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## **Creating Opportunities for Urban Agriculture in Lewiston/Auburn**

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# Creating Opportunities for Urban Agriculture in Lewiston/Auburn

Department of Environmental Studies; Bates College  
Environmental Studies Community Engaged Research Seminar  
Fall 2020

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## **EXECUTIVE SUMMARY**

The intersectional effects of the COVID-19 pandemic and the climate crisis, as well as the heightened awareness of racism and racial disparities across the United States, all shed light on one specific commonality: food injustice. Through a food justice lens, these issues may be further explored and complicated as cities experience exacerbated inequities within food access and food security. These ongoing issues have further illuminated the barriers to achieving food justice, identifying a need for more accessible and affordable opportunities within cities' food systems. One possible solution to overcome these barriers is the implementation of urban agriculture, which scholars have deemed as a possible driver of food justice. Through this report, we aim to take a deeper look at the ways in which urban agriculture is carried out in other cities, with the ultimate goal of recommending possible strategies to achieve more successful urban agriculture in Lewiston and Auburn, Maine

Our project was rooted in two separate but interrelated processes: 1) the collection and analysis of urban agriculture ordinances from cities across the United States and 2) the analysis of interviews with city stakeholders from some of those cities. By examining urban agriculture performance standards and regulations across several cities, we were able to identify successful ordinances and various challenges encountered through the passing of the ordinances. We found examples of performance standards in cities like Chicago, IL, Austin, TX, and Minneapolis, MN that allow for more freedom and equitable urban agricultural practices than are currently practiced in Lewiston and Auburn. The recommendations are as follows: 1) Combination restrictions for fowl, livestock, and compost. Using chickens as an example: residents would be allowed a certain number of chickens on land tracts smaller than  $x$  square feet, with additional chickens conditionally permitted for larger pieces of land. 2) Reduced setback requirements for bees, with the addition of flyway barrier requirements implemented when necessary. 3) Increased maximum square footage allowances for community gardens, introduction of the term "market gardens" into city code, and allowances for on-site sale or farm-stand opportunities. 4) Designation and explicit guidelines as to what can and cannot be composted, as well as adding language around composting to make residents' rights more clear.

In terms of political strategies, we looked at both process-related and rhetorical strategies. The most salient key factors in the success of an urban agriculture ordinance were developing relationships with city council members, farmers, and residents; conducting community outreach; educating all stakeholders about urban agriculture and the ordinance-passing process; and “finding the champion” of urban agriculture to help lead a broader coalition of supporters. In terms of rhetorical strategies, we found that using COVID, the need for climate resilience, community involvement, and the benefits of local investment were all themes that would make for an extremely compelling argument as to why urban agriculture is something Lewiston and Auburn should consider implementing.

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## I. INTRODUCTION

### *Urban Agriculture and Food Justice*

The main goals of urban agriculture stem from an aim to increase food access, create positive health impacts, and further develop the local community (Horst et al. 2017). As defined by Brinkley and Vitiello (2014), urban agriculture has been considered as a crucial driver of community food supplies throughout cities by providing an organized means of animal pasturing and gardens. Through its creation of local food supplies and farming, urban agriculture has also been considered as a facilitator of food justice (Meenar 2017). Glennie and Alkon (2018) define food justice as an examination of the equity, or lack thereof, within food systems and how these systems reproduce class and race-based disparities.

The intersection of food justice and urban agriculture highlights a complex relationship in which the two entities inform one another, but do not always work in tandem to achieve the same goals. Various scholars have studied this relationship with the aim of exposing the ways in which urban agriculture both supports and impedes on achieving equitable food security (Alkon & Cadji 2018, Siegner et al. 2018). While urban agriculture may increase food access, food justice places emphasis on the class and race-based disparities that urban agriculture often fails to address and can even exacerbate (Glennie & Alkon 2018). For example, Alkon & Cadji (2018) analyzed the ways in which food activism plays a role in green gentrification, a process by which green services attract and cater to affluent residents, thereby shaping residential neighborhoods.

If food justice is to be achieved, the implementation of urban agriculture (hereafter, UA) opportunities requires a conscious and deliberate consideration of its relation to, and effects on, marginalized communities. As shown in a study on the spatial distribution of UA in Philadelphia, PA, most unstable or temporary UA projects are located in neighborhoods with high levels of food insecurity, pointing to a lack of equitable distribution (Meenar 2017). This finding is not unique to the city of Philadelphia, as the literature points to similar findings in Seattle, WA where the majority of UA resources were originally allocated to predominantly white neighborhoods prior to the city's action on the issue (Horst et al. 2017). Allocating a more equitable distribution of UA resources and infrastructure is crucial in creating food security within urban areas while supporting more just food systems.

### *The Role of Municipalities and Urban Planners in UA Policy*

Various cities have developed infrastructure through UA policy in order to combat the barriers that arise within UA, such as the inequitable distribution of UA areas, the creation of nuisances, and various fees and taxes to obtain necessary permitting (Horst et al. 2017, Metcalf & Widener 2011, McClintock & Simpson 2017). The development of UA policy takes shape in myriad ways, involving

both state municipalities as well as non-governmental urban planners and stakeholders (Haynes-Maslow & Stillerman 2016). With one of the largest UA systems in the United States, New York City is one example of the overlapping relationship between government-led and stakeholder-led initiatives. The city's officials have advanced UA policy proposals within the past years, but these actions are often non-binding and stem from political motivations of reaching a higher office (Cohen & Reynolds 2014). Urban planning organizations and programs provide a means for local stakeholders to communicate food-related issues, but without the resources necessary for engaging with municipal decision makers, local voices are left unheard (Cohen & Reynolds 2015). In order to pass equitable and just UA policy, a level of solidarity between municipalities and local urban planners is necessary.

