cities have established those programs in their codes of ordinances. A few more examples of these programs are included in the Appendix of this paper. While ordinances are critical enabling legislation for urban agriculture, lessons can also be learned from the administrative practices and programs local government staff have developed.

A final limitation is that this paper did not look at the outcomes of these ordinances. Therefore, I cannot provide any commentary on how these policies have impacted the communities, and any thoughts on the pros and cons of different approaches are purely speculative. The limited scope of this paper was largely due to the constrained timeline for this project. However, a useful avenue for future research would be to both quantitatively and qualitatively explore the successes, challenges, benefits, and harms that have occurred during
the implementation process and as a result of these policies. This would help communities like Rocky Mount better understand the policy impacts and proactively design policies to avoid potential pitfalls. This research would assist practitioners and community members while also adding to the body of literature around implementing urban agriculture.

**Recommendations for Rocky Mount**

I close by offering recommendations for the Just Foods Collaborative and the City of Rocky Mount. Drawing on the review of Rocky Mount’s current zoning ordinance, the community profiles, and the takeaways from the content analysis, these eight recommendations provide starting points for future discussions, analysis, and community engagement.

- **Start with the basics: defining land uses.**

  Rocky Mount is in the early stages of developing an urban agriculture initiative. While some of the approaches in the municipalities in this paper may be scaled to fit Rocky Mount, it is important to start with the basics: determining the types of land uses and where and how they will fit into Rocky Mount’s zoning code. The ordinance can be amended and new components can be added as urban agriculture gains momentum.

  Rocky Mount will need to consider how many land uses to incorporate into the ordinance. The Just Foods Collaborative’s primary interest is promoting community gardens, so starting with a land use definition that only allows community gardens may be one approach. Winston-Salem took a different approach than other municipalities in the sample and developed a catch-all urban agriculture land use. However, there may be value in permitting both community gardens and urban farms at the outset if there is community interest in larger-scale urban agriculture. Permitting multiples uses at the outset or creating a broad use like Winston-Salem’s reduces the administrative burden needed to reupdate the zoning code in the future. In terms of where to permit these uses, Mukherji and Morales recommend starting with a permissive approach to allow for
“creative experimentation” (2010). To guide communities in the beginning stages of the policy change process, they offer the following questions (Ibid 2010, 7):

- “What are the possible urban agriculture activities for our city?”
- “What can be allowed in a widespread way with little controversy?”
- “What can be allowed, but controlled?”
- “What can be allowed, but only in some places?”
- “Are there some places where specific activities should be especially encouraged?”
- “Who are the likely participants and how can positive relationships be fostered?”

- **Identify use standards that balance preventing negative impacts with creating too many hurdles.**

  The use standards that are required for urban agriculture uses should generally be in line with the level of detail that Rocky Mount currently includes in its zoning ordinance. That is, the use standards for urban agriculture should not be more onerous than the standards residents must meet for other low impact land uses. That said, there will need to be enough detail in the ordinance to address some of the conflicting ordinances currently in Rocky Mount’s code. For instance, potential conflicts with nuisance ordinances will need to be addressed. Considering the three themes identified in this analysis—neighborhood character, safety, and environmental health—when developing use standards could be a helpful place to start. Additionally, the ordinance’s language should make it clear that these standards do not apply to home gardens on residential property to prevent any confusion.

- **Consider City staff capacity, process efficiency, and community capacity in permitting requirements.**

  In determining to what extent urban agriculture uses should be permitted by right and if some uses or some zoning districts should require a special use permit, there are several tradeoffs that should be considered. Permitting uses by right requires far less effort for all parties involved, as there is no need to take the application to the Board of Adjustment. This can reduce the administrative burden for staff and make it easier for
community members to establish urban agriculture activities. Increased scrutiny from the City may prevent some community members from wanting to pursue urban agriculture, particularly if finding the time to attend Board of Adjustment meetings presents a challenge or if they are uncomfortable with presenting before a board. All of the municipalities with a specific community garden land use permit community gardens by right in all or most of their base zoning districts, so this could be a feasible approach for Rocky Mount. There are certainly legitimate reasons for requiring a special use permit for specific zoning districts or larger-scale urban agriculture activities. However, choosing when and where to require a special use permit should include a consideration of the tradeoffs for putting this process in place.

New Port Richey uses an interesting approach for its permitting process, as urban agriculture activities must register with the City, and when staff review the applications during the registration process, they determine if a building permit or special use permit would be required. This could be a useful method to adapt for a few reasons. First, it helps the City know the extent of interest in urban agriculture, and creates a registry of where urban agriculture resources like community gardens can be accessed in the community. Second, it may reduce the amount of back-and-forth communication that may need to go on between staff and applicants, as there is one portal for the application process, staff can review the preliminary application, and return to the applicants with the necessary permits. Finally, this could help to make the process more efficient, as increased review would only be triggered when the application includes a use that requires more scrutiny.