### *UA in Lewiston/Auburn*

Despite the need for a stronger UA infrastructure, Lewiston/Auburn shows potential for growth with its food-related businesses, markets, and farms. St. Mary's Nutrition Center currently supports various UA programming, including community and school gardens as well as equitable food access projects (Local Foods Local Places 2019). Also located in the L/A area is the New Roots Cooperative Farm, where four Somali-Bantu farmers own and operate 30 acres of land to produce wholesale vegetables which are distributed to food pantries, schools, local restaurants, and sold at farmers' markets. A third food-related business is the 75 acre Valley View Farm which produces various goods that are sold in the 4 Season Farm Market, alongside other goods from local farmers and producers. These growing food systems will be some of the local stakeholders important to the process of passing new UA policy in Lewiston/Auburn. Developing new language for an UA ordinance in Lewiston and Auburn will be essential to the equitable distribution of UA resources amongst these stakeholders. By creating new UA policy, the two cities will be one step closer to achieving the goals put forth by the Local Foods Local Places program.

The Good Food Council in Lewiston, Maine is currently working to understand other states' successes with UA as well as the barriers they have encountered along the way. The council aims to make local food in Lewiston/Auburn (L/A) more affordable and accessible, increase equitable access to farmland, and include local food as part of the city's aims for economic development. This work follows the creation of an action plan that was developed as part of the Local Foods, Local Places (LFLP) workshop in the Fall of 2019 (Local Foods Local Places 2019). LFLP is a federal technical assistance program in which Lewiston/Auburn was selected to take part along with 14 other communities across the United States. The program aims to aid Lewiston/Auburn in bolstering its UA policy while supporting new avenues of equitable UA infrastructure that the region currently lacks (J. H., personal communication, 2020). Based on the action plan put forth in the LFLP workshop, the groundwork has

been laid for a new ordinance to be drafted. Blood et al. (2020) produced findings regarding the barriers to passing new UA policy, current regulations, and possible recommendations for future approaches to UA in the L/A area.

## **II. OUR PROJECT**

### *2.1 Aims and Objectives*

Project Aim: Create a foundation that supports more opportunities for UA in Lewiston/Auburn by giving recommendations (key terms, definition, examples from other cities' ordinances) for an ordinance which aims to lower barriers to entry and increase affordability of UA.

Objective 1: Draw on the collective experiences and successes of other cities to outline a successful political strategy, which includes both process-related and rhetorical components, for passing a UA ordinance in Lewiston/Auburn.

Objective 2: Draw on the collective experiences and successes of other cities to identify useful performance standards for comparison for a potentially viable UA ordinance for Lewiston/Auburn.

### *2.2 Deliverables*

Deliverable 1: Definitions of key terms, an outline of relevant performance standards from other cities, and recommendations for a local comprehensive UA ordinance that is relevant to the L/A context.

Deliverable 2: A document outlining a successful political strategy for passing a comprehensive UA ordinance that includes, but is not limited to: a list of recommended stakeholder members to include, and steps for how to implement and sustain a UA ordinance.

## **III. METHODOLOGY**

The layout of this section is partially in chronological order and partially focuses on the two different objectives of the project. Ultimately, our process diverged into two parallel methodological approaches that focused on attaining each objective, and then came back together once data collection was finished (see *Appendix A* for visual representation of methods).



### *Outreach and Interviews*

Julia Harper, our partner who works with the Good Food Council in Lewiston, ME, provided us with a list of contacts in other cities (see *Appendix B*). These people work in various parts of UA--some in city departments, others with non-profit organizations. Using this list, we reached out to each contact via email and asked to interview them with questions that Julia has provided (See *Appendix C* and *D*). Due to the number of responses we got and the time constraints of this semester, we ultimately conducted eleven interviews from nine different cities. The purpose of these interviews was to gather information on successful strategies in getting UA ordinances passed. The questions mostly focused on the contacts' experiences in UA, as well as asked about any specific requirements and/or standards their city may have for farmers. After an initial survey regarding UA and potential legislative actions, these questions were created by the Good Food Council of L/A with input from city staff, city councillors, and other stakeholders in L/A. Additionally, we expanded and reworded the questions to increase validity, as well as added some follow-up questions we thought are pertinent. These questions were open-ended and the number of follow-up questions or additional questions was interview-dependent.

Most of the interviews were conducted over Zoom, although a couple were over the phone. We asked consent from the contact to record the interview for our own note-taking purposes. Whoever made the initial contact with the interviewee led the interview by asking the questions, while the other took notes and asked follow-up questions as needed. The information gathered from these interviews benefited not only the political strategy portion of the project, but the recommendations for the future ordinance as well.

### *Ordinance Data Collection*

The second major part of the project was spent looking at ordinances from around the country, and comparing language and performance standards in an attempt to provide recommendations for how Lewiston and Auburn could create more equitable UA systems. Because of the time constraint of this semester, limiting us to just 6 weeks, crafting a model ordinance was not possible, so we decided to define key terms, compare restrictive and nonrestrictive performance standards, and provide recommendations for how we think urban agriculture in Lewiston and Auburn could improve. In collecting this data, however, we focused mainly on the cities from which we were also interviewing people, as well as some additional cities that we thought would provide helpful information. We mostly utilized Municode as a resource in searching through each city's ordinances, although there were some individual PDFs that required reading through.

## *Synthesis/Analysis*

Once we researched and read the ordinances, we systematically analyzed them for themes, key words, and trends. We created a database with various land uses and performance standard categories. Our categories and subcategories were as follows: **urban agriculture lot requirements**, **greenhouses** (restrictions/whether they are allowed, seasonal restrictions, placement and sizing requirements), **gardens** (market gardens, community gardens, and home gardens), **farm-stands and on-site sale** (whether they are allowed/restrictions), **animals: pigs** (whether they are allowed, number allowed, smell restrictions, other restrictions, and required distance from property lines), **goats** (whether they are allowed, number allowed, smell restrictions, other restrictions, and required distance from property lines), **cows** (whether they are allowed, number allowed, smell restrictions, other restrictions, and required distance from property lines), **bees** (whether they are allowed, number allowed, smell restrictions, other restrictions, and required distance from property lines), and **chickens** (whether they are allowed, number allowed, smell restrictions, other restrictions, and required distance from property lines), and **compost** (sizing requirements, allowed materials, prohibited materials, location).

After collecting all this data, we made heat maps that illustrated both the amount of information that each city provided and how helpful that information was. Our “degrees of helpfulness” were based on our limited knowledge of urban agriculture, and we decided to categorize this information based on how comfortable the two of us would be in our knowledge of our rights to do each activity or keep each animal if we were to move to that city.

After completing all the interviews, we coded our extensive notes for the following themes: **key advocates**, **ordinance process** (successes, barriers, other), **performance standards**, and **political strategies** (successful and unsuccessful process strategies, and rhetorical strategies). Within the *barriers*, we created three underlying categories--based on who would face which variable. The decisions about which actors would face which barriers were based mostly on our own interpretation, unless the interviewee was explicit about a specific actor facing a barrier they were mentioning. These subcategories of actors are as follows: **farmers**, **those trying to pass an ordinance**, and **residents**. Additionally, these actors are not exhaustive or mutually exclusive (a farmer could also be a resident of the city, and a resident could be trying to get an ordinance passed, etc.), and so the purpose of the subcategories was to subdivide the barriers based on what role a person might be played at a certain time, and which barriers that role might face.

Because of time constraints in our semester, we did not have time to go through the recordings of each interview and write out transcripts. This means that our analysis and findings are based primarily on our understanding and interpretation of what our interviewees said. We relied on the recordings to fill in missing information or to re-listen to something we were confused about. Additionally, when creating our

presentation and putting together this final report, we went back and listened to parts of some interviews that we thought could provide quotes which would exemplify the themes we were trying to explain. After populating the database with key phrases that fell into each category, we coded each of these quotes according to key themes. For example, many interviewees talked about the importance of building relationships with city council members, talking to them constantly, and getting them on your side. We condensed all these ideas into the phrase “developing relationships” which is our own term that we decided encompasses anything and everything that applied to that idea.

After the re-phrasing to create consistencies across the data, we produced a word cloud that illustrated the most salient themes, as well as those that were most important and less important. We created two word clouds (*see Appendix E*)--one for the rhetorical strategies that our interviewees said could be useful, and one for the successful strategies that our interviewees thought were important to the ordinance-passing process. The size of each phrase indicates how important each theme is--and this is based on our own understanding of these themes as well as the number of interviewees that brought them up. These word clouds, and the overall data we collected through the interviews, informed our political strategy deliverable.

## IV. ORDINANCE FINDINGS

### *4.1 Community Gardens versus Market Gardens*

#### Definitions

The language used to define community gardens and market gardens varied from city to city. We found some key similarities and divergences among and across the definitions. Our own definitions are provided below; they aim to give a comprehensive understanding of how these cities think about community gardens versus market gardens. The wording of the definitions came from looking across the cities and coming up with language that could clearly identify key differences between the two while being concise.

**Community Gardens:** A piece of land that individuals or a group of individuals use to grow food crops and/or ornamental crops for personal use/consumption or donation. Some cities allow sale of harvest. Some cities specify limits on keeping of animals for community gardens purposes.

**Market Gardens:** A piece of land that individuals or a group of individuals use to grow food crops and/or ornamental crops for the purpose of donating or selling the harvest commercially. The profit can be made through various accessory uses, such as restaurants, education, tourism, etc.

## Performance Standards

Several city ordinances we examined require permits to be obtained prior to putting a community garden in place. Although some cities only allowed community gardens in agricultural zones, others allow community gardens in residential districts. As for the storing of tools and supplies, Chicago, IL allows for on-site accessory buildings to contain these items so as to avoid and control any possible nuisance.

Market gardens show more variation in whether they are permitted as accessory or principal uses. Some cities limit the size of market gardens to one acre (Austin, TX), while others allow for up to 40 acres within agricultural zones as long as farmers follow the other restrictions (Lincoln, NE). Springfield, MA allows the implementation of market gardens on lots no greater than 5 acres, a regulation that is more lenient than the standards in Minneapolis, MN which requires a conditional use permit if the area is greater than 10,000 square feet.

Opportunities for on-site sale of produce vary greatly from city to city. Some cities limit on-site sale to just market gardens (Atlanta, GA), while others allow for sale of produce from community gardens but limit the number of hours produce can be sold per week (Buffalo, NY), or the length of the season during which farmers can sell their harvest (Somerville, MA; Minneapolis MN). The language around on-site sale for Springfield, MA allows for sale of excess produce at licensed venues. In Cleveland, OH the amount of land that can be dedicated to retail sales is limited to two percent of the garden's total footprint, limiting opportunities for urban farmers. With the issue of on-site sales comes the issue of parking, where some cities allow a maximum number of parking spaces on-site (Minneapolis, MN allows just 2) while other cities require a minimum number of on-site spaces (Atlanta, GA requires at least 2 spaces for customers and 1 space for personnel).

### *4.2 Greenhouses versus Hoop Houses*

#### Definitions

Many cities failed to clearly define greenhouses, and the distinction between greenhouses and hoop houses was not explicit within the ordinances. We came across a distinction from some interviews, when a couple of our contacts explained their understanding of the difference between the two: that greenhouses are often permanent structures while hoop houses are often temporary. Additionally, greenhouses are often heated during the cold months, whereas hoop houses are not, and this additional heating infrastructure is typically what makes greenhouses more permanent (Eanes, personal communication, 2020). Based on the lack of clarity from the cities' ordinances, we decided to come up with our own definitions and distinctions between greenhouses and hoop houses, which we think might be beneficial to take into consideration.