- **Develop a pilot program for community gardens on vacant lots and city-owned property.**
  
  Because Rocky Mount is in the early stages of urban agriculture promotion, developing a pilot program for community gardens on public land could be a good first
step to gauge community interest and test different approaches before scaling it up to more parts of the city. The examples discussed in this paper provide a starting point for adapting a program to Rocky Mount’s context. Austin provided the most detailed example of a program similar to the Just Foods Collaborative’s goals. Three elements of Austin’s program in particular may be helpful to consider: 1) the land use must be a community garden used by a group of people, 2) a nonprofit must endorse the garden to take on the liability for the garden and enter into a formal agreement with the City, and 3) sales are not permitted—the garden should be for community use. It is not necessary to establish this program in the Code of Ordinances; however, Rocky Mount may decide to formalize the program through an ordinance in the future.

Land tenure is a potential obstacle for community gardens on city-owned property. Since the City maintains the legal rights to the property, the land may only be used for a garden for as long as the City allows the use. However, pilot programs allow for evidence to be collected about the benefits of such a program, and can establish a case for the public land to be used for gardens for longer periods of time. Other land tenure approaches for establishing land to be used for community gardens are discussed in the Appendix.

- **Work with City staff to identify standards and a process for gardening in floodplains.**

Because urban agriculture involves a lot of open space, a lack of impervious surface, and minimal structures, it can be well-suited to floodplains. However, stormwater does have impacts on gardens, as heavy floods can destroy crops and material that may be washed into gardens can have food safety ramifications. Additionally, depending on the agricultural practices that are permitted in the floodplain, there could be concerns about using chemicals that may impact ground and surface water. Therefore, City staff with expertise about these issues and how Rocky
Mount is regulating them should be involved in any plans to allow urban agriculture in
floodplains and on floodplain buyout property.

- **Continue to develop local partnerships.**
  Drawing on the resources in the community can support urban agriculture
initiatives. The community profiles in this paper revealed that nonprofits, local
government, food policy councils, and community members all play a role in making
urban agriculture successful. The Cooperative Extension, local Master Gardeners, and
knowledgeable community members can make sure community members have the
gardening knowledge needed to grow their own food. Local philanthropies or businesses
may be interested in funding a tool share program or donating supplies to set up a
garden. Tapping into these existing resources and developing relationships among
stakeholders can contribute to the longevity of this initiative.

- **Employ an intentional community engagement process.**
  The community needs to be involved in the development of the ordinance, a
community garden program, and any other elements of this initiative. In Mark Winne's
words, “the most important word in ‘community garden’ is not ‘garden’” (2008, 62).
Ensuring that this initiative is set up to be accessible for the community and that it is
something that community members want and feel empowered to use will be critical to
its success.

- **Evaluate progress over time. Adjust as needed.**
  Finally, as previously mentioned, this ordinance and other components of the
initiative can be adjusted over time. This requires a regular evaluation process to reflect
on the impacts of the program and identify any adjustments that may need to be made.
This can allow for formalization over time as urban agriculture in Rocky Mount matures.

**Conclusion**
Urban agriculture is a compelling strategy for a variety of community goals, and it is one that cities of all sizes and geographic regions are incorporating into their urban form. Looking at examples from other municipalities is a useful starting point to understand what is being done and consider how to adapt other approaches to Rocky Mount’s context. Across the municipalities examined here, there are a lot of similarities in the approaches, but the specific differences indicate that these ordinances are context specific based on a variety of factors in these communities. Putting an urban agriculture ordinance in place is a key first step, but the evolution of urban agriculture in Rocky Mount will require ongoing commitment to learning through trial and error and strong community engagement.

References


Cohen, Kari. “From Vacant Lot to Community Gathering Place, Water Quality Program Awarded


right/#:~:text=The%20term%20'Use%20by%20Right,or%20other%20property%20is%20located.&text=A%20use%20that%20is%20considered,district%20in%20the%20zoning
%20ordinance


https://www.census.gov/quickfacts/fact/table/austincitytexas,US/PST045219

https://www.census.gov/quickfacts/fact/table/detroitcitymichigan,US/PST045219


https://www.census.gov/quickfacts/fact/table/lawrencecitykansas,US/PST045219

https://www.census.gov/quickfacts/fact/table/newportricheycityflorida,US/PST045219

https://www.census.gov/quickfacts/fact/table/peoriacityillinois,US/PST045219

https://www.census.gov/quickfacts/fact/table/winstonsealcitynorthcarolina,US/PST04519

https://www.epa.gov/urban-agriculture/agricultural-crops#UrbanAgriculture


https://www.ers.usda.gov/faqs/#Q1


Voigt, Kate A. "Pigs in the Backyard or the Barnyard: Removing Zoning Impediments to Urban Agriculture." Boston College Environmental Affairs Law REview 38 (2011): 537.


Wentling, Nikki. “Goats, Sheep May Be Your New Neighbors Under Proposed City Code for