**Greenhouses:** A structure made primarily of glass, or glass-like translucent material, for the purpose of cultivating food and/or ornamental crops. Sometimes used primarily for retail purposes, and often heated during colder months.

**Hoop Houses:** Similar to greenhouses, except some cities make a distinction between permanent and temporary structures. In these cases, hoop houses tend to be temporary and greenhouses tend to be permanent. Hoop houses are also often unheated, which allows them to be more easily taken down when necessary.

### Performance Standards

Overall, a majority of the cities examined allow for a type of greenhouse to be used. Although many cities only allow greenhouses in urban agriculture districts, Somerville, MA allows greenhouses to be used as accessory residential structures as a way of extending the growing season. In these cases, the city still requires the greenhouse structure to meet specific setback requirements. Louisville, KY is one example of restrictive setback standards, in which the greenhouse must be at least 50 feet from the front and/ or side-street property line as well as 20 feet from any other property line.

In terms of sizing requirements, some cities require a specific area standard while others state that the area allowed is contingent upon the principal structure area on the lot. For example, Chicago greenhouses may be a maximum of 575 square feet, while Atlanta greenhouses cannot exceed the height of the principal structure and cannot be greater than 30 percent of the principal structure's floor area. Various cities also allow for retail of produce and ornamental products in greenhouses, but they typically implement various restrictions for the size of the retail area. For example, in Minneapolis, MN the retail area cannot exceed 20% of the gross floor area of the greenhouse.

### *4.3 Animals: Livestock, Fowl, and Bees*

#### Definitions

The definitions of what constitutes "livestock" -- i.e. the distinction between animals used for agriculture and animals kept as pets -- were fairly uniform across cities. However, some cities included fowl in their list of livestock, and others had entire sections devoted to the differences. We decided to go with the more detailed definitions of each, especially because fowl is more conducive to urban environments and farmers can keep more chickens than pigs or cows on a small land tract.

**Generally:** Animals ordinarily kept for agricultural uses, and specifically not as a pet.

**Livestock:** Horses, cows, goats, pigs, sheep, and other hooved animals

**Fowl:** Chickens, turkeys, ducks, geese, hens, roosters, and other winged/beaked animals.

**Bees:** An insect of a large group to which the honeybee belongs, including many solitary as well as social kinds; the terms “colony” and “hive” are used interchangeably.

### Performance Standards

Most cities do not allow livestock within the city limits (Minneapolis, MN; Louisville, KY; Madison, WI), while those that do allow pigs, cows, and goats often have limits on number (Kansas City, MO; Atlanta GA) or limits by land size. Cleveland, OH, for example, allows for a maximum of two pigs with an additional pig allowed for each additional 2,400 square feet of land.<sup>1</sup> Livestock restrictions, although they vary by city, are usually uniform across kinds of livestock within each city.

Other common performance standards seek to suppress excess noise and odors. These restrictions, however, are often fairly general and not specific in terms of how an owner must follow the rules. London, ON (Canada) and Kansas City, MO are two examples of fairly general guidelines that say land areas must be free of manure so as to limit odors, but do not describe how owners should dispose of such waste. The most common kind of restriction is distance restrictions, that prohibit the placement of animal structures or the animals themselves from being too close to neighboring property lines. Many cities (Chapel Hill, NC; Cleveland, OH; Austin, TX; London, ON) require enclosures and animals to be at least 100 feet from property lines. Atlanta, GA requires a minimum distance of 150 feet from another residence or business establishment as well as a distance of 25 feet from that of the owner’s dwelling.

Fowl is similar to livestock in that cities restrict the number and/or land size permitted, but are often more lenient because fowl tend to be smaller in size. Buffalo, NY and Cleveland, OH both restrict the number of chickens based on square footage (1 hen per 1,000 square feet and 1 per 800 square feet, respectively), while other cities such as Atlanta, GA, and Chapel Hill allow a flat maximum. The range in flat maximums is wide, from four chickens (Madison, WI) to 25 (Atlanta, GA). Auburn exhibits more of a combination restriction that allows for a maximum number of chickens on smaller lots, and additional chickens for larger lots. On lots less than half an acre, a maximum of six laying hens is allowed. On half-acre or larger lots, 12 laying hens per acre are permitted prorated based on actual lot size up to a total maximum of 36 laying hens per single-family detached residence. Smell restrictions look very similar to livestock, in that many cities prohibit any excess odors. In terms of noise, many cities only allow hens, in an attempt to restrict roosters constantly crowing throughout the city.

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<sup>1</sup> Cleveland, OH allows for a maximum of two pigs within the city, as well as an additional pig allowed for each additional 2,400 square feet of land. Because we are fairly unfamiliar with the layout of Cleveland in comparison to Lewiston/Auburn, we cannot suggest a concrete number of square feet as a threshold for allowing additional animals. Hereafter, in talking about “flat maximums” with “additional allowed if the land is more than x square feet,” we are referencing the kind of system that Cleveland has put in place.

Distance and placement requirements also vary, but many cities limit the placement of coops or pens to just the backyard, with distance restraints on how close a coop can be to neighboring property lines. Kansas City, MO requires a 100 foot buffer between the enclosure and the nearest residence while Buffalo, NY requires that coops be in the rear yard, but only requires a minimum distance of 10 feet from property lines.

Bee restrictions are fairly uniform across cities, and mostly limit the number of colonies depending on size of the land. Austin, TX; Louisville, KY; and Minneapolis, MN all have this kind of restriction, which allows for 2 colonies on a quarter acre or less, 4 colonies on up to half an acre, 6 colonies on up to one acre, and 8 colonies are permitted on land greater than an acre large. On the other hand, Cleveland, OH allows one hive per 2,400 square feet, which would allow for 18 colonies on an acre. More lenient requirements, however, often come with mandated flyway barriers around the hives. Madison, WI; Chicago, IL; and Buffalo, NY do not restrict hive numbers based on land area but have flat maximums instead.

#### *4.4 Compost*

##### Definitions

As with gardens and greenhouse-like structures, our definition of composting comes from synthesis across the cities. Our final definition of composting is a conglomeration of multiple definitions, aimed at being comprehensive and providing clarity.

Compost: An enclosure that supports and controls the natural, microbial process of converting organic materials into usable soil and/or mulch.

##### Performance Standards

Compost restrictions include sizing requirements, allowed materials, prohibited materials, and placement restrictions. In Louisville, KY the restrictions are flat: your compost cannot exceed 5 feet in height and 20 cubic yards. Minneapolis, MN is another example of a city that utilizes a flat maximum, where the compost is limited to 15 cubic yards. However, if there is no residence building on the lot, compost can take up more space (25 cubic feet for under 10,000 square feet, and 120 cubic yards for over 10,000 square feet).

Some cities are very specific about which materials are prohibited. Minneapolis compost cannot include materials such as bones, meat, eggs, and pesticides. Most cities allow yard waste, food scraps, bowl/fecal waste and litter, and manure. Many cities also do not have restrictions on materials for composting. In terms of setbacks, compost is sometimes only allowed in rear yards (Buffalo, NY;

Minneapolis, MN) and often have distance requirements from property lines. St. Paul, MN requires containers to be at least 5 feet from property lines, and at least 20 feet from habitable buildings. Somerville, on the other hand, requires that compost be just 18 inches or more from all structures. Many cities require maintenance of compost to reduce the possibility of odor, and in Madison, WI, compost bins must be covered if they contain horse manure.

## **V. PERFORMANCE STANDARD RECOMMENDATIONS**

### *5.1 Community Gardens and Market Gardens*

Lewiston allows for community gardens in all districts, but makes no mention of market gardens, and does not allow for on-site sale of produce within community gardens. Auburn's city code does not mention community or market gardens. The use of the term community garden implies and supports collaboration within the community while the use of the term "market garden" implies and supports entrepreneurial opportunities which propel economic development. For this reason the implementation of both terms, as well as separate definitions for each, would be advantageous for both Lewiston and Auburn. Making a distinction between the two terms is imperative due to the fact that community gardens are typically defined as non-commercial entities while market gardens are typically commercial entities. Further, including opportunities for on-site sale would be beneficial--for both community and market gardens. Incorporating the terms "on-site sale" or "farm-stands" into the definitions of both should be considered as well.

In regards to farmers selling their produce, opportunities for farmers remain limited without the inclusion of on-site sale opportunities, especially considering this implementation could increase distribution of foods as well as bolster some families' incomes. The parts of Springfield, MA's code that allow for the sale of excess produce are supportive of opportunities for farmers to sell their goods, but they do restrict those abilities in other ways (prohibiting the display of goods for sale, limiting sale of goods to licensed venues, etc.). In using the term community garden and allowing for on-site sale, Lewiston and Auburn will be supporting farmers' consumption of their own harvest, while increasing opportunities for families to sell any excess produce. The primary purpose of the farms would still be personal consumption (as opposed to market gardens' commercial purpose). The implementation of these opportunities would increase food security as well as support families' abilities to supplement their income with profits from their own labor.

Lewiston should also consider increasing the current maximum area permitted within community gardens. Currently about 12.5 of Lewiston's maximum sized community gardens (2,000 square feet) could fit into just one community garden in Chicago, IL (25,000 square feet). By allowing for a greater



area to be utilized by community gardens, more small-scale farmers with larger land-tracts would be able to utilize their land more effectively.

We also recommend considering the implementation of nearby public parking opportunities before considering the addition of on-site parking requirements. The addition of parking requirements has been studied as a driver of urban sprawl, exacerbating various inequities through gentrification and further amplifying environmental degradation. Despite the increased accessibility that comes as a result of more parking spaces, alternative parking opportunities that are already available should be considered first.

### *5.2 Greenhouses and Hoop Houses*

In the state of Maine, buildings over 200 square feet must meet roof loading requirements for snow. In Auburn, most residents have to take down their greenhouses in the winter because these structures are typically not strong enough to meet the weight bearing requirements. Any ordinance language that distinguishes between permanent and temporary structures might be beneficial, and using terms such as hoop house versus greenhouse adds clarity. Additionally, we encourage implementation of a more straightforward permitting process for structure under 200 square feet because those structures are exempt from needing to meet the state's roof loading requirements. Any structure larger than that should go through a process to ensure it meets the state's requirements. The exemption would state that structures under 200 square feet are permitted, and anything larger than 200 square feet are conditional based on whether they are permanent and meet the state requirements versus temporary.

### *5.3 Animals: Livestock, Fowl, and Bees*

In regards to location restrictions, we suggest that a relatively simple approach be taken by allowing for animal (livestock, fowl, and bee) enclosures to be permitted in both rear and side yard areas. This would create more opportunities for residents to raise livestock, fowl, and bees for agricultural purposes. Our findings also indicate that reduced and concise setback distances from property lines are conducive to more accessible residential agriculture opportunities.

In terms of the number of animals allowed, we find that flat maximums produce more opportunities for farmers in the city center. The drawback of this method, however, is that owners of large land tracts that might be zoned as "urban" are then subject to smaller numbers of livestock, fowl, and bees, simply because of how the city is zoned. Consequently, we suggest a flat maximum (for example, a maximum of 2 cows permitted throughout the city), as well as a stipulation that allows for additional animals if your land size is bigger than  $x$  square feet. This increases opportunities for urban farmers to have animals within the city, while also bypassing potential limitations for farmers with large land tracts.

More specifically for fowl, we suggest a similar approach to the livestock recommendations by permitting a flat maximum number of fowl with the exception of large tracts of land, in which case more fowl are permitted per  $x$  square feet. Reduced setback requirements for fowl enclosures would also allow for more agricultural opportunities, implying that a reduction in Lewiston's current setback requirement of 100 feet should be considered.

Residents with bee colonies would also benefit from reduced setback requirements, given that flyway barrier requirements are implemented when necessary. This has proven to be successful in cities like Austin, TX and Buffalo, NY, where a flyway barrier is required if the bee colony is located within 25 feet of the property line. As for the number of hives permitted, a flat maximum number of hives per lot may be beneficial with the caveat that larger land tracts allow for additional hives.

#### *5.4 Compost*

In conjunction with the aforementioned livestock recommendations, a flat maximum of compostable volume should be considered, unless the land tract is  $x$  square feet. By combining a flat maximum with a conditionally permitted increase, urban farmers are granted the more equitable opportunities when compared to farmers in more rural areas with larger land tracts. In the same token, the limiting factor of land-size is removed and farmers are not confined to an area that may be smaller than the amount of land they own, thereby benefiting both small and large farming communities. To remove any barriers related to setback distances, a flat distance from adjacent property lines and habitable buildings should be considered as opposed to only allowing compost in rear yards like Buffalo, NY.

Additionally, the designation of what materials are and are not allowed to be composted is helpful in removing any gray area for residents. In cities where compostable materials are not defined, there is a lack of clarity as to what is permitted and prohibited. We recommend that these materials be outlined and included in the language related to compost restrictions.

## **VI. POLITICAL STRATEGIES**

Upon speaking with various stakeholders and actors in each respective city and after analysis of the data collected, three categories pertaining to political strategies emerged across the interviews: barriers to implementation, key factors in success (process strategies), and successful rhetorical strategies. Through the analysis of each categorical political strategy, we developed several recommendations for political strategies that may be successful in creating more urban agriculture opportunities in Lewiston/Auburn.

## *6.1 Barriers to Implementation*

One common barrier highlighted among the various stakeholders we talked to is the inability to use public land for private use in order to advance community garden development within city limits. This barrier typically stems from local residents' fears that all public land areas, such as parks, would be used for private gardening and therefore prevent access to open spaces. More specifically, a city planner from Austin, TX explained that community gardens are open to the public, yet they are member-based entities on public land. With these entities often comes infrastructure, like fencing, to maintain the garden which further amplifies residential fears of restrictive access to public spaces.

A second common barrier is a lack of community involvement and collaboration with residents in the ordinance drafting process, which in turn, creates resident pushback. Several interviewees highlighted experiences with residents feeling surprised when hearing of city planners attempting to push their agendas forward without prior communication about their plans. Those we interviewed described how city constituents sometimes remain stuck in their own preconceived notions of what UA should look like, preventing the political process from moving forward.

These barriers are further exacerbated by the implementation of counterproductive ordinances, in which policies that were originally meant to emphasize good environmental practices further restrict access to certain UA markets. For example, the Good Agricultural Policies (GAP) ordinance in North Carolina created a barrier for farmers despite its intention to enforce more environmentally sustainable farming practices. The policy requires farmers to pay for yearly inspections in order to have each of their produce certified. This, in turn, creates an additional barrier with the requirement for schools to serve food that is GAP certified, as farmers who do not have the time or money to have all of their produce certified are cut off from selling their produce to schools.

Small-scale farmers also face the challenge of large businesses saturating the market as more UA practices are implemented and utilized to attract consumers. For example, in Austin, TX, many apartment complexes have begun developing community gardens as part of their amenities. Although this may be seen as a positive step for UA, this creates competition for local farmers and reduces opportunities for them to sell their produce.

The most common barrier mentioned, and one that often intersected with the aforementioned barriers, was the issue of misinformation and lack of knowledge on UA issues. This barrier creates more of a divide between city planners, council members, and residents. As explained by an NGO worker in the case of UA in Chicago, IL, council people often lack the knowledge of what UA is and why UA is important and beneficial when dealing with food insecurity.

## *6.2 Key Factors in Success (Process Strategies)*

In tandem with the barriers that our interviewees noted and talked at length about, we were able to identify some key factors in success within the political process of passing ordinances. One of the most salient themes from the interviews was the importance of developing relationships within the community--whether it is with farmers, local residents, or city council members. A city planner from Louisville, KY explained the importance eloquently when she said, “The legislative process works best, again, when you have relationships developed with the people who represent the districts before you need anything from them.” Additionally, once those relationships are developed, collaboration becomes a vital aspect of the process, both to include all actors and ensure there is no alienation of any groups from within the community. This collaboration can take on many forms, from “co-creating and working alongside career government” to conducting focus groups with residents and farmers who would be directly affected by an ordinance.

Involving the various stakeholders in this process was also a theme that came up many times. Not only is “working with farmers associations” important as a city planner from Austin, TX mentioned, accumulating public awareness and support is also crucial in making the ordinance one that is helpful to the surrounding community: “Drafting urban agriculture ordinances and policy is so place-based and knowing the exact history of Lewiston and what the politics are...is an important context to know... Understanding all of the context is really important to [making] change.” Understanding the local community is another theme that several interviewees talked about, especially as Lewiston and Auburn are diverse and have many people with different cultural backgrounds for whom an ordinance might affect their lives differently.

Because of this diversity, reaching out to residents was something that our interviewees mentioned would be crucial. Making sure that the ordinances are productive and are implemented in the ways they were intended, as well as ensuring it does not create additional barriers for those trying to engage in urban agriculture, is also something that must be kept in mind. Through outreach, education is an important step of the process, where it is vital that residents, farmers, and city council members especially, understand the ordinance, how their lives will be positively impacted, and understand the process of how an ordinance like this is passed. Our interviewees really emphasized education and outreach, especially as a way of bypassing potential resident pushback. Misinformation and lack of knowledge were two big barriers that we identified, which further articulates the importance of being able to break down the process and making information available to all community members, not just those with direct connection to the ordinance process.

Lastly, our interviewees consistently highlighted the crucial work of “finding the champion” of urban agriculture. In tandem with developing relationships with those on the city council, finding

someone who “is just personally really interested in or believes in the cause or it could be somebody who has a ton of constituents in their district that have been talking to him or her about it for a long time. Or, it could be somebody who sees the benefit for their district, and the community as a whole, and is willing to be the spokesperson or the legislative banner-holder for the issue.” Additionally, a city planner working in Omaha and Lincoln, NE mentioned that “This does not have to be a partisan issue...if you can find some city council members, [or] a mayor...and then do whatever you can to keep the issue non-partisan and try to create broad buy-in...at the top [which] will allow everybody else to work together.” Again, this illustrates the importance of making this a collaborative process, and finding a way to see past personal biases to create a more food secure environment and a more sustainable and supportive Lewiston-Auburn.

### *6.3 Successful Rhetorical Strategies*

While key factors of the process are important in understanding what variables are at play when trying to pass an ordinance, our interviewees also helped identify some potentially successful rhetorical strategies, which aim to demonstrate *why* an urban agriculture ordinance that increases opportunities for farmers is important. The most salient rhetorical theme identified across the data is directly related to the ongoing pandemic. COVID-19 has created unstable living situations for many Americans across the country, and Americans’ dependence on food from other places has become abundantly clear as a result. Increasing opportunities for farmers to grow more of their own food, or keep their own animals, would create a much broader and more supportive safety net for communities like Lewiston and Auburn. As one NGO worker explained, “With COVID, it’s been something that’s gotten a lot more attention. People realize when they go to the grocery store and they don’t see things on the shelf, that food is important.” Instead of relying on large corporations that ship in food from California or Mexico, Lewiston and Auburn could become leaders in food security by creating an environment that is supportive of agriculture for urban settings.

While COVID-19 is just one lens through which we can see and understand the importance of food security, it brings other issues to light as well. COVID-19 highlights a need for communities to be resilient, and resiliency is a key component of surviving the climate crisis. As it continues to affect families across the United States, being less dependent on outside sources for food will become increasingly crucial. Climate change is another broad reason for the need to increase urban agriculture opportunities, and can be a very productive way to bring people together and increase residents’ support of one another.

A professor from Chapel Hill, NC highlighted how urban agriculture can lead to increased community involvement and in turn, support local investment:

If [a] farm has access to these markets, it can create [x] number of local jobs... and they pay a living wage which means [there's] this sort of multiplier effect within the city limits, without taking jobs away....When you can show that having an ordinance that supports UA allows school systems, grocery stores, farmers' markets, etc. to sell more local produce, that in turn has a local effect on the local economy... it's a generator within the local economy... If your board is concerned about local jobs, that becomes a compelling argument."

This applies to residents who become more food secure because they are either now gardening or there are increased opportunities for farmers in Lewiston/Auburn to sell their produce. Consequently, they are less likely to be left hungry in the event of another food shortage. It also highlights the positive implications of an increase in local jobs that can only be beneficial to the Lewiston-Auburn area.

In addition to opportunities that increase the number of local jobs, urban agriculture also can be an opportunity for young children to access good, healthy foods within their schools. Public school lunches are typically unhealthy and not always fresh, and our interviewees identified schools as being some of the biggest potential beneficiaries of a UA ordinance: "Schools are a major market for agricultural products, statewide. School kitchens use a lot of produce." Additionally, the relationship would be reciprocal, given that "If schools are interested in buying locally, it incentivizes farmers to grow locally." Subsequently, not only do schools benefit from increased urban agriculture, but schools can also create a need for more local farmers--making the production of local agriculture significant and necessary.

COVID, climate resilience, local investment, and community involvement are the four most salient rhetorical themes. The others are important, of course, but these four were brought up the most times, from across all of the interviews. Additionally, they are all interconnected, and while the use of only one or two of them would be beneficial to a certain extent, keeping all of these themes in mind would make for an extremely compelling argument for why urban agriculture is something Lewiston and Auburn should consider implementing.

## **VII. NEXT STEPS**

After analyzing many ordinances from cities around the country, we have come up with some comparisons to the city codes for both Lewiston and Auburn that we think are pertinent to the conversation around urban agriculture. Ultimately, we have laid out some recommendations for how we think Auburn and Lewiston could increase and expand opportunities for urban farmers. In short, we recommend the following: consideration of combination restrictions for most kinds of land and animal uses; flat maximums, which allow for those with smaller land tracts to participate in urban ag when compared to restrictions based on land size; reduced setback requirements for various kinds of

performance standards; and the addition of some clarifying terms like “market gardens” and “hoop houses” within the ordinances to provide a more comprehensive understanding of permitted land uses.

Our interviews helped us identify key elements of a political strategy that will be important moving forward. The process-related strategies include, but are not limited to: developing relationships, reaching out to the community, and finding the champion. The rhetorical strategies that we identified as being important to understanding *why* the expansion of urban agriculture-related opportunities are as follows: COVID-19, climate change, local investment, and community involvement.

Because of the time constraints of our semester, we were not able to examine all urban agriculture-related issues. Moving forward, parking is an issue that we failed to sufficiently discuss in this report, but is important nevertheless. Should a minimum number of parking spaces be required per garden? How does that contribute to urban sprawl and limit farmers’ abilities to utilize the entirety of their land effectively? Additionally, the issue of how multi-family residents restrict UA opportunities will be an important next step. For example, how the city should approach a 6-family residence that sits on a .5 acres plot in terms of each family’s opportunities to have chickens is a barrier that has yet to be tackled. Should each family be allowed to keep chickens? How do nuisances play into multi-family residents, especially if one family wants to keep chickens and another is against it? How can Lewiston and Auburn create opportunities for those families, and more generally for families of lower socioeconomic statuses, to participate in urban agriculture and the increased food security that comes from those opportunities?

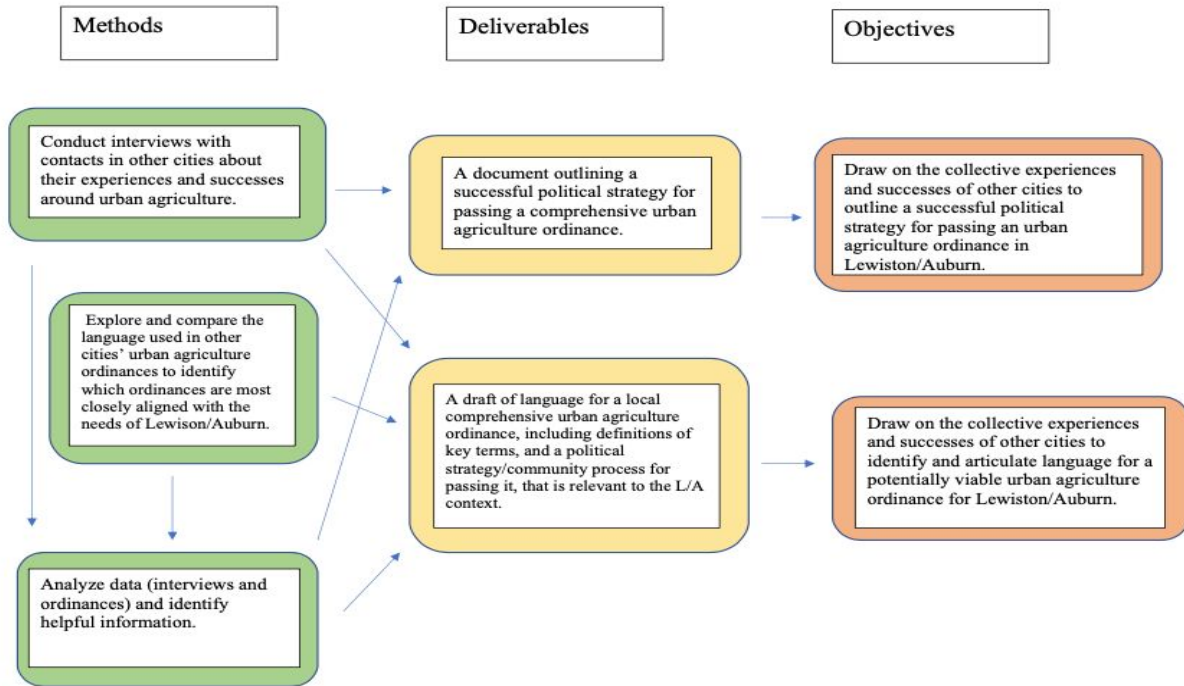
This project aimed to identify some ways in which Auburn and Lewiston can work to support a more equitable urban environment. Additionally, we have laid out some reasons for *why* this work is important. However, as we have illustrated throughout the report, this work is far from complete, and will require broad collaboration on many levels, from many different people. Hopefully this research will support that cause, and help to create a more food secure environment and a more sustainable and supportive Lewiston/Auburn.

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## X. APPENDIX A: Visual Representation of Methods



## XI. APPENDIX B: List of Cities to be Contacted and Ordinance Information

1. Louisville, KY
  - a. Link to [ordinance/info](#)
2. Minneapolis & St. Paul, MN
3. Chicago, IL
4. Kansas City, MO
  - a. Link to [ordinance](#)
5. Austin, TX
  - a. Link to [ordinance/info](#)
6. Lincoln, NE
7. Chapel Hill, NC
8. Atlanta, GA
  - a. Links to [ordinance/info](#)
9. Portland, OR
10. Buffalo, NY
11. Cleveland, OH
12. Madison, WI
13. Somerville, MA
  - a. Link to [ordinance/info](#)
14. Springfield, MA

- a. Link to [ordinance/info](#)
15. London, ON (Canada)
- a. Link to [ordinance/info](#)

## **XII. APPENDIX C: Template Email Sent to Contacts**

Dear \_\_\_\_\_,

Hello! My name is \_\_\_\_\_ and I am an Environmental Studies Major at Bates College. As part of our senior capstone coursework, my classmate and I are working on a project with the Good Food Council in Lewiston, ME, and we are trying to increase urban agriculture opportunities for farmers within the community. I would love to talk to you about some of the successes and challenges you've had in your community around passing and drafting urban agriculture ordinances. We are interviewing many cities around the US, in an effort to find similarities to Lewiston's population of immigrants, farmers, and residents, and we hope that you can provide us with some much needed insight.

As our project window is shorter this semester due to the ongoing pandemic, we would love to talk to you as soon as possible. If you have any time within the next few days or coming week, please let me know! You can reach me at the contact information below:

Email:

Phone:

Thanks for taking the time to read this email, and I look forward to hearing from you!

Best,

\_\_\_\_\_

## **XIII. APPENDIX D: Interview Questions**

1. What has your city learned through the process of drafting urban agriculture ordinances?
  - a. What were some of the biggest challenges and barriers?
  - b. What were you surprised by?
  - c. What came the most easily?
2. How have your ordinances evolved over time?
  - a. Have you been able to create more opportunities for farmers?
  - b. What kind of legislation does urban ag policy utilize? Overlays? Or is urban ag built into the core of your city's legislation?
3. What political strategies, if any, did you (or others) pursue to pass the ordinance?
  - a. How important was the political context of your city in passing the ordinances/urban ag reform?

- b. Did you go through an appeals process, and what did that look like?
- 4. What tangible impacts have your ordinances (or your work in urban agriculture) had?
- 5. How has your work been received by politicians? By farmers? By residents?
  - a. Did you receive any pushback? Who from?
  - b. Did you receive complaints? What kinds? Who from?
  - c. How did you address these?
- 6. Do you have specific performance standards for various permitted or conditional urban agriculture land use?

**XIV. APPENDIX E: Word Clouds**



*Figure 1. Successful rhetorical strategies.*



*Figure 2. Successful process strategies.*